ATTACHMENT D8

RISK SUMMARIES, ADDING DERMAL ABSORPTION OF METALS

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Table D8.1. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 1

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface and subsurface soil)	**4.2E-05**	PCB, Total Uranium-238	98% 2%	Ingestion Dermal Inhalation External exposure	50% 49% 0% 1%	**1.1**	Manganese Vanadium	56% 41%	Ingestion Dermal Inhalation	13% 87% 0%
Excavation Worker (surface and subsurface soil)	**8.4E-06**	PCB, Total	98%	Ingestion Dermal Inhalation External exposure	50% 49% 0% 1%	**1.1**	Manganese Vanadium	56% 41%	Ingestion Dermal Inhalation	13% 87% 0%
Future Adult Resident (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Child Resident (surface soil)	See Future Adult Resident					**1.4**	Nickel Vanadium	11% 85%	Ingestion Dermal Inhalation	9% 91% 0%

Table D8.1. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 1 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**<1**	*No COCs		Ingestion Dermal Inhalation	

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.2. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 2

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.3**	Manganese Nickel Vanadium	67% 6% 24%	Ingestion Dermal Inhalation	2% 98% 0%
Outdoor Worker (surface soil)	**1.2E-06**	Uranium-238	100%	Ingestion Dermal Inhalation External exposure	52% 50% 0% 48%	**2.0**	Iron Manganese Nickel Vanadium	7% 64% 6% 23%	Ingestion Dermal Inhalation	17% 83% 0%
Outdoor Worker (surface and subsurface soil)	**2.3E-05**	Arsenic	97%	Ingestion Dermal Inhalation External exposure	81% 17% 0% 2%	**2.2**	Arsenic Iron Manganese Nickel Vanadium	6% 7% 60% 6% 22%	Ingestion Dermal Inhalation	20% 79% 0%
Excavation Worker (surface and subsurface soil)	**4.7E-06**	Arsenic	97%	Ingestion Dermal Inhalation External exposure	81% 17% 0% 2%	**2.2**	Arsenic Iron Manganese Nickel Vanadium	6% 7% 60% 6% 22%	Ingestion Dermal Inhalation	20% 79% 0%
Future Adult Resident (surface soil)	**2.8E-06**	Uranium-238	100%	Ingestion Dermal Inhalation External exposure	11% 0% 0% 89%	**5.7**	Iron Manganese Nickel Vanadium	3% 66% 6% 24%	Ingestion Dermal Inhalation	2% 97% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**14.6**	Iron Manganese Nickel Vanadium	5% 65% 6% 24%	Ingestion Dermal Inhalation	10% 90% 0%

Table D8.2. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**1.7**	Manganese Nickel Vanadium	66% 6% 24%	Ingestion Dermal Inhalation	2% 98% 0%
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**5.2**	Iron Manganese Nickel Vanadium	3% 66% 6% 24%	Ingestion Dermal Inhalation	2% 98% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**5.8**	Iron Manganese Nickel Vanadium	5% 65% 6% 24%	Ingestion Dermal Inhalation	10% 90% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.3. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 3

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.4**	Manganese Molybdenum Nickel Vanadium	56% 6% 11% 24%	Ingestion Dermal Inhalation	3% 96% 0%
Outdoor Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.3**	Iron Manganese Molybdenum Nickel Vanadium	7% 50% 13% 9% 21%	Ingestion Dermal Inhalation	24% 75% 0%
Outdoor Worker (surface and subsurface soil)	**7.6E-06**	PAH, Total	100%	Ingestion Dermal Inhalation External exposure	52% 48% 0% 0%	**2.3**	Iron Manganese Molybdenum Nickel Vanadium	7% 50% 13% 9% 21%	Ingestion Dermal Inhalation	24% 75% 0%
Excavation Worker (surface and subsurface soil)	**1.5E-06**	PAH, Total	100%	Ingestion Dermal Inhalation External exposure	52% 48% 0% 0%	**2.3**	Iron Manganese Molybdenum Nickel Vanadium	7% 50% 13% 9% 21%	Ingestion Dermal Inhalation	24% 75% 0%
Future Adult Resident (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**6.0**	Iron Manganese Molybdenum Nickel Vanadium	3% 56% 6% 11% 24%	Ingestion Dermal Inhalation	4% 96% 0%

Table D8.3. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Child Resident (surface soil)	See Future Adult Resident					**16.0**	Iron	5%	Ingestion	15%
							Manganese	53%	Dermal	85%
							Molybdenum	10%	Inhalation	0%
							Nickel	10%		
							Vanadium	23%		
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion		**1.8**	Manganese	56%	Ingestion	4%
				Dermal			Molybdenum	6%	Dermal	96%
				Inhalation			Nickel	11%	Inhalation	0%
				External exposure			Vanadium	24%		
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**5.5**	Iron	3%	Ingestion	3%
							Manganese	56%	Dermal	97%
							Molybdenum	6%	Inhalation	0%
							Nickel	11%		
							Vanadium	24%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**6.4**	Iron	5%	Ingestion	15%
							Manganese	53%	Dermal	85%
							Molybdenum	10%	Inhalation	0%
							Nickel	10%		
							Vanadium	23%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.4. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 4

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**2.2E-06**	PCB, Total	86%	Ingestion	9%	**<1**	*No COCs		Ingestion	
				Dermal	88%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	2%					
Future Industrial Worker (surface soil)	**4.0E-05**	PAH, Total	12%	Ingestion	9%	**<1**	*No COCs		Ingestion	
		PCB, Total	86%	Dermal	88%				Dermal	
		Uranium-238	3%	Inhalation	0%				Inhalation	
				External exposure	2%					
Outdoor Worker (surface soil)	**5.4E-05**	PAH, Total	12%	Ingestion	50%	**<1**	*No COCs		Ingestion	
		PCB, Total	85%	Dermal	49%				Dermal	
		Uranium-238	3%	Inhalation	0%				Inhalation	
				External exposure	1%					
Outdoor Worker (surface and subsurface soil)	**6.0E-05**	PAH, Total	14%	Ingestion	49%	**1.9**	Iron	9%	Ingestion	17%
		PCB, Total	79%	Dermal	47%		Manganese	56%	Dermal	82%
		Uranium-238	5%	Inhalation	0%		Nickel	9%	Inhalation	0%
				External exposure	4%		Vanadium	26%		
Excavation Worker (surface and subsurface soil)	**1.2E-05**	PAH, Total	14%	Ingestion	48%	**1.9**	Iron	9%	Ingestion	17%
		PCB, Total	78%	Dermal	46%		Manganese	56%	Dermal	82%
				Inhalation	0%		Nickel	9%	Inhalation	0%
				External exposure	6%		Vanadium	26%		
Future Adult Resident (surface soil)	**1.6E-04**	PAH, Total	12%	Ingestion	22%	**2.1**	Iron	9%	Ingestion	4%
		PCB, Total	86%	Dermal	76%		Nickel	24%	Dermal	96%
		Uranium-238	2%	Inhalation	0%		Vanadium	67%	Inhalation	0%
				External exposure	2%					
Future Child Resident (surface soil)	See Future Adult Resident					**5.7**	Iron	15%	Ingestion	15%
							Nickel	22%	Dermal	85%
							Vanadium	63%	Inhalation	0%

Table D8.4. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 4 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**7.0E-05**	PAH, Total PCB, Total	12% 87%	Ingestion Dermal Inhalation External exposure	21% 79% 0% 1%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.0**	Iron Nickel Vanadium	9% 24% 68%	Ingestion Dermal Inhalation	3% 97% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**2.3**	Iron Nickel Vanadium	15% 22% 63%	Ingestion Dermal Inhalation	15% 85% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.5. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 5

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**3.7E-06**	PCB, Total	33%	Ingestion	11%	**<1**	*No COCs		Ingestion	
(surface soil)		Uranium-238	42%	Dermal	37%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	52%					
Future Industrial Worker	**6.6E-05**	PAH, Total	8%	Ingestion	11%	**2.8**	Antimony	13%	Ingestion	3%
(surface soil)		PCB, Total	33%	Dermal	37%		Manganese	42%	Dermal	96%
		Neptunium-237	2%	Inhalation	0%		Nickel	14%	Inhalation	0%
		Uranium-234	2%	External exposure	52%		Vanadium	23%		
		Uranium-235	12%							
		Uranium-238	43%							
Outdoor Worker	**9.3E-05**	PAH, Total	7%	Ingestion	53%	**2.6**	Antimony	14%	Ingestion	26%
(surface soil)		PCB, Total	31%	Dermal	19%		Iron	5%	Dermal	74%
		Neptunium-237	1%	Inhalation	0%		Manganese	36%	Inhalation	0%
		Technetium-99	2%	External exposure	27%		Molybdenum	8%		
		Uranium-234	9%				Nickel	12%		
		Uranium-235	7%				Uranium	4%		
		Uranium-238	42%				Vanadium	20%		
Outdoor Worker	**2.3E-05**	PAH, Total	8%	Ingestion	51%	**2.6**	Antimony	14%	Ingestion	26%
(surface and subsurface		PCB, Total	44%	Dermal	26%		Iron	5%	Dermal	74%
soil)		Cesium-137	2%	Inhalation	0%		Manganese	36%	Inhalation	0%
		Neptunium-237	1%	External exposure	23%		Molybdenum	8%		
		Technetium-99	1%				Nickel	11%		
		Uranium-234	6%				Uranium	4%		
		Uranium-235	6%				Vanadium	20%		
		Uranium-238	31%							
Excavation Worker	**2.1E-05**	PAH, Total	8%	Ingestion	51%	**2.6**	Antimony	14%	Ingestion	26%
(surface and subsurface		PCB, Total	44%	Dermal	26%		Iron	5%	Dermal	74%
soil)		Uranium-234	6%	Inhalation	0%		Manganese	36%	Inhalation	0%
		Uranium-235	6%	External exposure	23%		Molybdenum	8%		
		Uranium-238	31%				Nickel	11%		
							Uranium	4%		
							Vanadium	20%		

Table D8.5. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 5 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**2.3E-04**	PAH, Total	8%	Ingestion	17%	**6.8**	Antimony	13%	Ingestion	4%
(surface soil)		PCB, Total	37%	Dermal	35%		Iron	2%	Dermal	96%
		Neptunium-237	2%	Inhalation	0%		Manganese	41%	Inhalation	0%
		Uranium-234	2%	External exposure	48%		Molybdenum	3%		
		Uranium-235	11%				Nickel	14%		
		Uranium-238	40%				Uranium	2%		
							Vanadium	23%		
Future Child Resident	See Future Adult Resident					**18.2**	Aluminum	1%	Ingestion	16%
(surface soil)							Antimony	14%	Dermal	84%
							Iron	4%	Inhalation	0%
							Manganese	38%		
							Molybdenum	6%		
							Nickel	13%		
							Uranium	3%		
							Vanadium	21%		

Table D8.5. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 5 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**6.7E-05**	PAH, Total	13%	Ingestion	23%	**2.0**	Antimony	13%	Ingestion	4%
		PCB, Total	57%	Dermal	56%		Manganese	41%	Dermal	96%
		Uranium-234	2%	Inhalation	0%		Nickel	14%	Inhalation	0%
		Uranium-235	5%	External exposure	21%		Vanadium	23%		
		Uranium-238	21%							
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**6.2**	Antimony	13%	Ingestion	3%
							Iron	2%	Dermal	97%
							Manganese	42%	Inhalation	0%
							Molybdenum	3%		
							Nickel	14%		
							Uranium	2%		
							Vanadium	23%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**7.3**	Antimony	14%	Ingestion	16%
							Iron	4%	Dermal	84%
							Manganese	38%	Inhalation	0%
							Molybdenum	6%		
							Nickel	13%		
							Uranium	3%		
							Vanadium	21%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.6. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 6

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**4.4E-06**	PCB, Total	45%	Ingestion	10%	**<1**	*No COCs		Ingestion	
		Uranium-238	33%	Dermal	50%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	40%					
Future Industrial Worker (surface soil)	**7.8E-05**	PAH, Total	9%	Ingestion	10%	**1.2**	Molybdenum	15%	Ingestion	6%
		PCB, Total	45%	Dermal	50%		Nickel	15%	Dermal	93%
		Neptunium-237	6%	Inhalation	0%		Vanadium	61%	Inhalation	0%
		Uranium-234	1%	External exposure	40%					
		Uranium-235	5%							
		Uranium-238	33%							
Outdoor Worker (surface soil)	**1.1E-04**	PAH, Total	9%	Ingestion	52%	**1.4**	Iron	13%	Ingestion	40%
		PCB, Total	44%	Dermal	26%		Molybdenum	28%	Dermal	60%
		Neptunium-237	4%	Inhalation	0%		Nickel	11%	Inhalation	0%
		Technetium-99	1%	External exposure	22%		Vanadium	44%		
		Uranium-234	6%							
		Uranium-235	3%							
		Uranium-238	33%							
Outdoor Worker (surface and subsurface soil)	**8.3E-05**	PAH, Total	16%	Ingestion	52%	**2.9**	Iron	6%	Ingestion	26%
		PCB, Total	37%	Dermal	26%		Manganese	35%	Dermal	74%
		Cesium-137	2%	Inhalation	0%		Molybdenum	13%	Inhalation	0%
		Neptunium-237	2%	External exposure	22%		Nickel	5%		
		Technetium-99	2%				Silver	17%		
		Uranium-234	6%				Vanadium	21%		
		Uranium-235	3%							
		Uranium-238	33%							
Excavation Worker (surface and subsurface soil)	**1.7E-05**	PAH, Total	15%	Ingestion	52%	**2.9**	Iron	6%	Ingestion	26%
		PCB, Total	37%	Dermal	26%		Manganese	35%	Dermal	74%
		Uranium-234	6%	Inhalation	0%		Molybdenum	13%	Inhalation	0%
		Uranium-238	33%	External exposure	22%		Nickel	5%		
							Silver	17%		
							Vanadium	21%		

Table D8.6. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 6 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident (surface soil)	**2.8E-04**	PAH, Total	10%	Ingestion	18%	**2.9**	Iron	7%	Ingestion	7%
		PCB, Total	49%	Dermal	45%		Molybdenum	15%	Dermal	93%
		Neptunium-237	6%	Inhalation	0%		Nickel	15%	Inhalation	0%
		Uranium-234	1%	External exposure	36%		Vanadium	60%		
		Uranium-235	4%							
		Uranium-238	30%							
Future Child Resident (surface soil)	See Future Adult Resident					**8.7**	Iron	11%	Ingestion	26%
							Molybdenum	22%	Dermal	74%
							Nickel	13%	Inhalation	0%
							Uranium	3%		
							Vanadium	51%		
Future Adult Recreational User (surface soil)	**9.3E-05**	PAH, Total	14%	Ingestion	22%	**<1**	*No COCs		Ingestion	
		PCB, Total	67%	Dermal	64%				Dermal	
		Neptunium-237	2%	Inhalation	0%				Inhalation	
		Uranium-234	1%	External exposure	14%					
		Uranium-235	2%							
		Uranium-238	14%							
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.6**	Iron	7%	Ingestion	6%
							Molybdenum	15%	Dermal	94%
							Nickel	15%	Inhalation	0%
							Vanadium	61%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.5**	Iron	11%	Ingestion	26%
							Molybdenum	22%	Dermal	74%
							Nickel	13%	Inhalation	0%
							Uranium	3%		
							Vanadium	51%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.7. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 7

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.0**	Nickel Silver Vanadium	6% 55% 36%	Ingestion Dermal Inhalation	2% 98% 0%
Outdoor Worker (surface soil)	**1.1E-06**	Uranium-238	100%	Ingestion Dermal Inhalation External exposure	52% 50% 0% 48%	**1.8**	Iron Silver Vanadium	9% 52% 34%	Ingestion Dermal Inhalation	18% 82% 0%
Outdoor Worker (surface and subsurface soil)	**5.0E-05**	PCB, Total Uranium-238	94% 6%	Ingestion Dermal Inhalation External exposure	50% 47% 0% 3%	**1.3**	Iron Silver Vanadium	13% 31% 48%	Ingestion Dermal Inhalation	20% 80% 0%
Excavation Worker (surface and subsurface soil)	**1.0E-05**	PCB, Total	94%	Ingestion Dermal Inhalation External exposure	50% 47% 0% 3%	**1.3**	Iron Silver Vanadium	13% 31% 48%	Ingestion Dermal Inhalation	20% 80% 0%
Future Adult Resident (surface soil)	**2.6E-06**	Uranium-238	100%	Ingestion Dermal Inhalation External exposure	11% 0% 0% 89%	**5.0**	Iron Nickel Silver Vanadium	4% 6% 55% 36%	Ingestion Dermal Inhalation	3% 97% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**12.9**	Iron Nickel Silver Vanadium	7% 6% 53% 35%	Ingestion Dermal Inhalation	10% 90% 0%

Table D8.7. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 7 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**1.5**	Silver Vanadium	55% 36%	Ingestion Dermal Inhalation	3% 97% 0%
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**4.6**	Iron Nickel Silver Vanadium	4% 6% 55% 36%	Ingestion Dermal Inhalation	2% 98% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**5.1**	Iron Nickel Silver Vanadium	7% 6% 53% 35%	Ingestion Dermal Inhalation	10% 90% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.8. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 8

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.2**	Manganese Nickel Vanadium	64% 6% 27%	Ingestion Dermal Inhalation	2% 98% 0%
Outdoor Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**1.9**	Iron Manganese Nickel Vanadium	7% 61% 6% 26%	Ingestion Dermal Inhalation	17% 83% 0%
Outdoor Worker (surface and subsurface soil)	**8.3E-06**	PAH, Total	100%	Ingestion Dermal Inhalation External exposure	52% 48% 0% 0%	**1.9**	Iron Manganese Nickel Vanadium	7% 61% 6% 26%	Ingestion Dermal Inhalation	17% 83% 0%
Excavation Worker (surface and subsurface soil)	**1.7E-06**	PAH, Total	100%	Ingestion Dermal Inhalation External exposure	52% 48% 0% 0%	**1.9**	Iron Manganese Nickel Vanadium	7% 61% 6% 26%	Ingestion Dermal Inhalation	17% 83% 0%
Future Adult Resident (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**5.4**	Iron Manganese Nickel Vanadium	3% 64% 6% 27%	Ingestion Dermal Inhalation	2% 97% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**13.9**	Iron Manganese Nickel Vanadium	5% 62% 6% 26%	Ingestion Dermal Inhalation	10% 90% 0%

Table D8.8. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 8 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**1.6**	Manganese Vanadium	64% 27%	Ingestion Dermal Inhalation	2% 98% 0%
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**5.0**	Iron Manganese Nickel Vanadium	3% 64% 6% 27%	Ingestion Dermal Inhalation	2% 98% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**5.5**	Iron Manganese Nickel Vanadium	5% 62% 6% 26%	Ingestion Dermal Inhalation	10% 90% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.9. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 9

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**5.5E-06**	Neptunium-237 Uranium-238	50% 45%	Ingestion Dermal Inhalation External exposure	6% 5% 0% 89%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface soil)	**6.0E-06**	Neptunium-237 Uranium-238	36% 57%	Ingestion Dermal Inhalation External exposure	37% 3% 0% 60%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface and subsurface soil)	**4.1E-05**	Arsenic PAH, Total Cesium-137 Neptunium-237 Uranium-238	67% 17% 4% 4% 8%	Ingestion Dermal Inhalation External exposure	68% 20% 0% 12%	**1.1**	Arsenic Molybdenum Nickel Vanadium	15% 17% 11% 55%	Ingestion Dermal Inhalation	34% 66% 0%
Excavation Worker (surface and subsurface soil)	**8.2E-06**	Arsenic PAH, Total	66% 17%	Ingestion Dermal Inhalation External exposure	67% 20% 0% 12%	**1.1**	Arsenic Molybdenum Nickel Vanadium	15% 17% 11% 55%	Ingestion Dermal Inhalation	34% 66% 0%
Future Adult Resident (surface soil)	**1.8E-05**	PAH, Total Neptunium-237 Uranium-238	6% 49% 45%	Ingestion Dermal Inhalation External exposure	7% 5% 0% 88%	**2.3**	Molybdenum Nickel Vanadium	9% 15% 75%	Ingestion Dermal Inhalation	4% 96% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**6.1**	Molybdenum Nickel Vanadium	15% 14% 70%	Ingestion Dermal Inhalation	15% 85% 0%

Table D8.9. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 9 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**2.9E-06**	Neptunium-237 Uranium-238	39% 43%	Ingestion Dermal Inhalation External exposure	17% 14% 0% 69%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.1**	Molybdenum Nickel Vanadium	9% 15% 75%	Ingestion Dermal Inhalation	3% 97% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**2.5**	Molybdenum Nickel Vanadium	15% 14% 70%	Ingestion Dermal Inhalation	15% 85% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.10. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 10

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**5.4**	Iron Manganese Molybdenum Nickel Silver Vanadium	2% 72% 4% 2% 6% 14%	Ingestion Dermal Inhalation	3% 97% 0%
Outdoor Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**4.9**	Iron Manganese Molybdenum Nickel Silver Vanadium	5% 66% 9% 2% 5% 13%	Ingestion Dermal Inhalation	20% 79% 0%
Outdoor Worker (surface and subsurface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**4.9**	Iron Manganese Molybdenum Nickel Silver Vanadium	5% 66% 9% 2% 5% 13%	Ingestion Dermal Inhalation	20% 79% 0%
Excavation Worker (surface and subsurface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**4.9**	Iron Manganese Molybdenum Nickel Silver Vanadium	5% 66% 9% 2% 5% 13%	Ingestion Dermal Inhalation	20% 79% 0%

Table D8.10. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 10 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**13.3**	Iron Manganese Molybdenum Nickel Silver Vanadium	2% 72% 4% 2% 6% 14%	Ingestion Dermal Inhalation	3% 97% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**34.8**	Iron Manganese Molybdenum Nickel Silver Vanadium	3% 69% 6% 2% 6% 14%	Ingestion Dermal Inhalation	12% 88% 0%
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**3.9**	Manganese Molybdenum Silver Vanadium	72% 4% 6% 14%	Ingestion Dermal Inhalation	3% 97% 0%
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**12.2**	Iron Manganese Molybdenum Nickel Silver Vanadium	2% 72% 4% 2% 6% 14%	Ingestion Dermal Inhalation	2% 98% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**13.9**	Iron Manganese Molybdenum Nickel Silver Vanadium	3% 68% 6% 2% 6% 14%	Ingestion Dermal Inhalation	12% 88% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.11. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 11

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**1.9E-06**	PCB, Total	100%	Ingestion Dermal Inhalation External exposure	9% 91% 0%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**3.4E-05**	PCB, Total	100%	Ingestion Dermal Inhalation External exposure	9% 91% 0%	**1.3**	Silver Vanadium	47% 51%	Ingestion Dermal Inhalation	2% 98% 0%
Outdoor Worker (surface soil)	**4.5E-05**	PCB, Total	100%	Ingestion Dermal Inhalation External exposure	50% 50% 0%	**1.1**	Silver Vanadium	46% 50%	Ingestion Dermal Inhalation	13% 87% 0%
Outdoor Worker (surface and subsurface soil)	**4.5E-05**	PCB, Total	100%	Ingestion Dermal Inhalation External exposure	50% 50% 0%	**1.9**	Manganese Silver Vanadium	42% 27% 29%	Ingestion Dermal Inhalation	13% 87% 0%
Excavation Worker (surface and subsurface soil)	**9.0E-06**	PCB, Total	100%	Ingestion Dermal Inhalation External exposure	50% 50% 0%	**1.9**	Manganese Silver Vanadium	42% 27% 29%	Ingestion Dermal Inhalation	13% 87% 0%
Future Adult Resident (surface soil)	**1.3E-04**	PCB, Total	100%	Ingestion Dermal Inhalation External exposure	22% 78% 0%	**3.3**	Silver Vanadium	47% 51%	Ingestion Dermal Inhalation	2% 98% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**8.2**	Nickel Silver Vanadium	2% 46% 51%	Ingestion Dermal Inhalation	8% 92% 0%

Table D8.11. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 11 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**6.0E-05**	PCB, Total	100%	Ingestion Dermal Inhalation External exposure	21% 79% 0%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**3.0**	Silver Vanadium	47% 51%	Ingestion Dermal Inhalation	1% 99% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.3**	Silver Vanadium	46% 51%	Ingestion Dermal Inhalation	8% 92% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.12. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 12

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**3.3**	Manganese Molybdenum Nickel Silver Vanadium	52% 3% 5% 16% 21%	Ingestion Dermal Inhalation	2% 97% 0%
Outdoor Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**3.0**	Iron Manganese Molybdenum Nickel Silver Vanadium	5% 48% 8% 5% 15% 20%	Ingestion Dermal Inhalation	20% 80% 0%
Outdoor Worker (surface and subsurface soil)	**4.5E-05**	PCB, Total	100%	Ingestion Dermal Inhalation External exposure	50% 50% 0% 0%	**3.3**	Iron Manganese Molybdenum Nickel Silver Vanadium	4% 44% 7% 4% 23% 18%	Ingestion Dermal Inhalation	19% 81% 0%
Excavation Worker (surface and subsurface soil)	**9.0E-06**	PCB, Total	100%	Ingestion Dermal Inhalation External exposure	50% 50% 0% 0%	**3.3**	Iron Manganese Molybdenum Nickel Silver Vanadium	4% 44% 7% 4% 23% 18%	Ingestion Dermal Inhalation	19% 81% 0%

Table D8.12. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 12 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**8.0**	Iron Manganese Molybdenum Nickel Silver Vanadium	2% 52% 3% 5% 16% 21%	Ingestion Dermal Inhalation	3% 97% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**20.9**	Iron Manganese Molybdenum Nickel Silver Vanadium	3% 50% 6% 5% 16% 20%	Ingestion Dermal Inhalation	12% 88% 0%
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.4**	Manganese Nickel Silver Vanadium	52% 5% 16% 21%	Ingestion Dermal Inhalation	3% 97% 0%
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**7.3**	Iron Manganese Molybdenum Nickel Silver Vanadium	2% 52% 3% 5% 16% 21%	Ingestion Dermal Inhalation	2% 98% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**8.4**	Iron Manganese Molybdenum Nickel Silver Vanadium	3% 50% 6% 5% 16% 20%	Ingestion Dermal Inhalation	12% 88% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.13. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 13

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.4**	Manganese Molybdenum Vanadium	60% 7% 30%	Ingestion Dermal Inhalation	4% 96% 0%
Outdoor Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.3**	Iron Manganese Molybdenum Vanadium	7% 51% 16% 25%	Ingestion Dermal Inhalation	27% 73% 0%
Outdoor Worker (surface and subsurface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.3**	Iron Manganese Molybdenum Vanadium	7% 51% 16% 25%	Ingestion Dermal Inhalation	27% 73% 0%
Excavation Worker (surface and subsurface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.3**	Iron Manganese Molybdenum Vanadium	7% 51% 16% 25%	Ingestion Dermal Inhalation	27% 73% 0%
Future Adult Resident (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**5.8**	Iron Manganese Molybdenum Vanadium	3% 59% 7% 30%	Ingestion Dermal Inhalation	4% 96% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**15.9**	Iron Manganese Molybdenum Vanadium	6% 55% 12% 27%	Ingestion Dermal Inhalation	16% 84% 0%

Table D8.13. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 13 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**1.7**	Manganese Molybdenum Vanadium	59% 8% 30%	Ingestion Dermal Inhalation	4% 96% 0%
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**5.3**	Iron Manganese Molybdenum Vanadium	3% 60% 7% 30%	Ingestion Dermal Inhalation	3% 97% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**6.3**	Iron Manganese Molybdenum Vanadium	6% 55% 12% 27%	Ingestion Dermal Inhalation	16% 84% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.14. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 14

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**1.3E-06**	PCB, Total	93%	Ingestion	9%	**<1**	*No COCs		Ingestion	
				Dermal	86%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	5%					
Future Industrial Worker (surface soil)	**2.3E-05**	PCB, Total	93%	Ingestion	9%	**1.4**	Silver	40%	Ingestion	1%
		Uranium-238	6%	Dermal	86%		Vanadium	53%	Dermal	99%
				Inhalation	0%				Inhalation	0%
				External exposure	5%					
Outdoor Worker (surface soil)	**3.0E-05**	PCB, Total	93%	Ingestion	50%	**1.1**	Silver	40%	Ingestion	12%
		Uranium-238	6%	Dermal	47%		Vanadium	53%	Dermal	88%
				Inhalation	0%				Inhalation	0%
				External exposure	3%					
Outdoor Worker (surface and subsurface soil)	**5.8E-05**	PAH, Total	14%	Ingestion	50%	**1.8**	Manganese	33%	Ingestion	12%
		PCB, Total	80%	Dermal	47%		Silver	29%	Dermal	88%
		Uranium-238	6%	Inhalation	0%		Vanadium	34%	Inhalation	0%
				External exposure	3%					
Excavation Worker (surface and subsurface soil)	**1.2E-05**	PAH, Total	14%	Ingestion	50%	**1.8**	Manganese	33%	Ingestion	12%
		PCB, Total	80%	Dermal	47%		Silver	29%	Dermal	88%
				Inhalation	0%		Vanadium	34%	Inhalation	0%
				External exposure	3%					
Future Adult Resident (surface soil)	**8.8E-05**	PAH, Total	2%	Ingestion	22%	**3.3**	Nickel	7%	Ingestion	2%
		PCB, Total	94%	Dermal	74%		Silver	40%	Dermal	98%
		Uranium-238	5%	Inhalation	0%		Vanadium	53%	Inhalation	0%
				External exposure	4%					
Future Child Resident (surface soil)	See Future Adult Resident					**8.4**	Nickel	7%	Ingestion	7%
							Silver	40%	Dermal	93%
							Vanadium	53%	Inhalation	0%

Table D8.14. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 13, EU 14 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**3.9E-05**	PCB, Total	97%	Ingestion Dermal Inhalation External exposure	21% 78% 0% 1%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**3.1**	Nickel Silver Vanadium	7% 40% 53%	Ingestion Dermal Inhalation	1% 99% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.4**	Nickel Silver Vanadium	7% 40% 53%	Ingestion Dermal Inhalation	7% 93% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.15. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 1

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**1.6E-06**	PAH, Total	66%	Ingestion	17%	**<1**	*No COCs		Ingestion	
				Dermal	80%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	3%					
Future Industrial Worker (surface soil)	**2.9E-05**	Arsenic	31%	Ingestion	17%	**3.1**	Antimony	63%	Ingestion	5%
		PAH, Total	66%	Dermal	80%		Nickel	26%	Dermal	95%
		Uranium-238	4%	Inhalation	0%				Inhalation	0%
				External exposure	3%					
Outdoor Worker (surface soil)	**5.3E-05**	Arsenic	47%	Ingestion	66%	**3.3**	Antimony	60%	Ingestion	33%
		PAH, Total	50%	Dermal	33%		Arsenic	5%	Dermal	67%
		Uranium-238	3%	Inhalation	0%		Iron	5%	Inhalation	0%
				External exposure	1%		Nickel	20%		
Outdoor Worker (surface and subsurface soil)	**4.7E-05**	Arsenic	56%	Ingestion	70%	**10.6**	Antimony	26%	Ingestion	51%
		PAH, Total	38%	Dermal	28%		Arsenic	2%	Dermal	49%
		Technetium-99	4%	Inhalation	0%		Cadmium	1%	Inhalation	0%
		Uranium-238	2%	External exposure	1%		Iron	2%		
							Manganese	6%		
							Nickel	7%		
							Thallium	51%		
							Vanadium	4%		
Excavation Worker (surface and subsurface soil)	**9.3E-06**	Arsenic	56%	Ingestion	70%	**10.6**	Antimony	26%	Ingestion	51%
		PAH, Total	38%	Dermal	28%		Arsenic	2%	Dermal	49%
				Inhalation	0%		Cadmium	1%	Inhalation	0%
				External exposure	1%		Iron	2%		
							Manganese	6%		
							Nickel	7%		
							Thallium	51%		
							Vanadium	4%		

Table D8.15. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 1 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**1.3E-04**	Arsenic	37%	Ingestion	36%	**7.5**	Antimony	63%	Ingestion	6%
(surface soil)		PAH, Total	60%	Dermal	61%		Arsenic	2%	Dermal	94%
		Uranium-238	3%	Inhalation	0%		Iron	3%	Inhalation	0%
				External exposure	3%		Nickel	26%		
							Silver	3%		
							Thallium	2%		
Future Child Resident	See Future Adult Resident					**21.5**	Antimony	61%	Ingestion	21%
(surface soil)							Arsenic	4%	Dermal	79%
							Barium	1%	Inhalation	0%
							Cadmium	1%		
							Copper	0%		
							Iron	4%		
							Nickel	23%		
							Silver	2%		
							Thallium	2%		
							Uranium	1%		

Table D8.15. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 1 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**5.5E-05**	Arsenic	37%	Ingestion	34%	**2.3**	Antimony	63%	Ingestion	6%
		PAH, Total	62%	Dermal	65%		Nickel	26%	Dermal	94%
				Inhalation	0%				Inhalation	0%
				External exposure	1%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**6.9**	Antimony	63%	Ingestion	5%
							Arsenic	2%	Dermal	95%
							Iron	3%	Inhalation	0%
							Nickel	26%		
							Silver	3%		
							Thallium	1%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**8.6**	Antimony	61%	Ingestion	21%
							Arsenic	4%	Dermal	79%
							Cadmium	1%	Inhalation	0%
							Iron	4%		
							Nickel	23%		
							Silver	2%		
							Thallium	2%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.16. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 2

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**2.5E-06**	PAH, Total	53%	Ingestion	16%	**<1**	*No COCs		Ingestion	
				Dermal	67%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	17%					
Future Industrial Worker (surface soil)	**4.5E-05**	Arsenic	26%	Ingestion	16%	**4.7**	Antimony	54%	Ingestion	4%
		PAH, Total	53%	Dermal	67%		Iron	2%	Dermal	96%
		PCB, Total	2%	Inhalation	0%		Mercury	14%	Inhalation	0%
		Uranium-235	2%	External exposure	17%		Nickel	25%		
		Uranium-238	16%							
Outdoor Worker (surface soil)	**7.9E-05**	Arsenic	41%	Ingestion	65%	**4.8**	Antimony	53%	Ingestion	30%
		PAH, Total	41%	Dermal	28%		Arsenic	4%	Dermal	70%
		PCB, Total	2%	Inhalation	0%		Iron	5%	Inhalation	0%
		Uranium-234	3%	External exposure	7%		Mercury	12%		
		Uranium-238	13%				Nickel	21%		
							Uranium	4%		
Outdoor Worker (surface and subsurface soil)	**8.1E-05**	Arsenic	40%	Ingestion	64%	**8.2**	Antimony	34%	Ingestion	25%
		PAH, Total	40%	Dermal	27%		Arsenic	2%	Dermal	75%
		PCB, Total	2%	Inhalation	0%		Iron	3%	Inhalation	0%
		Neptunium-237	2%	External exposure	9%		Manganese	18%		
		Uranium-234	3%				Mercury	7%		
		Uranium-238	13%				Nickel	23%		
							Thallium	2%		
							Uranium	2%		
							Vanadium	6%		

Table D8.16. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Excavation Worker	**1.6E-05**	Arsenic	40%	Ingestion	64%	**8.2**	Antimony	34%	Ingestion	25%
(surface and subsurface		PAH, Total	40%	Dermal	27%		Arsenic	2%	Dermal	75%
soil)		Uranium-238	13%	Inhalation	0%		Iron	3%	Inhalation	0%
				External exposure	9%		Manganese	18%		
							Mercury	7%		
							Nickel	23%		
							Thallium	2%		
							Uranium	2%		
							Vanadium	6%		
Future Adult Resident	**1.9E-04**	Arsenic	33%	Ingestion	33%	**11.5**	Antimony	54%	Ingestion	5%
(surface soil)		PAH, Total	50%	Dermal	53%		Arsenic	2%	Dermal	95%
		PCB, Total	2%	Inhalation	0%		Barium	1%	Inhalation	0%
		Uranium-234	1%	External exposure	13%		Iron	2%		
		Uranium-235	2%				Mercury	14%		
		Uranium-238	13%				Nickel	25%		
							Uranium	2%		
Future Child Resident	See Future Adult Resident					**32.1**	Antimony	54%	Ingestion	19%
(surface soil)							Arsenic	3%	Dermal	81%
							Barium	1%	Inhalation	0%
							Iron	4%		
							Mercury	13%		
							Nickel	23%		
							Uranium	3%		

Table D8.16. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**7.5E-05**	Arsenic	35%	Ingestion	34%	**3.4**	Antimony	54%	Ingestion	5%
		PAH, Total	56%	Dermal	62%		Mercury	14%	Dermal	95%
		PCB, Total	3%	Inhalation	0%		Nickel	25%	Inhalation	0%
		Uranium-238	5%	External exposure	4%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**10.6**	Antimony	54%	Ingestion	4%
							Arsenic	1%	Dermal	96%
							Iron	2%	Inhalation	0%
							Mercury	14%		
							Nickel	25%		
							Uranium	2%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**12.9**	Antimony	54%	Ingestion	19%
							Arsenic	3%	Dermal	81%
							Barium	1%	Inhalation	0%
							Iron	4%		
							Mercury	13%		
							Nickel	23%		
							Uranium	3%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.17. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 3

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**3.6E-05**	Arsenic	3%	Ingestion	11%	**<1**	*No COCs		Ingestion	
(surface soil)		PCB, Total	3%	Dermal	7%				Dermal	
		Uranium-235	6%	Inhalation	0%				Inhalation	
		Uranium-238	82%	External exposure	81%					
Future Industrial Worker	**6.4E-04**	Arsenic	3%	Ingestion	11%	**11.2**	Antimony	16%	Ingestion	4%
(surface soil)		PAH, Total	3%	Dermal	7%		Arsenic	1%	Dermal	96%
		PCB, Total	3%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Neptunium-237	2%	External exposure	81%		Iron	2%		
		Uranium-234	1%				Manganese	18%		
		Uranium-235	6%				Mercury	7%		
		Uranium-238	82%				Molybdenum	1%		
							Nickel	45%		
							Uranium	1%		
							Vanadium	4%		
Outdoor Worker	**9.3E-04**	Arsenic	6%	Ingestion	55%	**11.0**	Antimony	17%	Ingestion	28%
(surface soil)		PAH, Total	2%	Dermal	4%		Arsenic	3%	Dermal	72%
		PCB, Total	3%	Inhalation	0%		Cobalt	4%	Inhalation	0%
		Neptunium-237	1%	External exposure	41%		Copper	2%		
		Technetium-99	1%				Iron	5%		
		Thorium-230	0%				Manganese	15%		
		Uranium-234	5%				Mercury	6%		
		Uranium-235	4%				Molybdenum	2%		
		Uranium-238	78%				Nickel	38%		
							Thallium	1%		
							Uranium	3%		
							Vanadium	3%		

Table D8.17. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Outdoor Worker	**1.2E-03**	Arsenic	6%	Ingestion	54%	**19.6**	Antimony	15%	Ingestion	43%
(surface and subsurface		PAH, Total	1%	Dermal	4%		Arsenic	2%	Dermal	57%
soil)		PCB, Total	5%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Neptunium-237	1%	External exposure	41%		Copper	1%		
		Technetium-99	0%				Iron	3%		
		Thorium-230	0%				Manganese	9%		
		Uranium-234	5%				Mercury	7%		
		Uranium-235	4%				Molybdenum	1%		
		Uranium-238	76%				Nickel	21%		
							Thallium	35%		
							Uranium	2%		
							Vanadium	2%		
Excavation Worker	**2.4E-04**	Arsenic	6%	Ingestion	54%	**19.6**	Antimony	15%	Ingestion	43%
(surface and subsurface		PAH, Total	1%	Dermal	4%		Arsenic	2%	Dermal	57%
soil)		PCB, Total	5%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Neptunium-237	1%	External exposure	41%		Copper	1%		
		Uranium-234	5%				Iron	3%		
		Uranium-235	4%				Manganese	9%		
		Uranium-238	76%				Mercury	7%		
							Molybdenum	1%		
							Nickel	21%		
							Thallium	35%		
							Uranium	2%		
							Vanadium	2%		

Table D8.17. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**2.2E-03**	Arsenic	5%	Ingestion	14%	**27.4**	Antimony	16%	Ingestion	4%
(surface soil)		PAH, Total	3%	Dermal	7%		Arsenic	1%	Dermal	95%
		PCB, Total	4%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Neptunium-237	2%	External exposure	78%		Copper	1%		
		Technetium-99	0%				Iron	2%		
		Thorium-230	0%				Manganese	18%		
		Uranium-234	1%				Mercury	7%		
		Uranium-235	6%				Molybdenum	1%		
		Uranium-238	79%				Nickel	45%		
							Silver	1%		
							Thallium	0%		
							Uranium	1%		
							Vanadium	4%		
Future Child Resident	See Future Adult Resident					**75.2**	Antimony	17%	Ingestion	17%
(surface soil)							Arsenic	2%	Dermal	83%
							Barium	0%	Inhalation	0%
							Cadmium	0%		
							Cobalt	3%		
							Copper	1%		
							Iron	4%		
							Manganese	16%		
							Mercury	6%		
							Molybdenum	2%		
							Nickel	41%		
							Silver	1%		
							Thallium	1%		
							Uranium	2%		
							Vanadium	4%		

Table D8.17. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**4.1E-04**	Arsenic	11%	Ingestion	29%	**8.1**	Antimony	16%	Ingestion	4%
		PAH, Total	7%	Dermal	18%		Cobalt	2%	Dermal	96%
		PCB, Total	10%	Inhalation	0%		Iron	2%	Inhalation	0%
		Neptunium-237	1%	External exposure	52%		Manganese	18%		
		Uranium-234	2%				Mercury	7%		
		Uranium-235	4%				Nickel	45%		
		Uranium-238	65%				Uranium	1%		
							Vanadium	4%		
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**25.1**	Antimony	16%	Ingestion	4%
							Arsenic	1%	Dermal	96%
							Cobalt	2%	Inhalation	0%
							Copper	1%		
							Iron	2%		
							Manganese	18%		
							Mercury	7%		
							Molybdenum	1%		
							Nickel	45%		
							Silver	1%		
							Thallium	0%		
							Uranium	1%		
							Vanadium	4%		

Table D8.17. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**30.1**	Antimony	17%	Ingestion	17%
							Arsenic	2%	Dermal	83%
							Cobalt	3%	Inhalation	0%
							Copper	1%		
							Iron	4%		
							Manganese	16%		
							Mercury	6%		
							Molybdenum	2%		
							Nickel	41%		
							Silver	1%		
							Thallium	1%		
							Uranium	2%		
							Vanadium	4%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.18. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 4

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**8.9E-06**	Arsenic	15%	Ingestion	13%	**<1**	*No COCs		Ingestion	
(surface soil)		PAH, Total	12%	Dermal	80%				Dermal	
		PCB, Total	65%	Inhalation	0%				Inhalation	
				External exposure	7%					
Future Industrial Worker	**1.6E-04**	Arsenic	15%	Ingestion	13%	**14.7**	Antimony	13%	Ingestion	3%
(surface soil)		PAH, Total	12%	Dermal	80%		Arsenic	1%	Dermal	97%
		PCB, Total	65%	Inhalation	0%		Iron	1%	Inhalation	0%
		Neptunium-237	2%	External exposure	7%		Manganese	11%		
		Uranium-238	5%				Mercury	15%		
							Nickel	51%		
							Silver	2%		
							Vanadium	3%		
Outdoor Worker	**2.5E-04**	Arsenic	27%	Ingestion	59%	**13.4**	Antimony	15%	Ingestion	21%
(surface soil)		PAH, Total	11%	Dermal	38%		Arsenic	3%	Dermal	79%
		PCB, Total	55%	Inhalation	0%		Iron	3%	Inhalation	0%
		Neptunium-237	1%	External exposure	3%		Manganese	10%		
		Uranium-234	1%				Mercury	14%		
		Uranium-238	5%				Nickel	46%		
							Silver	2%		
							Uranium	1%		
							Vanadium	3%		

Table D8.18. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 4 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Outdoor Worker	**2.4E-04**	Arsenic	28%	Ingestion	59%	**23.4**	Antimony	10%	Ingestion	40%
(surface and subsurface		PAH, Total	8%	Dermal	38%		Arsenic	2%	Dermal	60%
soil)		PCB, Total	58%	Inhalation	0%		Iron	2%	Inhalation	0%
		Neptunium-237	1%	External exposure	2%		Manganese	6%		
		Uranium-234	1%				Mercury	14%		
		Uranium-238	3%				Nickel	27%		
							Silver	1%		
							Thallium	37%		
							Uranium	1%		
							Vanadium	2%		
Excavation Worker	**4.7E-05**	Arsenic	28%	Ingestion	59%	**23.4**	Antimony	10%	Ingestion	40%
(surface and subsurface		PAH, Total	8%	Dermal	38%		Arsenic	2%	Dermal	60%
soil)		PCB, Total	58%	Inhalation	0%		Iron	2%	Inhalation	0%
		Uranium-238	3%	External exposure	2%		Manganese	6%		
							Mercury	14%		
							Nickel	27%		
							Silver	1%		
							Thallium	37%		
							Uranium	1%		
							Vanadium	2%		

Table D8.18. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 4 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident (surface soil)	**6.4E-04**	Arsenic	20%	Ingestion	29%	**35.8**	Antimony	13%	Ingestion	3%
		PAH, Total	12%	Dermal	66%		Arsenic	1%	Dermal	97%
		PCB, Total	62%	Inhalation	0%		Iron	1%	Inhalation	0%
		Neptunium-237	1%	External exposure	6%		Manganese	11%		
		Uranium-234	0%				Mercury	15%		
		Uranium-235	0%				Nickel	51%		
		Uranium-238	4%				Silver	2%		
							Uranium	1%		
							Vanadium	3%		
Future Child Resident (surface soil)	See Future Adult Resident					**94.4**	Antimony	14%	Ingestion	13%
							Arsenic	2%	Dermal	87%
							Barium	0%	Inhalation	0%
							Cadmium	0%		
							Copper	0%		
							Iron	2%		
							Manganese	11%		
							Mercury	15%		
							Nickel	49%		
							Silver	2%		
							Thallium	0%		
							Uranium	1%		
							Vanadium	3%		
Future Adult Recreational User (surface soil)	**2.8E-04**	Arsenic	20%	Ingestion	28%	**10.6**	Antimony	13%	Ingestion	3%
		PAH, Total	13%	Dermal	71%		Arsenic	1%	Dermal	97%
		PCB, Total	65%	Inhalation	0%		Iron	1%	Inhalation	0%
		Neptunium-237	0%	External exposure	2%		Manganese	11%		
		Uranium-238	1%				Mercury	15%		
							Nickel	51%		
							Silver	2%		
							Vanadium	3%		

Table D8.18. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 4 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**32.9**	Antimony	13%	Ingestion	3%
							Arsenic	1%	Dermal	97%
							Iron	1%	Inhalation	0%
							Manganese	11%		
							Mercury	15%		
							Nickel	51%		
							Silver	2%		
							Uranium	1%		
							Vanadium	3%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**37.8**	Antimony	14%	Ingestion	13%
							Arsenic	2%	Dermal	87%
							Cadmium	0%	Inhalation	0%
							Copper	0%		
							Iron	2%		
							Manganese	11%		
							Mercury	15%		
							Nickel	49%		
							Silver	2%		
							Thallium	0%		
							Uranium	1%		
							Vanadium	3%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.19. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 5

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**6.0E-06**	PCB, Total	77%	Ingestion	11%	**<1**	*No COCs		Ingestion	
(surface soil)				Dermal	80%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	9%					
Future Industrial Worker	**1.1E-04**	Arsenic	8%	Ingestion	11%	**6.3**	Antimony	42%	Ingestion	4%
(surface soil)		PAH, Total	5%	Dermal	80%		Copper	4%	Dermal	96%
		PCB, Total	77%	Inhalation	0%		Mercury	15%	Inhalation	0%
		Neptunium-237	3%	External exposure	9%		Nickel	34%		
		Uranium-235	1%				Uranium	2%		
		Uranium-238	6%							
Outdoor Worker	**1.6E-04**	Arsenic	16%	Ingestion	54%	**6.4**	Antimony	41%	Ingestion	30%
(surface soil)		PAH, Total	5%	Dermal	41%		Arsenic	2%	Dermal	70%
		PCB, Total	71%	Inhalation	0%		Copper	9%	Inhalation	0%
		Neptunium-237	1%	External exposure	5%		Mercury	12%		
		Uranium-235	1%				Nickel	28%		
		Uranium-238	6%				Uranium	4%		
Outdoor Worker	**2.4E-04**	Arsenic	11%	Ingestion	53%	**8.3**	Antimony	38%	Ingestion	29%
(surface and subsurface		PAH, Total	2%	Dermal	45%		Arsenic	2%	Dermal	71%
		PCB, Total	83%	Inhalation	0%		Copper	7%	Inhalation	0%
		Neptunium-237	1%	External exposure	2%		Iron	2%		
		Uranium-238	3%				Manganese	9%		
							Mercury	15%		
							Nickel	21%		
							Uranium	3%		
Excavation Worker	**4.9E-05**	Arsenic	11%	Ingestion	53%	**8.3**	Antimony	38%	Ingestion	29%
(surface and subsurface		PAH, Total	2%	Dermal	45%		Arsenic	2%	Dermal	71%
soil)		PCB, Total	83%	Inhalation	0%		Copper	7%	Inhalation	0%
		Uranium-238	3%	External exposure	2%		Iron	2%		
							Manganese	9%		
							Mercury	15%		
							Nickel	21%		
							Uranium	3%		

Table D8.19. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 5 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**4.3E-04**	Arsenic	11%	Ingestion	25%	**15.3**	Antimony	42%	Ingestion	5%
(surface soil)		PAH, Total	5%	Dermal	67%		Arsenic	1%	Dermal	95%
		PCB, Total	76%	Inhalation	0%		Barium	1%	Inhalation	0%
		Neptunium-237	2%	External exposure	7%		Copper	4%		
		Uranium-235	1%				Mercury	15%		
		Uranium-238	5%				Nickel	34%		
							Silver	1%		
							Uranium	2%		
Future Child Resident	See Future Adult Resident					**42.8**	Antimony	41%	Ingestion	19%
(surface soil)							Arsenic	2%	Dermal	81%
							Barium	1%	Inhalation	0%
							Cadmium	1%		
							Copper	7%		
							Mercury	13%		
							Nickel	30%		
							Silver	1%		
							Uranium	3%		
							Zinc	0%		

Table D8.19. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 5 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.8E-04**	Arsenic	12%	Ingestion	24%	**4.5**	Antimony	42%	Ingestion	5%
		PAH, Total	6%	Dermal	73%		Copper	4%	Dermal	95%
		PCB, Total	80%	Inhalation	0%		Mercury	15%	Inhalation	0%
		Neptunium-237	1%	External exposure	2%		Nickel	34%		
		Uranium-238	2%							
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**14.1**	Antimony	42%	Ingestion	4%
							Arsenic	1%	Dermal	96%
							Barium	1%	Inhalation	0%
							Copper	4%		
							Mercury	15%		
							Nickel	34%		
							Silver	1%		
							Uranium	2%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**17.1**	Antimony	41%	Ingestion	19%
							Arsenic	2%	Dermal	81%
							Barium	1%	Inhalation	0%
							Cadmium	1%		
							Copper	7%		
							Mercury	13%		
							Nickel	30%		
							Silver	1%		
							Uranium	3%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.20. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 6

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**3.4E-06**	PAH, Total	30%	Ingestion	11%	**<1**	*No COCs		Ingestion	
(surface soil)		PCB, Total	33%	Dermal	80%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	9%					
Future Industrial Worker	**6.1E-05**	Arsenic	14%	Ingestion	11%	**5.5**	Antimony	42%	Ingestion	4%
(surface soil)		PAH, Total	30%	Dermal	80%		Cobalt	2%	Dermal	96%
		PCB, Total	33%	Inhalation	0%		Mercury	17%	Inhalation	0%
		Neptunium-237	4%	External exposure	9%		Nickel	33%		
		Uranium-235	3%							
		Uranium-238	15%							
Outdoor Worker	**9.6E-05**	Arsenic	26%	Ingestion	54%	**5.4**	Antimony	42%	Ingestion	29%
(surface soil)		PAH, Total	26%	Dermal	41%		Arsenic	3%	Dermal	71%
		PCB, Total	28%	Inhalation	0%		Cobalt	4%	Inhalation	0%
		Neptunium-237	2%	External exposure	5%		Iron	4%		
		Uranium-234	3%				Mercury	15%		
		Uranium-235	1%				Nickel	28%		
		Uranium-238	14%							
Outdoor Worker	**8.5E-05**	Arsenic	28%	Ingestion	53%	**6.8**	Antimony	38%	Ingestion	26%
(surface and subsurface		PAH, Total	23%	Dermal	45%		Arsenic	2%	Dermal	74%
soil)		PCB, Total	32%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Neptunium-237	2%	External exposure	2%		Iron	3%		
		Uranium-234	3%				Manganese	11%		
		Uranium-235	1%				Mercury	17%		
		Uranium-238	12%				Nickel	22%		
Excavation Worker	**1.7E-05**	Arsenic	28%	Ingestion	53%	**6.8**	Antimony	38%	Ingestion	26%
(surface and subsurface		PAH, Total	23%	Dermal	45%		Arsenic	2%	Dermal	74%
soil)		PCB, Total	32%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Uranium-238	12%	External exposure	2%		Iron	3%		
							Manganese	11%		
							Mercury	17%		
							Nickel	22%		

Table D8.20. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 6 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**2.4E-04**	Arsenic	19%	Ingestion	27%	**13.4**	Antimony	42%	Ingestion	5%
(surface soil)		PAH, Total	29%	Dermal	56%		Arsenic	1%	Dermal	95%
		PCB, Total	32%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Neptunium-237	3%	External exposure	17%		Iron	2%		
		Uranium-234	1%				Mercury	17%		
		Uranium-235	2%				Nickel	33%		
		Uranium-238	13%				Silver	1%		
							Uranium	1%		
Future Child Resident	See Future Adult Resident					**37.0**	Antimony	42%	Ingestion	18%
(surface soil)							Arsenic	2%	Dermal	82%
							Barium	1%	Inhalation	0%
							Cadmium	1%		
							Cobalt	3%		
							Copper	1%		
							Iron	3%		
							Mercury	16%		
							Nickel	30%		
							Silver	1%		
							Uranium	1%		

Table D8.20. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 6 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**9.5E-05**	Arsenic	21%	Ingestion	29%	**4.0**	Antimony	42%	Ingestion	5%
		PAH, Total	34%	Dermal	66%		Mercury	17%	Dermal	95%
		PCB, Total	37%	Inhalation	0%		Nickel	33%	Inhalation	0%
		Neptunium-237	1%	External exposure	5%					
		Uranium-238	5%							
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**12.3**	Antimony	42%	Ingestion	4%
							Arsenic	1%	Dermal	96%
							Cobalt	2%	Inhalation	0%
							Iron	2%		
							Mercury	17%		
							Nickel	33%		
							Silver	1%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**14.8**	Antimony	42%	Ingestion	18%
							Arsenic	2%	Dermal	82%
							Barium	1%	Inhalation	0%
							Cadmium	1%		
							Cobalt	3%		
							Iron	3%		
							Mercury	16%		
							Nickel	30%		
							Silver	1%		
							Uranium	1%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.21. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 7

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**5.8E-06**	PCB, Total	81%	Ingestion	12%	**<1**	*No COCs		Ingestion	
				Dermal	83%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	5%					
Future Industrial Worker (surface soil)	**1.0E-04**	Arsenic	11%	Ingestion	12%	**8.8**	Antimony	40%	Ingestion	3%
		PAH, Total	2%	Dermal	83%		Manganese	17%	Dermal	96%
		PCB, Total	81%	Inhalation	0%		Nickel	38%	Inhalation	0%
		Uranium-235	1%	External exposure	5%					
		Uranium-238	5%							
Outdoor Worker (surface soil)	**1.6E-04**	Arsenic	20%	Ingestion	57%	**8.5**	Antimony	42%	Ingestion	25%
		PAH, Total	2%	Dermal	40%		Arsenic	2%	Dermal	75%
		PCB, Total	72%	Inhalation	0%		Iron	2%	Inhalation	0%
		Uranium-234	1%	External exposure	3%		Manganese	15%		
		Uranium-235	1%				Nickel	33%		
		Uranium-238	4%				Thallium	1%		
Outdoor Worker (surface and subsurface soil)	**1.5E-04**	Arsenic	21%	Ingestion	57%	**8.5**	Antimony	43%	Ingestion	25%
		PAH, Total	1%	Dermal	41%		Arsenic	2%	Dermal	75%
		PCB, Total	73%	Inhalation	0%		Cadmium	1%	Inhalation	0%
		Uranium-234	1%	External exposure	2%		Iron	2%		
		Uranium-238	4%				Manganese	14%		
							Nickel	33%		
							Silver	1%		
Excavation Worker (surface and subsurface soil)	**3.1E-05**	Arsenic	21%	Ingestion	57%	**8.5**	Antimony	43%	Ingestion	25%
		PCB, Total	73%	Dermal	41%		Arsenic	2%	Dermal	75%
		Uranium-238	4%	Inhalation	0%		Cadmium	1%	Inhalation	0%
				External exposure	2%		Iron	2%		
							Manganese	14%		
							Nickel	33%		
							Silver	1%		

Table D8.21. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 7 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**4.2E-04**	Arsenic	14%	Ingestion	27%	**21.7**	Antimony	40%	Ingestion	4%
(surface soil)		PAH, Total	2%	Dermal	68%		Arsenic	1%	Dermal	96%
		PCB, Total	79%	Inhalation	0%		Barium	0%	Inhalation	0%
		Uranium-234	<1%	External exposure	4%		Iron	1%		
		Uranium-235	1%				Manganese	17%		
		Uranium-238	4%				Nickel	38%		
							Silver	1%		
							Thallium	1%		
Future Child Resident	See Future Adult Resident					**58.4**	Antimony	41%	Ingestion	15%
(surface soil)							Arsenic	2%	Dermal	85%
							Barium	0%	Inhalation	0%
							Cadmium	1%		
							Copper	1%		
							Iron	2%		
							Manganese	16%		
							Nickel	35%		
							Silver	1%		
							Thallium	1%		
							Uranium	1%		

Table D8.21. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 7 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.8E-04**	Arsenic	14%	Ingestion	26%	**6.4**	Antimony	40%	Ingestion	4%
		PAH, Total	2%	Dermal	73%		Manganese	17%	Dermal	96%
		PCB, Total	82%	Inhalation	0%		Nickel	38%	Inhalation	0%
		Uranium-238	1%	External exposure	1%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**19.9**	Antimony	40%	Ingestion	3%
							Arsenic	1%	Dermal	97%
							Iron	1%	Inhalation	0%
							Manganese	17%		
							Nickel	38%		
							Silver	1%		
							Thallium	1%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**23.4**	Antimony	41%	Ingestion	15%
							Arsenic	2%	Dermal	85%
							Barium	0%	Inhalation	0%
							Cadmium	1%		
							Copper	1%		
							Iron	2%		
							Manganese	16%		
							Nickel	35%		
							Silver	1%		
							Thallium	1%		
							Uranium	1%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.22. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 8

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**1.9E-06**	*No COCs		Ingestion	15%	**<1**	*No COCs		Ingestion	
				Dermal	70%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	15%					
Future Industrial Worker (surface soil)	**3.4E-05**	Arsenic	24%	Ingestion	15%	**4.1**	Antimony	47%	Ingestion	4%
		PAH, Total	12%	Dermal	70%		Mercury	18%	Dermal	96%
		PCB, Total	48%	Inhalation	0%		Nickel	27%	Inhalation	0%
		Neptunium-237	4%	External exposure	15%					
		Uranium-238	12%							
Outdoor Worker (surface soil)	**5.7E-05**	Arsenic	40%	Ingestion	62%	**4.0**	Antimony	48%	Ingestion	28%
		PAH, Total	10%	Dermal	31%		Arsenic	4%	Dermal	72%
		PCB, Total	38%	Inhalation	0%		Iron	4%	Inhalation	0%
		Neptunium-237	2%	External exposure	7%		Mercury	16%		
		Uranium-238	10%				Nickel	23%		
Outdoor Worker (surface and subsurface soil)	**5.9E-05**	Arsenic	38%	Ingestion	62%	**5.8**	Antimony	44%	Ingestion	26%
		PAH, Total	7%	Dermal	34%		Arsenic	2%	Dermal	74%
		PCB, Total	46%	Inhalation	0%		Iron	3%	Inhalation	0%
		Uranium-238	6%	External exposure	4%		Manganese	11%		
							Mercury	19%		
							Nickel	16%		
							Silver	2%		
Excavation Worker (surface and subsurface soil)	**1.2E-05**	Arsenic	38%	Ingestion	62%	**5.8**	Antimony	44%	Ingestion	26%
		PCB, Total	46%	Dermal	34%		Arsenic	2%	Dermal	74%
				Inhalation	0%		Iron	3%	Inhalation	0%
				External exposure	4%		Manganese	11%		
							Mercury	19%		
							Nickel	16%		
							Silver	2%		

Table D8.22. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 8 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**1.4E-04**	Arsenic	31%	Ingestion	32%	**9.9**	Antimony	47%	Ingestion	5%
(surface soil)		PAH, Total	11%	Dermal	57%		Arsenic	1%	Dermal	95%
		PCB, Total	45%	Inhalation	0%		Iron	2%	Inhalation	0%
		Neptunium-237	3%	External exposure	12%		Mercury	18%		
		Uranium-238	9%				Nickel	27%		
							Silver	2%		
Future Child Resident	See Future Adult Resident					**27.3**	Antimony	48%	Ingestion	18%
(surface soil)							Arsenic	3%	Dermal	82%
							Barium	1%	Inhalation	0%
							Cadmium	1%		
							Iron	3%		
							Mercury	17%		
							Nickel	25%		
							Silver	2%		
							Uranium	1%		

Table D8.22. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 8 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**5.8E-05**	Arsenic	33%	Ingestion	32%	**3.0**	Antimony	47%	Ingestion	5%
		PAH, Total	12%	Dermal	64%		Mercury	18%	Dermal	95%
		PCB, Total	50%	Inhalation	0%		Nickel	27%	Inhalation	0%
		Uranium-238	4%	External exposure	4%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**9.1**	Antimony	47%	Ingestion	4%
							Arsenic	1%	Dermal	96%
							Iron	2%	Inhalation	0%
							Mercury	18%		
							Nickel	27%		
							Silver	2%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**10.9**	Antimony	48%	Ingestion	18%
							Arsenic	3%	Dermal	82%
							Cadmium	1%	Inhalation	0%
							Iron	3%		
							Mercury	17%		
							Nickel	25%		
							Silver	2%		
							Uranium	1%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.23. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 9

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**2.0E-06**	PCB, Total	58%	Ingestion	15%	**<1**	*No COCs		Ingestion	
				Dermal	74%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	11%					
Future Industrial Worker (surface soil)	**3.5E-05**	Arsenic	22%	Ingestion	15%	**4.6**	Antimony	63%	Ingestion	4%
		PAH, Total	8%	Dermal	74%		Nickel	20%	Dermal	96%
		PCB, Total	58%	Inhalation	0%		Silver	3%	Inhalation	0%
		Uranium-238	12%	External exposure	11%		Vanadium	10%		
Outdoor Worker (surface soil)	**5.9E-05**	Arsenic	37%	Ingestion	62%	**4.6**	Antimony	63%	Ingestion	29%
		PAH, Total	6%	Dermal	33%		Arsenic	3%	Dermal	71%
		PCB, Total	47%	Inhalation	0%		Iron	4%	Inhalation	0%
		Uranium-238	10%	External exposure	5%		Nickel	16%		
							Vanadium	8%		
Outdoor Worker (surface and subsurface soil)	**6.1E-05**	Arsenic	42%	Ingestion	64%	**7.7**	Antimony	41%	Ingestion	24%
		PAH, Total	5%	Dermal	33%		Arsenic	2%	Dermal	76%
		PCB, Total	46%	Inhalation	0%		Cadmium	1%	Inhalation	0%
		Uranium-238	6%	External exposure	3%		Iron	2%		
							Manganese	21%		
							Mercury	14%		
							Nickel	10%		
							Silver	2%		
							Vanadium	5%		
Excavation Worker (surface and subsurface soil)	**1.2E-05**	Arsenic	42%	Ingestion	64%	**7.7**	Antimony	41%	Ingestion	24%
		PCB, Total	46%	Dermal	33%		Arsenic	2%	Dermal	76%
				Inhalation	0%		Cadmium	1%	Inhalation	0%
				External exposure	3%		Iron	2%		
							Manganese	21%		
							Mercury	14%		
							Nickel	10%		
							Silver	2%		
							Vanadium	5%		

Table D8.23. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 9 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**1.5E-04**	Arsenic	28%	Ingestion	31%	**11.2**	Antimony	63%	Ingestion	5%
(surface soil)		PAH, Total	7%	Dermal	60%		Arsenic	1%	Dermal	95%
		PCB, Total	55%	Inhalation	0%		Barium	1%	Inhalation	0%
		Uranium-238	10%	External exposure	9%		Iron	2%		
							Nickel	20%		
							Silver	3%		
							Vanadium	10%		
Future Child Resident	See Future Adult Resident					**31.0**	Antimony	63%	Ingestion	18%
(surface soil)							Arsenic	2%	Dermal	82%
							Barium	1%	Inhalation	0%
							Cadmium	1%		
							Iron	3%		
							Nickel	18%		
							Silver	2%		
							Uranium	1%		
							Vanadium	9%		

Table D8.23. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 9 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**6.1E-05**	Arsenic	29%	Ingestion	31%	**3.3**	Antimony	63%	Ingestion	5%
		PAH, Total	8%	Dermal	67%		Nickel	20%	Dermal	95%
		PCB, Total	59%	Inhalation	0%		Vanadium	10%	Inhalation	0%
		Uranium-238	4%	External exposure	3%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**10.3**	Antimony	63%	Ingestion	4%
							Arsenic	1%	Dermal	96%
							Barium	1%	Inhalation	0%
							Iron	2%		
							Nickel	20%		
							Silver	3%		
							Vanadium	10%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**12.4**	Antimony	63%	Ingestion	18%
							Arsenic	2%	Dermal	82%
							Barium	1%	Inhalation	0%
							Cadmium	1%		
							Iron	3%		
							Nickel	18%		
							Silver	2%		
							Vanadium	9%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.24. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 10

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**1.4E-06**	PAH, Total	100%	Ingestion Dermal Inhalation External exposure	10% 90% 0% 0%	**5.4**	Antimony Mercury Nickel	60% 11% 25%	Ingestion Dermal Inhalation	3% 96% 0%
Outdoor Worker (surface soil)	**2.0E-06**	PAH, Total	100%	Ingestion Dermal Inhalation External exposure	52% 48% 0% 0%	**5.2**	Antimony Mercury Nickel Uranium	63% 9% 22% 2%	Ingestion Dermal Inhalation	26% 74% 0%
Outdoor Worker (surface and subsurface soil)	**2.1E-05**	Arsenic PAH, Total	91% 9%	Ingestion Dermal Inhalation External exposure	79% 21% 0% 0%	**5.3**	Antimony Arsenic Mercury Nickel Uranium	61% 2% 9% 21% 2%	Ingestion Dermal Inhalation	27% 73% 0%
Excavation Worker (surface and subsurface soil)	**4.3E-06**	Arsenic	91%	Ingestion Dermal Inhalation External exposure	79% 21% 0% 0%	**5.3**	Antimony Arsenic Mercury Nickel Uranium	61% 2% 9% 21% 2%	Ingestion Dermal Inhalation	27% 73% 0%

Table D8.24. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 10 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**5.7E-06**	PAH, Total	100%	Ingestion	24%	**13.2**	Antimony	60%	Ingestion	4%
(surface soil)				Dermal	76%		Barium	1%	Dermal	96%
				Inhalation	0%		Mercury	10%	Inhalation	0%
				External exposure	0%		Nickel	25%		
							Silver	1%		
							Uranium	1%		
Future Child Resident	See Future Adult Resident					**35.6**	Antimony	61%	Ingestion	16%
(surface soil)							Barium	1%	Dermal	84%
							Cadmium	1%	Inhalation	0%
							Mercury	10%		
							Nickel	23%		
							Silver	1%		
							Uranium	2%		

Table D8.24. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 15, EU 10 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**2.6E-06**	PAH, Total	100%	Ingestion	22%	**3.9**	Antimony	60%	Ingestion	4%
				Dermal	78%		Mercury	11%	Dermal	96%
				Inhalation	0%		Nickel	25%	Inhalation	0%
				External exposure	0%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**12.1**	Antimony	60%	Ingestion	3%
							Barium	1%	Dermal	97%
							Mercury	11%	Inhalation	0%
							Nickel	25%		
							Silver	1%		
							Uranium	1%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**14.3**	Antimony	61%	Ingestion	16%
							Barium	1%	Dermal	84%
							Cadmium	1%	Inhalation	0%
							Mercury	10%		
							Nickel	23%		
							Silver	1%		
							Uranium	2%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.25. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 1

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**4.3E-06**	PCB, Total	40%	Ingestion	10%	**<1**	*No COCs		Ingestion	
(surface soil)		Uranium-238	53%	Dermal	39%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	51%					
Future Industrial Worker	**7.8E-05**	PAH, Total	3%	Ingestion	10%	**1.6**	Nickel	9%	Ingestion	8%
(surface soil)		PCB, Total	40%	Dermal	39%		Uranium	26%	Dermal	92%
		Uranium-235	4%	Inhalation	0%		Vanadium	61%	Inhalation	0%
		Uranium-238	53%	External exposure	51%					
Outdoor Worker	**1.1E-04**	PAH, Total	3%	Ingestion	51%	**2.0**	Iron	9%	Ingestion	45%
(surface soil)		PCB, Total	39%	Dermal	21%		Nickel	6%	Dermal	55%
		Uranium-234	2%	Inhalation	0%		Uranium	45%	Inhalation	0%
		Uranium-235	3%	External exposure	28%		Vanadium	41%		
		Uranium-238	53%							
Outdoor Worker	**1.2E-04**	Arsenic	17%	Ingestion	57%	**9.6**	Antimony	20%	Ingestion	27%
(surface and subsurface		PAH, Total	4%	Dermal	17%		Arsenic	1%	Dermal	73%
soil)		PCB, Total	24%	Inhalation	0%		Beryllium	2%	Inhalation	0%
		Uranium-234	2%	External exposure	26%		Cobalt	2%		
		Uranium-235	2%				Iron	2%		
		Uranium-238	50%				Manganese	9%		
							Mercury	37%		
							Nickel	6%		
							Thallium	1%		
							Uranium	10%		
							Vanadium	8%		

Table D8.25. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 1 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Excavation Worker (surface and subsurface soil)	**2.3E-05**	Arsenic	17%	Ingestion	57%	**9.6**	Antimony	20%	Ingestion	27%
		PCB, Total	24%	Dermal	17%		Arsenic	1%	Dermal	73%
		Uranium-238	50%	Inhalation	0%		Beryllium	2%	Inhalation	0%
				External exposure	26%		Cobalt	2%		
							Iron	2%		
							Manganese	9%		
							Mercury	37%		
							Nickel	6%		
							Thallium	1%		
							Uranium	10%		
							Vanadium	8%		
Future Adult Resident (surface soil)	**2.8E-04**	PAH, Total	3%	Ingestion	16%	**3.9**	Iron	5%	Ingestion	9%
		PCB, Total	43%	Dermal	36%		Nickel	9%	Dermal	91%
		Uranium-234	0%	Inhalation	0%		Uranium	26%	Inhalation	0%
		Uranium-235	4%	External exposure	47%		Vanadium	60%		
		Uranium-238	49%							
Future Child Resident (surface soil)	See Future Adult Resident					**12.1**	Iron	7%	Ingestion	30%
							Nickel	7%	Dermal	70%
							Uranium	37%	Inhalation	0%
							Vanadium	49%		

Table D8.25. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 1 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**8.1E-05**	PAH, Total	5%	Ingestion	22%	**1.2**	Nickel	9%	Ingestion	9%
		PCB, Total	67%	Dermal	57%		Uranium	26%	Dermal	91%
		Uranium-235	2%	Inhalation	0%		Vanadium	60%	Inhalation	0%
		Uranium-238	25%	External exposure	20%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**3.5**	Iron	5%	Ingestion	7%
							Nickel	9%	Dermal	93%
							Uranium	25%	Inhalation	0%
							Vanadium	61%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**4.8**	Iron	7%	Ingestion	30%
							Nickel	7%	Dermal	70%
							Uranium	37%	Inhalation	0%
							Vanadium	49%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.26. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 2

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**9.7E-06**	Arsenic	17%	Ingestion	9%	**<1**	*No COCs		Ingestion	
(surface soil)		Cesium-137	48%	Dermal	17%				Dermal	
		Uranium-238	18%	Inhalation	0%				Inhalation	
				External exposure	74%					
Future Industrial Worker	**1.7E-04**	Arsenic	17%	Ingestion	9%	**7.3**	Arsenic	3%	Ingestion	18%
(surface soil)		PCB, Total	6%	Dermal	17%		Beryllium	2%	Dermal	81%
		Cesium-137	48%	Inhalation	0%		Cobalt	6%	Inhalation	0%
		Radium-228	6%	External exposure	74%		Iron	2%		
		Uranium-235	4%				Nickel	8%		
		Uranium-238	18%				Thallium	62%		
							Uranium	6%		
							Vanadium	9%		
Outdoor Worker	**2.3E-04**	Arsenic	37%	Ingestion	48%	**13.9**	Aluminum	0%	Ingestion	68%
(surface soil)		PCB, Total	6%	Dermal	10%		Antimony	34%	Dermal	32%
		Cesium-137	28%	Inhalation	0%		Arsenic	3%	Inhalation	0%
		Radium-228	4%	External exposure	42%		Beryllium	1%		
		Thorium-230	1%				Cobalt	3%		
		Uranium-234	3%				Iron	1%		
		Uranium-235	2%				Manganese	5%		
		Uranium-238	19%				Mercury	7%		
							Nickel	3%		
							Thallium	33%		
							Uranium	8%		
							Vanadium	2%		

Table D8.26. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Outdoor Worker	**2.4E-04**	Arsenic	39%	Ingestion	51%	**21.1**	Aluminum	0%	Ingestion	48%
(surface and subsurface		PAH, Total	2%	Dermal	16%		Antimony	34%	Dermal	52%
soil)		PCB, Total	15%	Inhalation	0%		Arsenic	3%	Inhalation	0%
		Cesium-137	22%	External exposure	33%		Beryllium	1%		
		Radium-228	4%				Cobalt	3%		
		Thorium-230	0%				Iron	1%		
		Uranium-234	2%				Manganese	5%		
		Uranium-235	2%				Mercury	7%		
		Uranium-238	13%				Nickel	3%		
							Thallium	33%		
							Uranium	8%		
							Vanadium	2%		
Excavation Worker	**5.4E-05**	Arsenic	35%	Ingestion	48%	**21.1**	Aluminum	0%	Ingestion	48%
(surface and subsurface		PAH, Total	2%	Dermal	14%		Antimony	34%	Dermal	52%
soil)		PCB, Total	13%	Inhalation	0%		Arsenic	3%	Inhalation	0%
		Cesium-137	25%	External exposure	38%		Beryllium	1%		
		Radium-228	8%				Cobalt	3%		
		Uranium-238	12%				Iron	1%		
							Manganese	5%		
							Mercury	7%		
							Nickel	3%		
							Thallium	33%		
							Uranium	8%		
							Vanadium	2%		

Table D8.26. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**6.3E-04**	Arsenic	25%	Ingestion	19%	**18.3**	Aluminum	1%	Ingestion	20%
(surface soil)		PCB, Total	7%	Dermal	16%		Arsenic	3%	Dermal	79%
		Cesium-137	43%	Inhalation	0%		Beryllium	2%	Inhalation	0%
		Neptunium-237	<1%	External exposure	66%		Cobalt	6%		
		Radium-228	5%				Iron	2%		
		Uranium-234	1%				Nickel	8%		
		Uranium-235	3%				Thallium	63%		
		Uranium-238	16%				Uranium	6%		
							Vanadium	9%		
Future Child Resident	See Future Adult Resident					**74.6**	Aluminum	1%	Ingestion	54%
(surface soil)							Arsenic	3%	Dermal	46%
							Beryllium	1%	Inhalation	0%
							Cobalt	6%		
							Iron	2%		
							Nickel	5%		
							Thallium	68%		
							Uranium	7%		
							Vanadium	6%		

Table D8.26. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.5E-04**	Arsenic	47%	Ingestion	33%	**5.4**	Arsenic	3%	Ingestion	21%
		PCB, Total	13%	Dermal	32%		Beryllium	2%	Dermal	79%
		Cesium-137	23%	Inhalation	0%		Cobalt	6%	Inhalation	0%
		Radium-228	3%	External exposure	35%		Iron	2%		
		Uranium-234	1%				Nickel	8%		
		Uranium-235	2%				Thallium	63%		
		Uranium-238	10%				Uranium	6%		
							Vanadium	9%		
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**16.2**	Aluminum	1%	Ingestion	17%
							Arsenic	3%	Dermal	83%
							Beryllium	2%	Inhalation	0%
							Cobalt	6%		
							Iron	2%		
							Nickel	9%		
							Thallium	62%		
							Uranium	6%		
							Vanadium	10%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**29.8**	Aluminum	1%	Ingestion	54%
							Arsenic	3%	Dermal	46%
							Beryllium	1%	Inhalation	0%
							Cobalt	6%		
							Iron	2%		
							Nickel	5%		
							Thallium	68%		
							Uranium	7%		
							Vanadium	6%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.27. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 3

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**7.4E-06**	Arsenic	40%	Ingestion	16%	**<1**	*No COCs		Ingestion	
(surface soil)		PCB, Total	22%	Dermal	50%				Dermal	
		Cesium-137	30%	Inhalation	0%				Inhalation	
				External exposure	34%					
Future Industrial Worker	**1.3E-04**	Arsenic	40%	Ingestion	16%	**9.9**	Arsenic	3%	Ingestion	5%
(surface soil)		PAH, Total	3%	Dermal	50%		Mercury	64%	Dermal	95%
		PCB, Total	22%	Inhalation	0%		Molybdenum	3%	Inhalation	0%
		Cesium-137	30%	External exposure	34%		Nickel	4%		
		Neptunium-237	1%				Silver	6%		
		Uranium-238	3%				Thallium	7%		
							Uranium	1%		
							Vanadium	9%		
Outdoor Worker	**2.3E-04**	Arsenic	64%	Ingestion	65%	**10.7**	Arsenic	9%	Ingestion	35%
(surface soil)		PAH, Total	2%	Dermal	21%		Iron	2%	Dermal	65%
		PCB, Total	17%	Inhalation	0%		Mercury	52%	Inhalation	0%
		Cesium-137	13%	External exposure	15%		Molybdenum	5%		
		Neptunium-237	1%				Nickel	3%		
		Uranium-234	1%				Silver	5%		
		Uranium-238	3%				Thallium	14%		
							Uranium	3%		
							Vanadium	7%		

Table D8.27. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Outdoor Worker	**2.1E-04**	Arsenic	71%	Ingestion	68%	**8.1**	Antimony	22%	Ingestion	42%
(surface and subsurface		PAH, Total	3%	Dermal	20%		Arsenic	11%	Dermal	58%
soil)		PCB, Total	11%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Pentachlorophenol	1%	External exposure	12%		Iron	3%		
		Cesium-137	11%				Manganese	7%		
		Neptunium-237	1%				Mercury	14%		
		Uranium-234	1%				Molybdenum	7%		
		Uranium-238	2%				Nickel	4%		
							Silver	4%		
							Thallium	13%		
							Uranium	4%		
							Vanadium	9%		
Excavation Worker	**4.3E-05**	Arsenic	69%	Ingestion	66%	**8.1**	Antimony	22%	Ingestion	42%
(surface and subsurface		PAH, Total	2%	Dermal	20%		Arsenic	11%	Dermal	58%
soil)		PCB, Total	11%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Cesium-137	13%	External exposure	14%		Iron	3%		
							Manganese	7%		
							Mercury	14%		
							Molybdenum	7%		
							Nickel	4%		
							Silver	4%		
							Thallium	13%		
							Uranium	4%		
							Vanadium	9%		

Table D8.27. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**5.6E-04**	Arsenic	50%	Ingestion	35%	**24.3**	Arsenic	4%	Ingestion	6%
(surface soil)		PAH, Total	3%	Dermal	39%		Barium	1%	Dermal	94%
		PCB, Total	20%	Inhalation	0%		Iron	1%	Inhalation	0%
		Cesium-137	23%	External exposure	26%		Mercury	64%		
		Neptunium-237	1%				Molybdenum	3%		
		Uranium-235	0%				Nickel	4%		
		Uranium-238	2%				Silver	6%		
							Thallium	7%		
							Uranium	1%		
							Vanadium	9%		
Future Child Resident	See Future Adult Resident					**70.0**	Antimony	0%	Ingestion	23%
(surface soil)							Arsenic	6%	Dermal	77%
							Barium	1%	Inhalation	0%
							Beryllium	0%		
							Iron	2%		
							Mercury	57%		
							Molybdenum	4%		
							Nickel	3%		
							Silver	5%		
							Thallium	11%		
							Uranium	2%		
							Vanadium	8%		

Table D8.27. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**2.0E-04**	Arsenic	61%	Ingestion	40%	**7.2**	Arsenic	4%	Ingestion	6%
		PAH, Total	3%	Dermal	51%		Mercury	64%	Dermal	94%
		PCB, Total	26%	Inhalation	0%		Molybdenum	3%	Inhalation	0%
		Cesium-137	8%	External exposure	9%		Nickel	4%		
		Uranium-238	1%				Silver	6%		
							Thallium	7%		
							Vanadium	9%		
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**22.2**	Arsenic	3%	Ingestion	5%
							Barium	1%	Dermal	95%
							Iron	1%	Inhalation	0%
							Mercury	65%		
							Molybdenum	3%		
							Nickel	4%		
							Silver	6%		
							Thallium	7%		
							Uranium	1%		
							Vanadium	9%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**28.0**	Arsenic	6%	Ingestion	23%
							Barium	1%	Dermal	77%
							Iron	2%	Inhalation	0%
							Mercury	57%		
							Molybdenum	4%		
							Nickel	3%		
							Silver	5%		
							Thallium	11%		
							Uranium	2%		
							Vanadium	8%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.28. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 4

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**4.1E-05**	Arsenic	6%	Ingestion	13%	**<1**	*No COCs		Ingestion	
(surface soil)		PAH, Total	9%	Dermal	15%				Dermal	
		PCB, Total	4%	Inhalation	0%				Inhalation	
		Uranium-235	6%	External exposure	72%					
		Uranium-238	71%							
Future Industrial Worker	**7.2E-04**	Arsenic	6%	Ingestion	13%	**8.3**	Antimony	2%	Ingestion	6%
(surface soil)		PAH, Total	9%	Dermal	15%		Arsenic	3%	Dermal	94%
		PCB, Total	4%	Inhalation	0%		Mercury	64%	Inhalation	0%
		Cesium-137	1%	External exposure	72%		Molybdenum	3%		
		Neptunium-237	2%				Nickel	6%		
		Plutonium-239/240	<1%				Uranium	11%		
		Technetium-99	<1%				Vanadium	10%		
		Thorium-230	<1%							
		Uranium-234	1%							
		Uranium-235	6%							
		Uranium-238	71%							
Outdoor Worker	**1.1E-03**	Arsenic	11%	Ingestion	58%	**9.3**	Antimony	2%	Ingestion	38%
(surface soil)		PAH, Total	8%	Dermal	7%		Arsenic	8%	Dermal	62%
		PCB, Total	3%	Inhalation	0%		Iron	2%	Inhalation	0%
		Cesium-137	1%	External exposure	35%		Mercury	49%		
		Neptunium-237	1%				Molybdenum	5%		
		Plutonium-239/240	1%				Nickel	4%		
		Technetium-99	1%				Uranium	22%		
		Thorium-230	2%				Vanadium	8%		
		Uranium-234	6%							
		Uranium-235	3%							
		Uranium-238	64%							

Table D8.28. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 4 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Outdoor Worker	**1.3E-03**	Arsenic	9%	Ingestion	56%	**70.1**	Antimony	3%	Ingestion	17%
(surface and subsurface		PAH, Total	5%	Dermal	5%		Arsenic	1%	Dermal	83%
soil)		PCB, Total	3%	Inhalation	0%		Cobalt	0%	Inhalation	0%
		Cesium-137	2%	External exposure	39%		Copper	0%		
		Neptunium-237	9%				Iron	0%		
		Plutonium-239/240	1%				Manganese	1%		
		Technetium-99	5%				Mercury	2%		
		Thorium-230	2%				Molybdenum	1%		
		Uranium-234	9%				Nickel	86%		
		Uranium-235	4%				Silver	1%		
		Uranium-238	52%				Thallium	1%		
							Uranium	3%		
							Vanadium	1%		
Excavation Worker	**2.7E-04**	Arsenic	9%	Ingestion	55%	**70.1**	Antimony	3%	Ingestion	17%
(surface and subsurface		PAH, Total	5%	Dermal	5%		Arsenic	1%	Dermal	83%
soil)		PCB, Total	3%	Inhalation	0%		Cobalt	0%	Inhalation	0%
		Cesium-137	3%	External exposure	39%		Copper	0%		
		Neptunium-237	9%				Iron	0%		
		Plutonium-239/240	1%				Manganese	1%		
		Technetium-99	5%				Mercury	2%		
		Thorium-230	2%				Molybdenum	1%		
		Uranium-234	8%				Nickel	86%		
		Uranium-235	4%				Silver	1%		
		Uranium-238	52%				Thallium	1%		
							Uranium	3%		
							Vanadium	1%		

Table D8.28. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 4 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident	**2.5E-03**	Arsenic	9%	Ingestion	18%	**20.4**	Antimony	2%	Ingestion	7%
(surface soil)		PAH, Total	10%	Dermal	14%		Arsenic	3%	Dermal	93%
		PCB, Total	4%	Inhalation	0%		Iron	1%	Inhalation	0%
		Cesium-137	1%	External exposure	68%		Mercury	63%		
		Neptunium-237	1%				Molybdenum	3%		
		Plutonium-239/240	<1%				Nickel	6%		
		Technetium-99	<1%				Uranium	12%		
		Thorium-230	<1%				Vanadium	10%		
		Uranium-234	1%							
		Uranium-235	5%							
		Uranium-238	67%							
Future Child Resident	See Future Adult Resident					**60.1**	Aluminum	0%	Ingestion	25%
(surface soil)							Antimony	2%	Dermal	75%
							Arsenic	6%	Inhalation	0%
							Iron	1%		
							Mercury	55%		
							Molybdenum	4%		
							Nickel	5%		
							Uranium	18%		
							Vanadium	9%		

Table D8.28. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 26, EU 4 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**5.6E-04**	Arsenic	18%	Ingestion	32%	**6.1**	Antimony	2%	Ingestion	7%
		PAH, Total	20%	Dermal	30%		Arsenic	3%	Dermal	93%
		PCB, Total	8%	Inhalation	0%		Mercury	63%	Inhalation	0%
		Cesium-137	1%	External exposure	38%		Molybdenum	3%		
		Neptunium-237	1%				Nickel	6%		
		Plutonium-239/240	<1%				Uranium	12%		
		Technetium-99	<1%				Vanadium	10%		
		Thorium-230	1%							
		Uranium-234	2%							
		Uranium-235	3%							
		Uranium-238	46%							
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**18.6**	Antimony	2%	Ingestion	6%
							Arsenic	3%	Dermal	94%
							Iron	1%	Inhalation	0%
							Mercury	64%		
							Molybdenum	3%		
							Nickel	6%		
							Uranium	11%		
							Vanadium	10%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**24.0**	Antimony	2%	Ingestion	25%
							Arsenic	6%	Dermal	75%
							Iron	1%	Inhalation	0%
							Mercury	55%		
							Molybdenum	4%		
							Nickel	5%		
							Uranium	17%		
							Vanadium	9%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.29. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 77

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**1.5E-06**	*No COCs		Ingestion	11%	**<1**	*No COCs		Ingestion	
				Dermal	58%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	31%					
Future Industrial Worker (surface soil)	**2.7E-05**	PCB, Total	61%	Ingestion	11%	**1.8**	Iron	8%	Ingestion	8%
		Uranium-238	34%	Dermal	58%		Nickel	13%	Dermal	92%
				Inhalation	0%		Uranium	24%	Inhalation	0%
				External exposure	31%		Vanadium	55%		
Outdoor Worker (surface soil)	**4.0E-05**	PAH, Total	3%	Ingestion	55%	**2.3**	Iron	13%	Ingestion	45%
		PCB, Total	55%	Dermal	29%		Nickel	9%	Dermal	55%
		Thorium-230	10%	Inhalation	0%		Uranium	41%	Inhalation	0%
		Uranium-238	33%	External exposure	16%		Vanadium	37%		
Outdoor Worker (surface and subsurface soil)	**4.0E-05**	PAH, Total	3%	Ingestion	55%	**2.3**	Iron	13%	Ingestion	45%
		PCB, Total	55%	Dermal	29%		Nickel	9%	Dermal	55%
		Thorium-230	10%	Inhalation	0%		Uranium	41%	Inhalation	0%
		Uranium-238	33%	External exposure	16%		Vanadium	37%		
Excavation Worker (surface and subsurface soil)	**7.9E-06**	PCB, Total	55%	Ingestion	55%	**2.3**	Iron	13%	Ingestion	45%
		Uranium-238	32%	Dermal	29%		Nickel	9%	Dermal	55%
				Inhalation	0%		Uranium	41%	Inhalation	0%
				External exposure	16%		Vanadium	37%		
Future Adult Resident (surface soil)	**1.0E-04**	PAH, Total	3%	Ingestion	20%	**4.5**	Iron	8%	Ingestion	9%
		PCB, Total	64%	Dermal	52%		Nickel	13%	Dermal	91%
		Thorium-230	2%	Inhalation	0%		Uranium	24%	Inhalation	0%
		Uranium-238	31%	External exposure	27%		Vanadium	55%		
Future Child Resident (surface soil)	See Future Adult Resident					**13.9**	Iron	11%	Ingestion	31%
							Nickel	11%	Dermal	69%
							Uranium	34%	Inhalation	0%
							Vanadium	44%		

Table D8.29. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 77 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**3.6E-05**	PAH, Total	4%	Ingestion	23%	**1.3**	Iron	8%	Ingestion	9%
		PCB, Total	81%	Dermal	67%		Nickel	13%	Dermal	91%
		Uranium-238	13%	Inhalation	0%		Uranium	24%	Inhalation	0%
				External exposure	10%		Vanadium	55%		
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**4.0**	Iron	8%	Ingestion	7%
							Nickel	13%	Dermal	93%
							Uranium	23%	Inhalation	0%
							Vanadium	56%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**5.6**	Iron	11%	Ingestion	31%
							Nickel	11%	Dermal	69%
							Uranium	34%	Inhalation	0%
							Vanadium	44%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.30. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 80, EU 1

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**2.2E-05**	PCB, Total	99%	Ingestion	10%	**<1**	*No COCs		Ingestion	
				Dermal	90%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	0%					
Future Industrial Worker (surface soil)	**4.0E-04**	Dioxins/Furans, Total	1%	Ingestion	10%	**<1**	*No COCs		Ingestion	
		PCB, Total	99%	Dermal	90%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	0%					
Outdoor Worker (surface soil)	**5.4E-04**	Dioxins/Furans, Total	3%	Ingestion	51%	**<1**	*No COCs		Ingestion	
		PCB, Total	97%	Dermal	49%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	0%					
Outdoor Worker (surface and subsurface soil)	**5.2E-04**	PCB, Total	100%	Ingestion	50%	**<1**	*No COCs		Ingestion	
				Dermal	50%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	0%					
Excavation Worker (surface and subsurface soil)	**1.1E-04**	PCB, Total	100%	Ingestion	50%	**<1**	*No COCs		Ingestion	
				Dermal	50%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	0%					
Future Adult Resident (surface soil)	**1.6E-03**	Dioxins/Furans, Total	2%	Ingestion	23%	**<1**	*No COCs		Ingestion	
		PCB, Total	98%	Dermal	77%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	0%					
Future Child Resident (surface soil)	See Future Adult Resident					**2.3**	Uranium	30%	Ingestion	88%
							Dioxins/Furans, Total	70%	Dermal	12%
									Inhalation	0%

Table D8.30. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 80, EU 1 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**7.1E-04**	Dioxins/Furans, Total PCB, Total	2% 98%	Ingestion Dermal Inhalation External exposure	21% 79% 0% 0%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**<1**	*No COCs		Ingestion Dermal Inhalation	

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.31. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 80, EU 2

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**7.4E-05**	PCB, Total	3%	Ingestion	10%	**<1**	*No COCs		Ingestion	
(surface soil)		Uranium-235	6%	Dermal	3%				Dermal	
		Uranium-238	88%	Inhalation	0%				Inhalation	
				External exposure	86%					
Future Industrial Worker	**1.3E-03**	PAH, Total	1%	Ingestion	10%	**6.6**	Antimony	23%	Ingestion	15%
(surface soil)		PCB, Total	3%	Dermal	3%		Cobalt	2%	Dermal	84%
		Americium-241	<1%	Inhalation	0%		Molybdenum	3%	Inhalation	1%
		Cesium-137	1%	External exposure	86%		Nickel	2%		
		Neptunium-237	<1%				Uranium	56%		
		Uranium-234	1%				Vanadium	12%		
		Uranium-235	6%							
		Uranium-238	88%							
Outdoor Worker	**1.8E-03**	PAH, Total	1%	Ingestion	52%	**11.2**	Antimony	13%	Ingestion	63%
(surface soil)		PCB, Total	3%	Dermal	2%		Cobalt	2%	Dermal	37%
		Americium-241	<1%	Inhalation	0%		Iron	2%	Inhalation	0%
		Cesium-137	<1%	External exposure	46%		Molybdenum	4%		
		Neptunium-237	<1%				Nickel	1%		
		Uranium-234	4%				Uranium	71%		
		Uranium-235	4%				Vanadium	6%		
		Uranium-238	88%							

Table D8.31. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 80, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Outdoor Worker	**1.9E-03**	Arsenic	1%	Ingestion	53%	**13.3**	Antimony	15%	Ingestion	56%
(surface and subsurface		PAH, Total	1%	Dermal	2%		Arsenic	1%	Dermal	44%
soil)		PCB, Total	3%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Americium-241	<1%	External exposure	45%		Iron	2%		
		Cesium-137	<1%				Manganese	9%		
		Neptunium-237	<1%				Molybdenum	4%		
		Uranium-234	4%				Nickel	3%		
		Uranium-235	4%				Uranium	60%		
		Uranium-238	87%				Vanadium	5%		
Excavation Worker	**3.7E-04**	Arsenic	1%	Ingestion	53%	**13.3**	Antimony	15%	Ingestion	56%
(surface and subsurface		PAH, Total	1%	Dermal	2%		Arsenic	1%	Dermal	44%
soil)		PCB, Total	3%	Inhalation	0%		Cobalt	2%	Inhalation	0%
		Cesium-137	<1%	External exposure	45%		Iron	2%		
		Uranium-234	4%				Manganese	9%		
		Uranium-235	4%				Molybdenum	4%		
		Uranium-238	87%				Nickel	3%		
							Uranium	60%		
							Vanadium	5%		
Future Adult Resident	**4.4E-03**	PAH, Total	1%	Ingestion	12%	**16.5**	Antimony	22%	Ingestion	17%
(surface soil)		PCB, Total	4%	Dermal	3%		Cobalt	2%	Dermal	82%
		Americium-241	<1%	Inhalation	0%		Iron	1%	Inhalation	1%
		Cesium-137	1%	External exposure	85%		Molybdenum	3%		
		Neptunium-237	<1%				Nickel	2%		
		Uranium-234	1%				Uranium	57%		
		Uranium-235	6%				Vanadium	11%		
		Uranium-238	88%							

Table D8.31. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 80, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Child Resident (surface soil)	See Future Adult Resident					**61.9**	Antimony	16%	Ingestion	48%
							Barium	0%	Dermal	52%
							Cobalt	2%	Inhalation	0%
							Iron	2%		
							Mercury	0%		
							Molybdenum	4%		
							Nickel	1%		
							Uranium	66%		
							Vanadium	8%		
Future Adult Recreational User (surface soil)	**7.3E-04**	PAH, Total	2%	Ingestion	26%	**4.9**	Antimony	22%	Ingestion	17%
		PCB, Total	10%	Dermal	9%		Molybdenum	3%	Dermal	83%
		Cesium-137	<1%	Inhalation	0%		Nickel	2%	Inhalation	0%
		Uranium-234	2%	External exposure	64%		Uranium	56%		
		Uranium-235	5%				Vanadium	12%		
		Uranium-238	81%							
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**14.6**	Antimony	23%	Ingestion	14%
							Cobalt	2%	Dermal	86%
							Iron	1%	Inhalation	0%
							Molybdenum	3%		
							Nickel	2%		
							Uranium	55%		
							Vanadium	12%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**24.7**	Antimony	16%	Ingestion	48%
							Cobalt	2%	Dermal	52%
							Iron	2%	Inhalation	0%
							Molybdenum	4%		
							Nickel	1%		
							Uranium	66%		
							Vanadium	8%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

Table D8.31. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 80, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.32. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 80, EU 3

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**1.0E-04**	PCB, Total	100%	Ingestion	9%	**<1**	*No COCs		Ingestion	
				Dermal	91%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	0%					
Future Industrial Worker (surface soil)	**1.9E-03**	PCB, Total	100%	Ingestion	9%	**2.2**	Manganese	54%	Ingestion	4%
				Dermal	91%		Molybdenum	7%	Dermal	96%
				Inhalation	0%		Vanadium	33%	Inhalation	0%
				External exposure	0%					
Outdoor Worker (surface soil)	**2.5E-03**	PCB, Total	>99%	Ingestion	50%	**2.2**	Iron	8%	Ingestion	29%
		Uranium-238	<1%	Dermal	50%		Manganese	45%	Dermal	71%
				Inhalation	0%		Molybdenum	15%	Inhalation	0%
				External exposure	0%		Uranium	5%		
							Vanadium	27%		
Outdoor Worker (surface and subsurface soil)	**2.5E-03**	Arsenic	<1%	Ingestion	50%	**10.5**	Antimony	25%	Ingestion	24%
		PAH, Total	<1%	Dermal	50%		Arsenic	1%	Dermal	76%
		PCB, Total	99%	Inhalation	0%		Iron	2%	Inhalation	0%
		Uranium-238	<1%	External exposure	0%		Manganese	10%		
							Mercury	48%		
							Molybdenum	5%		
							Nickel	2%		
							Uranium	1%		
							Vanadium	6%		
Excavation Worker (surface and subsurface soil)	**5.0E-04**	Arsenic	<1%	Ingestion	50%	**10.5**	Antimony	25%	Ingestion	24%
		PAH, Total	<1%	Dermal	50%		Arsenic	1%	Dermal	76%
		PCB, Total	99%	Inhalation	0%		Iron	2%	Inhalation	0%
				External exposure	0%		Manganese	10%		
							Mercury	48%		
							Molybdenum	5%		
							Nickel	2%		
							Uranium	1%		
							Vanadium	6%		

Table D8.32. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 80, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident (surface soil)	**7.2E-03**	PCB, Total	>99%	Ingestion	22%	**5.4**	Iron	4%	Ingestion	5%
		Uranium-238	<1%	Dermal	77%		Manganese	54%	Dermal	95%
				Inhalation	0%		Molybdenum	7%	Inhalation	0%
				External exposure	0%		Uranium	2%		
							Vanadium	32%		
Future Child Resident (surface soil)	See Future Adult Resident					**15.0**	Barium	1%	Ingestion	269%
							Iron	6%	Dermal	1229%
							Manganese	49%	Inhalation	2%
							Molybdenum	11%		
							Uranium	3%		
							Vanadium	30%		
Future Adult Recreational User (surface soil)	**3.3E-03**	PCB, Total	100%	Ingestion	21%	**1.6**	Manganese	53%	Ingestion	5%
				Dermal	79%		Molybdenum	7%	Dermal	95%
				Inhalation	0%		Vanadium	32%	Inhalation	0%
				External exposure	0%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**5.0**	Iron	4%	Ingestion	4%
							Manganese	54%	Dermal	96%
							Molybdenum	7%	Inhalation	0%
							Uranium	2%		
							Vanadium	33%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**6.0**	Iron	6%	Ingestion	18%
							Manganese	49%	Dermal	82%
							Molybdenum	11%	Inhalation	0%
							Uranium	3%		
							Vanadium	30%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.33. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 1

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**6.3E-06**	PAH, Total	88%	Ingestion Dermal Inhalation External exposure	10% 79% 0% 11%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface soil)	**8.7E-06**	PAH, Total Uranium-238	88% 12%	Ingestion Dermal Inhalation External exposure	52% 42% 0% 6%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface and subsurface soil)	**8.7E-06**	PAH, Total Uranium-238	87% 13%	Ingestion Dermal Inhalation External exposure	52% 42% 0% 6%	**2.2**	Manganese Molybdenum Silver Vanadium	32% 15% 23% 27%	Ingestion Dermal Inhalation	23% 77% 0%
Excavation Worker (surface and subsurface soil)	**1.8E-06**	PAH, Total	87%	Ingestion Dermal Inhalation External exposure	52% 42% 0% 6%	**2.2**	Manganese Molybdenum Silver Vanadium	32% 15% 23% 27%	Ingestion Dermal Inhalation	23% 77% 0%
Future Adult Resident (surface soil)	**2.4E-05**	PAH, Total Uranium-238	89% 10%	Ingestion Dermal Inhalation External exposure	22% 68% 0% 9%	**2.1**	Molybdenum Vanadium	12% 85%	Ingestion Dermal Inhalation	5% 95% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**5.7**	Aluminum Molybdenum Vanadium	4% 19% 77%	Ingestion Dermal Inhalation	19% 81% 0%

Table D8.33. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 1 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.0E-05**	PAH, Total	96%	Ingestion Dermal Inhalation External exposure	22% 75% 0% 3%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**1.9**	Molybdenum Vanadium	11% 86%	Ingestion Dermal Inhalation	4% 96% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**2.3**	Aluminum Molybdenum Vanadium	4% 19% 77%	Ingestion Dermal Inhalation	19% 81% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.34. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 2

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**2.0E-06**	Arsenic	91%	Ingestion	31%	**<1**	*No COCs		Ingestion	
(surface soil)				Dermal	63%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	6%					
Future Industrial Worker	**3.5E-05**	Arsenic	91%	Ingestion	31%	**1.2**	Arsenic	17%	Ingestion	9%
(surface soil)		Uranium-238	7%	Dermal	63%		Molybdenum	12%	Dermal	91%
				Inhalation	0%		Nickel	9%	Inhalation	0%
				External exposure	6%		Vanadium	62%		
Outdoor Worker	**9.5E-05**	Arsenic	96%	Ingestion	81%	**1.6**	Arsenic	37%	Ingestion	49%
(surface soil)		Uranium-238	3%	Dermal	18%		Molybdenum	19%	Dermal	50%
				Inhalation	0%		Vanadium	39%	Inhalation	0%
				External exposure	2%					
Outdoor Worker	**9.4E-05**	Arsenic	97%	Ingestion	81%	**2.6**	Arsenic	22%	Ingestion	38%
(surface and subsurface		Uranium-238	3%	Dermal	18%		Iron	6%	Dermal	62%
soil)				Inhalation	0%		Manganese	34%	Inhalation	0%
				External exposure	1%		Molybdenum	11%		
							Nickel	4%		
							Vanadium	23%		
Excavation Worker	**1.9E-05**	Arsenic	97%	Ingestion	81%	**2.6**	Arsenic	22%	Ingestion	38%
(surface and subsurface				Dermal	18%		Iron	6%	Dermal	62%
soil)				Inhalation	0%		Manganese	34%	Inhalation	0%
				External exposure	1%		Molybdenum	11%		
							Nickel	4%		
							Vanadium	23%		
Future Adult Resident	**1.8E-04**	Arsenic	94%	Ingestion	55%	**2.9**	Arsenic	18%	Ingestion	10%
(surface soil)		PAH, Total	1%	Dermal	41%		Molybdenum	12%	Dermal	89%
		Uranium-238	4%	Inhalation	0%		Nickel	9%	Inhalation	0%
				External exposure	4%		Vanadium	61%		
Future Child Resident	See Future Adult Resident					**9.4**	Arsenic	29%	Ingestion	34%
(surface soil)							Molybdenum	16%	Dermal	65%
							Nickel	7%	Inhalation	0%
							Vanadium	47%		

Table D8.34. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 2 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**7.7E-05**	Arsenic	97%	Ingestion	54%	**<1**	*No COCs		Ingestion	
		PAH, Total	2%	Dermal	45%				Dermal	
		Uranium-238	2%	Inhalation	0%				Inhalation	
				External exposure	1%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.6**	Arsenic	17%	Ingestion	9%
							Molybdenum	12%	Dermal	91%
							Nickel	9%	Inhalation	0%
							Vanadium	62%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.7**	Arsenic	29%	Ingestion	34%
							Molybdenum	16%	Dermal	65%
							Nickel	7%	Inhalation	0%
							Vanadium	47%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.35. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 3

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**1.8E-06**	Uranium-238	78%	Ingestion Dermal Inhalation External exposure	10% 20% 0% 70%	**1.1**	Silver Vanadium	31% 69%	Ingestion Dermal Inhalation	1% 99% 0%
Outdoor Worker (surface soil)	**2.5E-06**	Uranium-238	78%	Ingestion Dermal Inhalation External exposure	52% 11% 0% 37%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface and subsurface soil)	**2.4E-05**	Arsenic Uranium-238	90% 8%	Ingestion Dermal Inhalation External exposure	79% 17% 0% 4%	**2.5**	Arsenic Manganese Molybdenum Silver Vanadium	5% 44% 16% 11% 24%	Ingestion Dermal Inhalation	26% 74% 0%
Excavation Worker (surface and subsurface soil)	**4.9E-06**	Arsenic	90%	Ingestion Dermal Inhalation External exposure	79% 17% 0% 4%	**2.5**	Arsenic Manganese Molybdenum Silver Vanadium	5% 44% 16% 11% 24%	Ingestion Dermal Inhalation	26% 74% 0%
Future Adult Resident (surface soil)	**6.2E-06**	PAH, Total Uranium-238	25% 75%	Ingestion Dermal Inhalation External exposure	14% 19% 0% 66%	**2.6**	Silver Vanadium	31% 69%	Ingestion Dermal Inhalation	2% 98% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**6.5**	Silver Vanadium	31% 69%	Ingestion Dermal Inhalation	7% 93% 0%

Table D8.35. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 3 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.4E-06**	*No COCs		Ingestion Dermal Inhalation External exposure	24% 39% 0% 37%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.4**	Silver Vanadium	31% 69%	Ingestion Dermal Inhalation	1% 99% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**2.6**	Silver Vanadium	31% 69%	Ingestion Dermal Inhalation	7% 93% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.36. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 4

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**1.4E-06**	Uranium-238	81%	Ingestion Dermal Inhalation External exposure	10% 17% 0% 72%	**1.5**	Molybdenum Silver Vanadium	17% 23% 54%	Ingestion Dermal Inhalation	6% 94% 0%
Outdoor Worker (surface soil)	**1.9E-06**	Uranium-238	81%	Ingestion Dermal Inhalation External exposure	52% 9% 0% 39%	**1.7**	Iron Molybdenum Silver Vanadium	10% 33% 17% 40%	Ingestion Dermal Inhalation	38% 62% 0%
Outdoor Worker (surface and subsurface soil)	**2.4E-05**	Arsenic Uranium-238	92% 6%	Ingestion Dermal Inhalation External exposure	80% 17% 0% 3%	**2.8**	Arsenic Iron Manganese Molybdenum Silver Vanadium	5% 6% 34% 20% 11% 25%	Ingestion Dermal Inhalation	32% 68% 0%
Excavation Worker (surface and subsurface soil)	**4.7E-06**	Arsenic	92%	Ingestion Dermal Inhalation External exposure	80% 17% 0% 3%	**2.8**	Arsenic Iron Manganese Molybdenum Silver Vanadium	5% 6% 34% 20% 11% 25%	Ingestion Dermal Inhalation	32% 68% 0%
Future Adult Resident (surface soil)	**4.7E-06**	PAH, Total Uranium-238	22% 78%	Ingestion Dermal Inhalation External exposure	14% 17% 0% 69%	**3.8**	Iron Molybdenum Silver Vanadium	5% 18% 23% 54%	Ingestion Dermal Inhalation	7% 93% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**11.1**	Iron Molybdenum Silver Vanadium	8% 26% 20% 46%	Ingestion Dermal Inhalation	25% 75% 0%

Table D8.36. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 4 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.0E-06**	*No COCs		Ingestion	24%	**1.1**	Molybdenum	18%	Ingestion	7%
				Dermal	36%		Silver	23%	Dermal	93%
				Inhalation	0%		Vanadium	54%	Inhalation	0%
				External exposure	40%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**3.4**	Iron	5%	Ingestion	6%
							Molybdenum	17%	Dermal	94%
							Silver	23%	Inhalation	0%
							Vanadium	55%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**4.4**	Iron	8%	Ingestion	25%
							Molybdenum	26%	Dermal	75%
							Silver	20%	Inhalation	0%
							Vanadium	46%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.37. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 5

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**2.5E-06**	Arsenic	91%	Ingestion Dermal Inhalation External exposure	31% 62% 0% 7%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**4.4E-05**	Arsenic Uranium-238	92% 8%	Ingestion Dermal Inhalation External exposure	31% 62% 0% 7%	**1.1**	Arsenic Nickel Vanadium	23% 10% 65%	Ingestion Dermal Inhalation	8% 91% 0%
Outdoor Worker (surface soil)	**1.2E-04**	Arsenic Uranium-238	95% 4%	Ingestion Dermal Inhalation External exposure	81% 17% 0% 2%	**1.4**	Arsenic Vanadium	49% 43%	Ingestion Dermal Inhalation	47% 53% 0%
Outdoor Worker (surface and subsurface soil)	**1.2E-04**	Arsenic Uranium-238	95% 5%	Ingestion Dermal Inhalation External exposure	81% 17% 0% 2%	**2.8**	Arsenic Cobalt Manganese Molybdenum Vanadium	25% 5% 37% 7% 22%	Ingestion Dermal Inhalation	37% 62% 0%
Excavation Worker (surface and subsurface soil)	**2.4E-05**	Arsenic Uranium-238	95% 5%	Ingestion Dermal Inhalation External exposure	81% 17% 0% 2%	**2.8**	Arsenic Cobalt Manganese Molybdenum Vanadium	25% 5% 37% 7% 22%	Ingestion Dermal Inhalation	37% 62% 0%
Future Adult Resident (surface soil)	**2.3E-04**	Arsenic Uranium-238	95% 5%	Ingestion Dermal Inhalation External exposure	55% 40% 0% 4%	**2.7**	Arsenic Nickel Vanadium	23% 10% 65%	Ingestion Dermal Inhalation	10% 90% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**8.7**	Antimony Arsenic Nickel Vanadium	2% 39% 8% 51%	Ingestion Dermal Inhalation	32% 68% 0%

Table D8.37. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 5 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**9.5E-05**	Arsenic Uranium-238	98% 2%	Ingestion Dermal Inhalation External exposure	54% 45% 0% 1%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**3.5**	Arsenic Nickel Vanadium	22% 10% 66%	Ingestion Dermal Inhalation	8% 92% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**2.3**	Arsenic Nickel Vanadium	39% 8% 51%	Ingestion Dermal Inhalation	32% 68% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.38. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 6

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**2.6E-06**	Uranium-238	86%	Ingestion Dermal Inhalation External exposure	10% 13% 0% 77%	**1.1**	Molybdenum Nickel Vanadium	20% 13% 68%	Ingestion Dermal Inhalation	6% 94% 0%
Outdoor Worker (surface soil)	**3.6E-06**	Uranium-238	86%	Ingestion Dermal Inhalation External exposure	52% 7% 0% 41%	**1.2**	Molybdenum Nickel Vanadium	39% 10% 52%	Ingestion Dermal Inhalation	36% 64% 0%
Outdoor Worker (surface and subsurface soil)	**2.3E-05**	Arsenic Uranium-238	85% 13%	Ingestion Dermal Inhalation External exposure	78% 16% 0% 6%	**4.3**	Arsenic Iron Manganese Molybdenum Nickel Vanadium	3% 4% 65% 11% 3% 14%	Ingestion Dermal Inhalation	24% 76% 0%
Excavation Worker (surface and subsurface soil)	**4.7E-06**	Arsenic	85%	Ingestion Dermal Inhalation External exposure	78% 16% 0% 6%	**4.3**	Arsenic Iron Manganese Molybdenum Nickel Vanadium	3% 4% 65% 11% 3% 14%	Ingestion Dermal Inhalation	24% 76% 0%
Future Adult Resident (surface soil)	**8.7E-06**	PAH, Total Uranium-238	16% 84%	Ingestion Dermal Inhalation External exposure	13% 13% 0% 74%	**2.7**	Molybdenum Nickel Vanadium	20% 12% 67%	Ingestion Dermal Inhalation	6% 94% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**7.9**	Molybdenum Nickel Vanadium	31% 11% 58%	Ingestion Dermal Inhalation	23% 77% 0%

Table D8.38. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 6 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.7E-06**	Uranium-238	63%	Ingestion	25%	**<1**	*No COCs		Ingestion	
				Dermal	29%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	46%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.5**	Molybdenum	19%	Ingestion	5%
							Nickel	13%	Dermal	95%
							Vanadium	68%	Inhalation	0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.1**	Molybdenum	31%	Ingestion	23%
							Nickel	11%	Dermal	77%
							Vanadium	58%	Inhalation	0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.39. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 7

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**1.3E-06**	Uranium-238	92%	Ingestion Dermal Inhalation External exposure	10% 7% 0% 82%	**3.3**	Manganese Vanadium	74% 23%	Ingestion Dermal Inhalation	2% 98% 0%
Outdoor Worker (surface soil)	**1.9E-06**	Uranium-238	92%	Ingestion Dermal Inhalation External exposure	52% 4% 0% 44%	**2.8**	Iron Manganese Vanadium	6% 72% 22%	Ingestion Dermal Inhalation	16% 84% 0%
Outdoor Worker (surface and subsurface soil)	**3.6E-05**	Arsenic Uranium-238	95% 5%	Ingestion Dermal Inhalation External exposure	81% 17% 0% 2%	**4.3**	Arsenic Cobalt Iron Manganese Vanadium	5% 5% 4% 69% 15%	Ingestion Dermal Inhalation	21% 79% 0%
Excavation Worker (surface and subsurface soil)	**7.1E-06**	Arsenic	95%	Ingestion Dermal Inhalation External exposure	81% 17% 0% 2%	**4.3**	Arsenic Cobalt Iron Manganese Vanadium	5% 5% 4% 69% 15%	Ingestion Dermal Inhalation	21% 79% 0%
Future Adult Resident (surface soil)	**4.5E-06**	Uranium-238	91%	Ingestion Dermal Inhalation External exposure	12% 7% 0% 80%	**8.0**	Iron Manganese Vanadium	3% 74% 23%	Ingestion Dermal Inhalation	2% 97% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**20.5**	Iron Manganese Vanadium	4% 73% 23%	Ingestion Dermal Inhalation	9% 91% 0%

Table D8.39. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 7 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.4**	Manganese Vanadium	74% 23%	Ingestion Dermal Inhalation	2% 98% 0%
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**7.4**	Iron Manganese Vanadium	2% 74% 23%	Ingestion Dermal Inhalation	2% 98% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**8.2**	Iron Manganese Vanadium	4% 73% 23%	Ingestion Dermal Inhalation	9% 91% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.40. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 8

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**2.0E-06**	Uranium-238	60%	Ingestion Dermal Inhalation External exposure	10% 36% 0% 53%	**1.1**	Nickel Vanadium	12% 72%	Ingestion Dermal Inhalation	5% 95% 0%
Outdoor Worker (surface soil)	**2.8E-06**	PAH, Total Uranium-238	40% 60%	Ingestion Dermal Inhalation External exposure	52% 19% 0% 29%	**1.1**	Cobalt Iron Nickel Vanadium	17% 15% 10% 58%	Ingestion Dermal Inhalation	32% 68% 0%
Outdoor Worker (surface and subsurface soil)	**2.0E-05**	Arsenic PAH, Total Uranium-238	86% 6% 9%	Ingestion Dermal Inhalation External exposure	78% 18% 0% 4%	**2.7**	Arsenic Cobalt Iron Manganese Nickel Vanadium	4% 7% 7% 54% 4% 24%	Ingestion Dermal Inhalation	23% 76% 0%
Excavation Worker (surface and subsurface soil)	**3.9E-06**	Arsenic	85%	Ingestion Dermal Inhalation External exposure	78% 18% 0% 4%	**2.7**	Arsenic Cobalt Iron Manganese Nickel Vanadium	4% 7% 7% 54% 4% 24%	Ingestion Dermal Inhalation	23% 76% 0%
Future Adult Resident (surface soil)	**7.3E-06**	PAH, Total Uranium-238	45% 55%	Ingestion Dermal Inhalation External exposure	17% 34% 0% 49%	**2.7**	Cobalt Iron Nickel Vanadium	8% 8% 12% 72%	Ingestion Dermal Inhalation	5% 95% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**7.6**	Cobalt Iron Nickel Vanadium	13% 12% 11% 64%	Ingestion Dermal Inhalation	20% 80% 0%

Table D8.40. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 8 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**2.1E-06**	PAH, Total	71%	Ingestion	23%	**<1**	*No COCs		Ingestion	
				Dermal	55%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	22%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.5**	Cobalt	8%	Ingestion	4%
							Iron	7%	Dermal	96%
							Nickel	12%	Inhalation	0%
							Vanadium	72%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.0**	Cobalt	13%	Ingestion	20%
							Iron	12%	Dermal	80%
							Nickel	11%	Inhalation	0%
							Vanadium	64%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.41. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 9

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**3.2E-06**	PAH, Total	98%	Ingestion	10%	**<1**	*No COCs		Ingestion	
				Dermal	88%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	2%					
Future Industrial Worker (surface soil)	**5.7E-05**	PAH, Total	98%	Ingestion	10%	**1.1**	Nickel	15%	Ingestion	3%
		Uranium-238	2%	Dermal	88%		Vanadium	78%	Dermal	97%
				Inhalation	0%				Inhalation	0%
				External exposure	2%					
Outdoor Worker (surface soil)	**7.9E-05**	PAH, Total	98%	Ingestion	52%	**<1**	*No COCs		Ingestion	
		Uranium-238	2%	Dermal	47%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	1%					
Outdoor Worker (surface and subsurface soil)	**9.6E-05**	Arsenic	17%	Ingestion	57%	**2.5**	Arsenic	4%	Ingestion	30%
		PAH, Total	81%	Dermal	42%		Iron	7%	Dermal	70%
		Uranium-238	2%	Inhalation	0%		Manganese	39%	Inhalation	0%
				External exposure	1%		Molybdenum	17%		
							Nickel	5%		
							Vanadium	27%		
Excavation Worker (surface and subsurface soil)	**1.9E-05**	Arsenic	17%	Ingestion	57%	**2.5**	Arsenic	4%	Ingestion	30%
		PAH, Total	81%	Dermal	42%		Iron	7%	Dermal	70%
				Inhalation	0%		Manganese	39%	Inhalation	0%
				External exposure	1%		Molybdenum	17%		
							Nickel	5%		
							Vanadium	27%		
Future Adult Resident (surface soil)	**2.3E-04**	PAH, Total	98%	Ingestion	24%	**2.6**	Iron	8%	Ingestion	3%
		Uranium-238	2%	Dermal	75%		Nickel	15%	Dermal	96%
				Inhalation	0%		Vanadium	77%	Inhalation	0%
				External exposure	2%					
Future Child Resident (surface soil)	See Future Adult Resident					**6.9**	Iron	13%	Ingestion	14%
							Nickel	14%	Dermal	86%
							Vanadium	73%	Inhalation	0%

Table D8.41. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 9 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.0E-04**	PAH, Total	99%	Ingestion Dermal Inhalation External exposure	22% 78% 0% 0%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.4**	Iron Nickel Vanadium	8% 15% 78%	Ingestion Dermal Inhalation	3% 97% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**2.8**	Iron Nickel Vanadium	13% 14% 73%	Ingestion Dermal Inhalation	14% 86% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.42. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 10

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**2.6E-06**	Uranium-238	73%	Ingestion Dermal Inhalation External exposure	10% 25% 0% 65%	**1.3**	Antimony Nickel Vanadium	25% 12% 56%	Ingestion Dermal Inhalation	3% 96% 0%
Outdoor Worker (surface soil)	**3.6E-06**	Uranium-238	73%	Ingestion Dermal Inhalation External exposure	52% 13% 0% 35%	**1.2**	Antimony Iron Nickel Vanadium	26% 15% 11% 49%	Ingestion Dermal Inhalation	26% 74% 0%
Outdoor Worker (surface and subsurface soil)	**5.5E-06**	Cesium-137 Uranium-238	34% 48%	Ingestion Dermal Inhalation External exposure	35% 9% 0% 57%	**1.7**	Antimony Iron Molybdenum Nickel Vanadium	18% 14% 20% 8% 39%	Ingestion Dermal Inhalation	37% 63% 0%
Excavation Worker (surface and subsurface soil)	**1.2E-06**	*No COCs		Ingestion Dermal Inhalation External exposure	32% 8% 0% 60%	**1.7**	Antimony Iron Molybdenum Nickel Vanadium	18% 14% 20% 8% 39%	Ingestion Dermal Inhalation	37% 63% 0%
Future Adult Resident (surface soil)	**9.2E-06**	PAH, Total Uranium-238	31% 69%	Ingestion Dermal Inhalation External exposure	15% 24% 0% 61%	**3.1**	Antimony Iron Nickel Vanadium	25% 7% 12% 56%	Ingestion Dermal Inhalation	4% 96% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**8.4**	Antimony Iron Nickel Vanadium	25% 11% 11% 52%	Ingestion Dermal Inhalation	16% 84% 0%

Table D8.42. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 10 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**2.2E-06**	PAH, Total	57%	Ingestion	24%	**<1**	*No COCs		Ingestion	
				Dermal	45%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	31%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.8**	Antimony	25%	Ingestion	3%
							Iron	7%	Dermal	97%
							Nickel	12%	Inhalation	0%
							Vanadium	56%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.3**	Antimony	25%	Ingestion	16%
							Iron	11%	Dermal	84%
							Nickel	11%	Inhalation	0%
							Vanadium	52%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.43. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 11

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**2.9E-06**	PAH, Total Uranium-238	35% 65%	Ingestion Dermal Inhalation External exposure	10% 31% 0% 58%	**1.4**	Molybdenum Nickel Vanadium	17% 13% 63%	Ingestion Dermal Inhalation	6% 94% 0%
Outdoor Worker (surface soil)	**4.0E-06**	PAH, Total Uranium-238	35% 65%	Ingestion Dermal Inhalation External exposure	52% 17% 0% 31%	**1.6**	Iron Molybdenum Nickel Vanadium	12% 33% 9% 46%	Ingestion Dermal Inhalation	40% 60% 0%
Outdoor Worker (surface and subsurface soil)	**2.2E-05**	Arsenic PAH, Total Uranium-238	80% 8% 12%	Ingestion Dermal Inhalation External exposure	76% 18% 0% 6%	**2.7**	Arsenic Iron Manganese Molybdenum Nickel Vanadium	4% 7% 38% 19% 5% 27%	Ingestion Dermal Inhalation	31% 69% 0%
Excavation Worker (surface and subsurface soil)	**4.3E-06**	Arsenic	80%	Ingestion Dermal Inhalation External exposure	76% 18% 0% 6%	**2.7**	Arsenic Iron Manganese Molybdenum Nickel Vanadium	4% 7% 38% 19% 5% 27%	Ingestion Dermal Inhalation	31% 69% 0%
Future Adult Resident (surface soil)	**1.0E-05**	PAH, Total Uranium-238	39% 61%	Ingestion Dermal Inhalation External exposure	16% 30% 0% 54%	**3.3**	Iron Molybdenum Nickel Vanadium	6% 18% 13% 63%	Ingestion Dermal Inhalation	7% 93% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**9.9**	Iron Molybdenum Nickel Vanadium	9% 27% 11% 53%	Ingestion Dermal Inhalation	26% 74% 0%

Table D8.43. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 11 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**2.7E-06**	PAH, Total	65%	Ingestion	23%	**<1**	*No COCs		Ingestion	
				Dermal	51%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	25%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**3.0**	Iron	6%	Ingestion	6%
							Molybdenum	17%	Dermal	94%
							Nickel	13%	Inhalation	0%
							Vanadium	64%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**4.0**	Iron	9%	Ingestion	26%
							Molybdenum	27%	Dermal	74%
							Nickel	11%	Inhalation	0%
							Vanadium	53%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.44. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 12

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**2.7E-06**	Uranium-238	73%	Ingestion Dermal Inhalation External exposure	10% 24% 0% 66%	**1.1**	Nickel Vanadium	13% 76%	Ingestion Dermal Inhalation	4% 96% 0%
Outdoor Worker (surface soil)	**3.7E-06**	Uranium-238	73%	Ingestion Dermal Inhalation External exposure	52% 13% 0% 35%	**1.1**	Iron Nickel Vanadium	15% 11% 65%	Ingestion Dermal Inhalation	26% 73% 0%
Outdoor Worker (surface and subsurface soil)	**2.5E-05**	Arsenic Cesium-137 Uranium-238	77% 8% 11%	Ingestion Dermal Inhalation External exposure	71% 16% 0% 13%	**3.8**	Arsenic Iron Manganese Molybdenum Nickel Vanadium	3% 4% 59% 11% 3% 19%	Ingestion Dermal Inhalation	24% 76% 0%
Excavation Worker (surface and subsurface soil)	**5.1E-06**	Arsenic	76%	Ingestion Dermal Inhalation External exposure	70% 15% 0% 14%	**3.8**	Arsenic Iron Manganese Molybdenum Nickel Vanadium	3% 4% 59% 11% 3% 19%	Ingestion Dermal Inhalation	24% 76% 0%
Future Adult Resident (surface soil)	**9.4E-06**	PAH, Total Uranium-238	30% 70%	Ingestion Dermal Inhalation External exposure	15% 23% 0% 62%	**2.8**	Iron Nickel Thallium Vanadium	7% 13% 4% 76%	Ingestion Dermal Inhalation	4% 96% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**7.5**	Iron Nickel Thallium Vanadium	12% 12% 6% 70%	Ingestion Dermal Inhalation	16% 84% 0%

Table D8.44. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 12 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**2.3E-06**	PAH, Total	56%	Ingestion	24%	**<1**	*No COCs		Ingestion	
				Dermal	44%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	32%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.5**	Iron	7%	Ingestion	3%
							Nickel	13%	Dermal	97%
							Vanadium	76%	Inhalation	0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.0**	Iron	12%	Ingestion	16%
							Nickel	12%	Dermal	84%
							Thallium	6%	Inhalation	0%
							Vanadium	70%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.45. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 13

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**7.5E-06**	PAH, Total Uranium-238	76% 24%	Ingestion Dermal Inhalation External exposure	10% 68% 0% 22%	**1.1**	Molybdenum Vanadium	19% 81%	Ingestion Dermal Inhalation	5% 95% 0%
Outdoor Worker (surface soil)	**1.0E-05**	PAH, Total Uranium-238	76% 24%	Ingestion Dermal Inhalation External exposure	52% 37% 0% 12%	**1.2**	Molybdenum Vanadium	37% 63%	Ingestion Dermal Inhalation	35% 65% 0%
Outdoor Worker (surface and subsurface soil)	**2.9E-05**	Arsenic PAH, Total Cesium-137 Uranium-238	58% 27% 7% 9%	Ingestion Dermal Inhalation External exposure	66% 23% 0% 11%	**2.4**	Arsenic Manganese Molybdenum Vanadium	4% 45% 21% 30%	Ingestion Dermal Inhalation	28% 72% 0%
Excavation Worker (surface and subsurface soil)	**5.9E-06**	Arsenic PAH, Total	57% 26%	Ingestion Dermal Inhalation External exposure	65% 23% 0% 12%	**2.4**	Arsenic Manganese Molybdenum Vanadium	4% 45% 21% 30%	Ingestion Dermal Inhalation	28% 72% 0%
Future Adult Resident (surface soil)	**2.8E-05**	PAH, Total Uranium-238	79% 21%	Ingestion Dermal Inhalation External exposure	21% 60% 0% 19%	**2.6**	Molybdenum Vanadium	19% 81%	Ingestion Dermal Inhalation	6% 94% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**7.5**	Molybdenum Vanadium	29% 71%	Ingestion Dermal Inhalation	22% 78% 0%

Table D8.45. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 13 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.1E-05**	PAH, Total	91%	Ingestion Dermal Inhalation External exposure	22% 72% 0% 6%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.4**	Molybdenum Vanadium	18% 82%	Ingestion Dermal Inhalation	5% 95% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.0**	Molybdenum Vanadium	29% 71%	Ingestion Dermal Inhalation	22% 78% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.46. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 14

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**5.6E-06**	Arsenic	96%	Ingestion	32%	**<1**	*No COCs		Ingestion	
				Dermal	66%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	2%					
Future Industrial Worker (surface soil)	**1.0E-04**	Arsenic	96%	Ingestion	32%	**1.8**	Arsenic	33%	Ingestion	14%
		PAH, Total	1%	Dermal	66%		Nickel	9%	Dermal	86%
		Uranium-238	3%	Inhalation	0%		Vanadium	48%	Inhalation	0%
				External exposure	2%					
Outdoor Worker (surface soil)	**2.8E-04**	Arsenic	98%	Ingestion	82%	**2.9**	Arsenic	58%	Ingestion	60%
		PAH, Total	1%	Dermal	18%		Iron	6%	Dermal	39%
		Uranium-238	1%	Inhalation	0%		Nickel	5%	Inhalation	0%
				External exposure	1%		Uranium	6%		
							Vanadium	24%		
Outdoor Worker (surface and subsurface soil)	**2.8E-04**	Arsenic	98%	Ingestion	82%	**3.8**	Arsenic	44%	Ingestion	49%
		PAH, Total	1%	Dermal	18%		Iron	5%	Dermal	50%
		Uranium-238	1%	Inhalation	0%		Manganese	23%	Inhalation	0%
				External exposure	1%		Nickel	4%		
							Uranium	5%		
							Vanadium	19%		
Excavation Worker (surface and subsurface soil)	**5.5E-05**	Arsenic	98%	Ingestion	82%	**3.8**	Arsenic	44%	Ingestion	49%
				Dermal	18%		Iron	5%	Dermal	50%
				Inhalation	0%		Manganese	23%	Inhalation	0%
				External exposure	1%		Nickel	4%		
							Uranium	5%		
							Vanadium	19%		

Table D8.46. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 14 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident (surface soil)	**5.2E-04**	Arsenic	97%	Ingestion	56%	**4.5**	Arsenic	34%	Ingestion	15%
		PAH, Total	1%	Dermal	42%		Iron	5%	Dermal	84%
		Uranium-238	2%	Inhalation	0%		Nickel	9%	Inhalation	0%
				External exposure	1%		Uranium	5%		
							Vanadium	47%		
Future Child Resident (surface soil)	See Future Adult Resident					**16.3**	Arsenic	50%	Ingestion	45%
							Iron	6%	Dermal	55%
							Nickel	6%	Inhalation	0%
							Uranium	6%		
							Vanadium	32%		
Future Adult Recreational User (surface soil)	**2.2E-04**	Arsenic	98%	Ingestion	54%	**1.3**	Arsenic	34%	Ingestion	16%
		PAH, Total	1%	Dermal	45%		Nickel	9%	Dermal	84%
		Uranium-238	1%	Inhalation	0%		Vanadium	47%	Inhalation	0%
				External exposure	0%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**4.0**	Arsenic	33%	Ingestion	13%
							Iron	5%	Dermal	87%
							Nickel	9%	Inhalation	0%
							Uranium	5%		
							Vanadium	48%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**6.5**	Arsenic	50%	Ingestion	45%
							Iron	6%	Dermal	55%
							Nickel	6%	Inhalation	0%
							Uranium	6%		
							Vanadium	32%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.47. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 15

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**8.9E-06**	Cesium-137 Uranium-238	62% 36%	Ingestion Dermal Inhalation External exposure	4% 1% 0% 95%	**1.1**	Molybdenum Nickel Vanadium	18% 12% 62%	Ingestion Dermal Inhalation	7% 93% 0%
Outdoor Worker (surface soil)	**8.9E-06**	Cesium-137 Uranium-238	47% 51%	Ingestion Dermal Inhalation External exposure	28% 1% 0% 71%	**1.3**	Iron Molybdenum Nickel Vanadium	13% 33% 8% 44%	Ingestion Dermal Inhalation	42% 58% 0%
Outdoor Worker (surface and subsurface soil)	**1.2E-05**	PAH, Total Cesium-137 Uranium-238	25% 36% 39%	Ingestion Dermal Inhalation External exposure	34% 12% 0% 54%	**2.4**	Iron Manganese Molybdenum Vanadium	12% 39% 20% 29%	Ingestion Dermal Inhalation	32% 68% 0%
Excavation Worker (surface and subsurface soil)	**2.5E-06**	Cesium-137	41%	Ingestion Dermal Inhalation External exposure	31% 11% 0% 58%	**2.4**	Iron Manganese Molybdenum Vanadium	12% 39% 20% 29%	Ingestion Dermal Inhalation	32% 68% 0%

Table D8.47. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 15 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident (surface soil)	**2.9E-05**	Cesium-137 Uranium-238	61% 37%	Ingestion Dermal Inhalation External exposure	5% 1% 0% 94%	**2.7**	Iron Molybdenum Nickel Vanadium	7% 19% 12% 62%	Ingestion Dermal Inhalation	8% 92% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**8.1**	Iron Molybdenum Nickel Uranium Vanadium	11% 27% 10% 1% 51%	Ingestion Dermal Inhalation	28% 72% 0%
Future Adult Recreational User (surface soil)	**4.1E-06**	Cesium-137 Uranium-238	55% 39%	Ingestion Dermal Inhalation External exposure	12% 5% 0% 83%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.4**	Iron Molybdenum Nickel Vanadium	7% 18% 12% 62%	Ingestion Dermal Inhalation	6% 94% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.3**	Iron Molybdenum Nickel Vanadium	11% 27% 10% 51%	Ingestion Dermal Inhalation	28% 72% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.48. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 16

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**1.2**	Iron Molybdenum Vanadium	15% 34% 51%	Ingestion Dermal Inhalation	42% 58% 0%
Outdoor Worker (surface and subsurface soil)	**1.7E-05**	Arsenic	98%	Ingestion Dermal Inhalation External exposure	81% 19% 0% 0%	**3.5**	Arsenic Iron Manganese Molybdenum Silver Vanadium	3% 5% 54% 13% 7% 17%	Ingestion Dermal Inhalation	25% 74% 0%
Excavation Worker (surface and subsurface soil)	**3.3E-06**	Arsenic	98%	Ingestion Dermal Inhalation External exposure	81% 19% 0% 0%	**3.5**	Arsenic Iron Manganese Molybdenum Silver Vanadium	3% 5% 54% 13% 7% 17%	Ingestion Dermal Inhalation	25% 74% 0%
Future Adult Resident (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.5**	Iron Molybdenum Vanadium	8% 19% 73%	Ingestion Dermal Inhalation	8% 92% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**7.4**	Iron Molybdenum Vanadium	12% 28% 60%	Ingestion Dermal Inhalation	28% 72% 0%

Table D8.48. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 16 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**4.1E-06**	Cesium-137 Uranium-238	55% 39%	Ingestion Dermal Inhalation External exposure	12% 5% 0% 83%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.2**	Iron Molybdenum Vanadium	8% 18% 74%	Ingestion Dermal Inhalation	7% 93% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.0**	Iron Molybdenum Vanadium	12% 28% 60%	Ingestion Dermal Inhalation	28% 72% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.49. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 17

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**2.2E-06**	Uranium-238	69%	Ingestion Dermal Inhalation External exposure	10% 28% 0% 62%	**1.0**	Molybdenum Vanadium	20% 72%	Ingestion Dermal Inhalation	7% 93% 0%
Outdoor Worker (surface soil)	**3.0E-06**	Uranium-238	69%	Ingestion Dermal Inhalation External exposure	52% 15% 0% 33%	**1.2**	Iron Molybdenum Vanadium	15% 35% 50%	Ingestion Dermal Inhalation	43% 57% 0%
Outdoor Worker (surface and subsurface soil)	**2.3E-05**	Arsenic PAH, Total Uranium-238	81% 10% 9%	Ingestion Dermal Inhalation External exposure	76% 19% 0% 4%	**2.2**	Arsenic Iron Manganese Molybdenum Vanadium	5% 8% 40% 19% 28%	Ingestion Dermal Inhalation	33% 67% 0%
Excavation Worker (surface and subsurface soil)	**4.7E-06**	Arsenic	81%	Ingestion Dermal Inhalation External exposure	76% 19% 0% 4%	**2.2**	Arsenic Iron Manganese Molybdenum Vanadium	5% 8% 40% 19% 28%	Ingestion Dermal Inhalation	33% 67% 0%
Future Adult Resident (surface soil)	**7.6E-06**	PAH, Total Uranium-238	34% 65%	Ingestion Dermal Inhalation External exposure	15% 26% 0% 58%	**2.5**	Iron Molybdenum Vanadium	8% 20% 72%	Ingestion Dermal Inhalation	8% 92% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**7.6**	Iron Molybdenum Vanadium	12% 29% 59%	Ingestion Dermal Inhalation	29% 71% 0%

Table D8.49. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 17 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**2.0E-06**	PAH, Total	61%	Ingestion Dermal Inhalation External exposure	24% 48% 0% 29%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.3**	Iron Molybdenum Vanadium	8% 19% 73%	Ingestion Dermal Inhalation	7% 93% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.0**	Iron Molybdenum Vanadium	12% 29% 59%	Ingestion Dermal Inhalation	29% 71% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.50. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 18

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**1.2E-06**	Uranium-238	93%	Ingestion Dermal Inhalation External exposure	10% 6% 0% 84%	**1.2**	Nickel Vanadium	12% 75%	Ingestion Dermal Inhalation	4% 96% 0%
Outdoor Worker (surface soil)	**1.6E-06**	Uranium-238	93%	Ingestion Dermal Inhalation External exposure	52% 3% 0% 45%	**1.2**	Iron Nickel Uranium Vanadium	16% 9% 12% 62%	Ingestion Dermal Inhalation	30% 70% 0%
Outdoor Worker (surface and subsurface soil)	**1.8E-06**	Uranium-238	82%	Ingestion Dermal Inhalation External exposure	52% 9% 0% 39%	**2.8**	Iron Manganese Nickel Silver Uranium Vanadium	7% 40% 4% 16% 5% 27%	Ingestion Dermal Inhalation	20% 80% 0%
Excavation Worker (surface and subsurface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.8**	Iron Manganese Nickel Silver Uranium Vanadium	7% 40% 4% 16% 5% 27%	Ingestion Dermal Inhalation	20% 80% 0%
Future Adult Resident (surface soil)	**3.9E-06**	Uranium-238	92%	Ingestion Dermal Inhalation External exposure	12% 6% 0% 82%	**3.0**	Iron Nickel Uranium Vanadium	8% 11% 6% 75%	Ingestion Dermal Inhalation	5% 95% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**8.2**	Iron Nickel Uranium Vanadium	13% 10% 10% 68%	Ingestion Dermal Inhalation	19% 81% 0%

Table D8.50. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 18 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.7**	Iron Nickel Uranium Vanadium	8% 12% 6% 75%	Ingestion Dermal Inhalation	4% 96% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**3.3**	Iron Nickel Uranium Vanadium	13% 10% 9% 68%	Ingestion Dermal Inhalation	19% 81% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.51. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 19

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**3.1E-06**	PAH, Total Uranium-238	47% 53%	Ingestion Dermal Inhalation External exposure	10% 43% 0% 47%	**1.1**	Nickel Silver Vanadium	12% 29% 55%	Ingestion Dermal Inhalation	2% 97% 0%
Outdoor Worker (surface soil)	**4.2E-06**	PAH, Total Uranium-238	47% 53%	Ingestion Dermal Inhalation External exposure	52% 23% 0% 25%	**1.0**	Nickel Silver Uranium Vanadium	11% 27% 11% 51%	Ingestion Dermal Inhalation	19% 81% 0%
Outdoor Worker (surface and subsurface soil)	**2.8E-05**	Arsenic PAH, Total Uranium-238	85% 7% 8%	Ingestion Dermal Inhalation External exposure	78% 19% 0% 4%	**2.6**	Arsenic Manganese Nickel Silver Uranium Vanadium	6% 52% 4% 11% 5% 23%	Ingestion Dermal Inhalation	19% 81% 0%
Excavation Worker (surface and subsurface soil)	**5.6E-06**	Arsenic	85%	Ingestion Dermal Inhalation External exposure	78% 19% 0% 4%	**2.6**	Arsenic Manganese Nickel Silver Uranium Vanadium	6% 52% 4% 11% 5% 23%	Ingestion Dermal Inhalation	19% 81% 0%
Future Adult Resident (surface soil)	**1.1E-05**	PAH, Total Uranium-238	52% 48%	Ingestion Dermal Inhalation External exposure	18% 39% 0% 43%	**2.8**	Nickel Silver Uranium Vanadium	11% 29% 5% 55%	Ingestion Dermal Inhalation	3% 97% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**7.3**	Nickel Silver Uranium Vanadium	11% 28% 8% 53%	Ingestion Dermal Inhalation	11% 89% 0%

Table D8.51. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 19 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**3.4E-06**	PAH, Total	76%	Ingestion	23%	**<1**	*No COCs		Ingestion	
				Dermal	60%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	17%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.6**	Nickel	12%	Ingestion	2%
							Silver	29%	Dermal	98%
							Uranium	5%	Inhalation	0%
							Vanadium	55%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**2.9**	Nickel	11%	Ingestion	11%
							Silver	28%	Dermal	89%
							Uranium	8%	Inhalation	0%
							Vanadium	53%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.52. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 20

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**1.8E-04**	PCB, Total	8%	Ingestion	10%	**<1**	*No COCs		Ingestion	
(surface soil)		Protactinium-231	1%	Dermal	7%				Dermal	
		Uranium-234	1%	Inhalation	0%					
		Uranium-235	5%	External exposure	82%				Inhalation	
		Uranium-238	85%							
Future Industrial Worker	**3.1E-03**	PCB, Total	8%	Ingestion	10%	**9.5**	Molybdenum	2%	Ingestion	20%
(surface soil)		Cesium-137	<1%	Dermal	7%		Nickel	2%	Dermal	79%
		Protactinium-231	1%	Inhalation	0%		Uranium	89%	Inhalation	1%
		Uranium-234	1%	External exposure	82%		Vanadium	7%		
		Uranium-235	5%							
		Uranium-238	85%							
Outdoor Worker	**4.4E-03**	PCB, Total	8%	Ingestion	52%	**19.3**	Molybdenum	2%	Ingestion	71%
(surface soil)		Americium-241	<1%	Dermal	4%		Nickel	1%	Dermal	29%
		Cesium-137	<1%	Inhalation	0%		Uranium	94%	Inhalation	0%
		Protactinium-231	1%	External exposure	44%		Vanadium	3%		
		Uranium-234	3%							
		Uranium-235	3%							
		Uranium-238	85%							
Outdoor Worker	**4.4E-03**	Arsenic	1%	Ingestion	53%	**21.1**	Arsenic	1%	Ingestion	68%
(surface and subsurface		PCB, Total	8%	Dermal	4%		Cobalt	1%	Dermal	32%
soil)		Americium-241	<1%	Inhalation	0%		Iron	1%	Inhalation	0%
		Cesium-137	<1%	External exposure	43%		Manganese	4%		
		Protactinium-231	1%				Molybdenum	2%		
		Uranium-234	3%				Nickel	1%		
		Uranium-235	3%				Silver	1%		
		Uranium-238	84%				Uranium	86%		
							Vanadium	3%		

Table D8.52. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 20 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Excavation Worker (surface and subsurface soil)	**8.8E-04**	Arsenic	1%	Ingestion	52%	**21.1**	Arsenic	1%	Ingestion	68%
		PCB, Total	8%	Dermal	4%		Cobalt	1%	Dermal	32%
		Cesium-137	<1%	Inhalation	0%		Iron	1%	Inhalation	0%
		Protactinium-231	1%	External exposure	43%		Manganese	4%		
		Uranium-234	3%				Molybdenum	2%		
		Uranium-235	3%				Nickel	1%		
		Uranium-238	84%				Silver	1%		
							Uranium	86%		
							Vanadium	3%		
Future Adult Resident (surface soil)	**1.0E-02**	PCB, Total	10%	Ingestion	12%	**23.9**	Molybdenum	2%	Ingestion	23%
		Americium-241	<1	Dermal	7%		Nickel	2%	Dermal	76%
		Cesium-137	<1	Inhalation	0%		Uranium	89%	Inhalation	1%
		Protactinium-231	1%	External exposure	80%		Vanadium	7%		
		Uranium-234	1%							
		Uranium-235	5%							
		Uranium-238	84%							
Future Child Resident (surface soil)	See Future Adult Resident					**101.1**	Beryllium	0%	Ingestion	57%
							Molybdenum	2%	Dermal	43%
							Nickel	1%	Inhalation	0%
							Uranium	92%		
							Vanadium	4%		

Table D8.52. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 20 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.9E-03**	PCB, Total	24%	Ingestion	26%	**7.0**	Molybdenum	2%	Ingestion	23%
		Cesium-137	<1%	Dermal	19%		Nickel	2%	Dermal	77%
		Protactinium-231	1%	Inhalation	0%		Uranium	89%	Inhalation	0%
		Uranium-234	1%	External exposure	55%		Vanadium	7%		
		Uranium-235	3%							
		Uranium-238	70%							
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**20.9**	Molybdenum	2%	Ingestion	19%
							Nickel	2%	Dermal	81%
							Uranium	88%	Inhalation	0%
							Vanadium	7%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**40.4**	Molybdenum	2%	Ingestion	57%
							Nickel	1%	Dermal	43%
							Uranium	92%	Inhalation	0%
							Vanadium	4%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.53. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 21

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface and subsurface soil)	**1.7E-05**	Arsenic	98%	Ingestion Dermal Inhalation External exposure	82% 18% 0% 0%	**2.7**	Arsenic Cobalt Manganese Molybdenum Nickel Vanadium	4% 9% 44% 16% 4% 22%	Ingestion Dermal Inhalation	30% 69% 0%
Excavation Worker (surface and subsurface soil)	**3.5E-06**	Arsenic	99%	Ingestion Dermal Inhalation External exposure	82% 18% 0% 0%	**2.7**	Arsenic Cobalt Manganese Molybdenum Nickel Vanadium	4% 9% 44% 16% 4% 22%	Ingestion Dermal Inhalation	30% 69% 0%
Future Adult Resident (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**2.4**	Cobalt Nickel Vanadium	12% 14% 72%	Ingestion Dermal Inhalation	4% 95% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**6.6**	Barium Cobalt Nickel Vanadium	2% 19% 13% 66%	Ingestion Dermal Inhalation	17% 83% 0%

Table D8.53. Alternate Summary of Risk Characterization using KY ABS Values for AOC 204, EU 21 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**2.2**	Cobalt Nickel Vanadium	11% 14% 72%	Ingestion Dermal Inhalation	4% 96% 0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**2.6**	Cobalt Nickel Vanadium	19% 13% 66%	Ingestion Dermal Inhalation	17% 83% 0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.54. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 211-A

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker	**6.5E-06**	Neptunium-237	20%	Ingestion	9%	**<1**	*No COCs		Ingestion	
(surface soil)		Uranium-238	62%	Dermal	2%				Dermal	
				Inhalation	0%				Inhalation	
				External exposure	89%					
Future Industrial Worker	**1.2E-04**	PAH, Total	1%	Ingestion	9%	**2.7**	Antimony	62%	Ingestion	4%
(surface soil)		PCB, Total	1%	Dermal	2%		Silver	8%	Dermal	96%
		Cesium-137	13%	Inhalation	0%		Vanadium	22%	Inhalation	0%
		Neptunium-237	20%	External exposure	88%					
		Uranium-234	3%							
		Uranium-238	62%							
Outdoor Worker	**1.6E-04**	PAH, Total	1%	Ingestion	50%	**2.8**	Antimony	61%	Ingestion	30%
(surface soil)		PCB, Total	1%	Dermal	1%		Iron	7%	Dermal	69%
		Cesium-137	7%	Inhalation	0%		Silver	6%	Inhalation	0%
		Neptunium-237	12%	External exposure	49%		Thallium	5%		
		Uranium-234	14%				Vanadium	18%		
		Uranium-238	64%							
Outdoor Worker	**2.0E-04**	Arsenic	10%	Ingestion	58%	**5.1**	Antimony	50%	Ingestion	39%
(surface and subsurface		PAH, Total	1%	Dermal	13%		Arsenic	2%	Dermal	61%
soil)		PCB, Total	22%	Inhalation	0%		Cobalt	14%	Inhalation	0%
		Uranium-234	11%	External exposure	28%		Iron	6%		
		Uranium-235	5%				Nickel	9%		
		Uranium-238	51%				Thallium	5%		
							Vanadium	10%		
Excavation Worker	**3.9E-05**	Arsenic	10%	Ingestion	58%	**5.1**	Antimony	50%	Ingestion	39%
(surface and subsurface		PCB, Total	22%	Dermal	13%		Arsenic	2%	Dermal	61%
soil)		Uranium-234	11%	Inhalation	0%		Cobalt	14%	Inhalation	0%
		Uranium-235	5%	External exposure	28%		Iron	6%		
		Uranium-238	51%				Nickel	9%		
							Thallium	5%		
							Vanadium	10%		

Table D8.54. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 211-A (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident (surface soil)	**3.8E-04**	PAH, Total	1%	Ingestion	11%	**6.6**	Antimony	62%	Ingestion	5%
		PCB, Total	1%	Dermal	2%		Barium	2%	Dermal	95%
		Cesium-137	12%	Inhalation	0%		Iron	3%	Inhalation	0%
		Neptunium-237	20%	External exposure	87%		Silver	8%		
		Uranium-234	3%				Thallium	2%		
		Uranium-238	62%				Vanadium	22%		
Future Child Resident (surface soil)	See Future Adult Resident					**18.5**	Antimony	62%	Ingestion	19%
							Barium	2%	Dermal	81%
							Iron	5%	Inhalation	0%
							Silver	7%		
							Thallium	4%		
							Uranium	1%		
							Vanadium	20%		
Future Adult Recreational User (surface soil)	**6.0E-05**	PAH, Total	3%	Ingestion	25%	**2.0**	Antimony	62%	Ingestion	5%
		PCB, Total	3%	Dermal	5%		Silver	8%	Dermal	95%
		Cesium-137	10%	Inhalation	0%		Vanadium	22%	Inhalation	0%
		Neptunium-237	16%	External exposure	70%					
		Uranium-234	7%							
		Uranium-238	60%							
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**6.1**	Antimony	62%	Ingestion	4%
							Barium	2%	Dermal	96%
							Iron	3%	Inhalation	0%
							Silver	8%		
							Thallium	2%		
							Vanadium	22%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**7.4**	Antimony	62%	Ingestion	19%
							Barium	2%	Dermal	81%
							Iron	5%	Inhalation	0%
							Silver	7%		
							Thallium	4%		
							Vanadium	20%		

Table D8.54. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 211-A (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.55. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 224

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**1.5E-05**	PAH, Total Uranium-238	44% 56%	Ingestion Dermal Inhalation External exposure	10% 40% 0% 50%	**2.9**	Antimony	97%	Ingestion Dermal Inhalation	4% 96% 0%
Outdoor Worker (surface soil)	**2.1E-05**	PAH, Total Uranium-238	44% 56%	Ingestion Dermal Inhalation External exposure	52% 21% 0% 27%	**2.9**	Antimony	97%	Ingestion Dermal Inhalation	30% 70% 0%
Outdoor Worker (surface and subsurface soil)	**4.3E-05**	Arsenic PAH, Total Cesium-137 Uranium-238	46% 21% 6% 27%	Ingestion Dermal Inhalation External exposure	63% 18% 0% 19%	**3.3**	Antimony Arsenic Nickel	84% 4% 9%	Ingestion Dermal Inhalation	30% 70% 0%
Excavation Worker (surface and subsurface soil)	**8.7E-06**	Arsenic PAH, Total Uranium-238	45% 21% 27%	Ingestion Dermal Inhalation External exposure	62% 18% 0% 20%	**3.3**	Antimony Arsenic Nickel	84% 4% 9%	Ingestion Dermal Inhalation	30% 70% 0%
Future Adult Resident (surface soil)	**5.4E-05**	PAH, Total Uranium-238	49% 51%	Ingestion Dermal Inhalation External exposure	17% 37% 0% 46%	**7.0**	Antimony Barium	97% 2%	Ingestion Dermal Inhalation	5% 95% 0%
Future Child Resident (surface soil)	See Future Adult Resident					**19.6**	Antimony Barium Uranium	97% 2% 2%	Ingestion Dermal Inhalation	19% 81% 0%

Table D8.55. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 224 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**1.6E-05**	PAH, Total	74%	Ingestion	23%	**2.1**	Antimony	97%	Ingestion	5%
		Uranium-238	26%	Dermal	58%				Dermal	95%
				Inhalation	0%				Inhalation	0%
				External exposure	19%					
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**6.4**	Antimony	97%	Ingestion	4%
							Barium	2%	Dermal	96%
									Inhalation	0%
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**7.8**	Antimony	97%	Ingestion	19%
							Barium	2%	Dermal	81%
							Uranium	2%	Inhalation	0%

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.56. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 225

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**2.1E-06**	Uranium-238	59%	Ingestion Dermal Inhalation External exposure	10% 37% 0% 53%	**2.5**	Antimony Molybdenum Nickel Vanadium	56% 9% 6% 26%	Ingestion Dermal Inhalation	5% 95% 0%
Outdoor Worker (surface soil)	**2.9E-06**	PAH, Total Uranium-238	41% 59%	Ingestion Dermal Inhalation External exposure	52% 20% 0% 28%	**2.7**	Antimony Molybdenum Nickel Thallium Vanadium	52% 18% 4% 4% 20%	Ingestion Dermal Inhalation	35% 65% 0%
Outdoor Worker (surface and subsurface soil)	**2.2E-05**	Arsenic PAH, Total Cesium-137 Uranium-238	74% 6% 13% 8%	Ingestion Dermal Inhalation External exposure	68% 16% 0% 16%	**3.6**	Antimony Arsenic Manganese Molybdenum Nickel Vanadium	39% 3% 25% 14% 3% 15%	Ingestion Dermal Inhalation	29% 71% 0%
Excavation Worker (surface and subsurface soil)	**4.5E-06**	Arsenic	72%	Ingestion Dermal Inhalation External exposure	66% 15% 0% 19%	**3.6**	Antimony Arsenic Manganese Molybdenum Nickel Vanadium	39% 3% 25% 14% 3% 15%	Ingestion Dermal Inhalation	29% 71% 0%

Table D8.56. Alternate Summary of Risk Characterization using KY ABS Values for SWMU 225 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Resident (surface soil)	**7.5E-06**	PAH, Total	46%	Ingestion	17%	**6.2**	Antimony	55%	Ingestion	6%
		Uranium-238	54%	Dermal	35%		Molybdenum	9%	Dermal	94%
				Inhalation	0%		Nickel	6%	Inhalation	0%
				External exposure	48%		Thallium	2%		
							Vanadium	26%		
Future Child Resident (surface soil)	See Future Adult Resident					**17.8**	Antimony	53%	Ingestion	22%
							Barium	1%	Dermal	78%
							Molybdenum	14%	Inhalation	0%
							Nickel	5%		
							Thallium	3%		
							Vanadium	22%		
Future Adult Recreational User (surface soil)	**2.2E-06**	PAH, Total	71%	Ingestion	23%	**1.8**	Antimony	55%	Ingestion	6%
				Dermal	56%		Molybdenum	9%	Dermal	94%
				Inhalation	0%		Nickel	6%	Inhalation	0%
				External exposure	21%		Vanadium	26%		
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**5.7**	Antimony	56%	Ingestion	5%
							Molybdenum	9%	Dermal	95%
							Nickel	6%	Inhalation	0%
							Thallium	2%		
							Vanadium	26%		
Future Child Recreational User (surface soil)	See Future Adult Recreational User					**7.1**	Antimony	53%	Ingestion	22%
							Molybdenum	14%	Dermal	78%
							Nickel	5%	Inhalation	0%
							Thallium	3%		
							Vanadium	22%		

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.

Table D8.57. Alternate Summary of Risk Characterization using KY ABS Values for AOC 565

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Current Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Industrial Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Outdoor Worker (surface and subsurface soil)	**2.6E-06**	Cesium-137	100%	Ingestion Dermal Inhalation External exposure	1% 0% 0% 99%	**<1**	*No COCs		Ingestion Dermal Inhalation	
Excavation Worker (surface and subsurface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Adult Resident (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Child Resident (surface soil)	See Future Adult Resident								Ingestion Dermal Inhalation	

Table D8.57. Alternate Summary of Risk Characterization using KY ABS Values for AOC 565 (Continued)

Receptor	Total ELCR	COCs	% Total ELCR	Routes of Exposure	% Total ELCR	Total HI	COCs	% Total HI	Routes of Exposure	% Total HI
Future Adult Recreational User (surface soil)	**<1.0E-06**	*No COCs		Ingestion Dermal Inhalation External exposure		**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Teen Recreational User (surface soil)	See Future Adult Recreational User					**<1**	*No COCs		Ingestion Dermal Inhalation	
Future Child Recreational User (surface soil)	See Future Adult Recreational User								Ingestion Dermal Inhalation	

Total ELCR and total HI represent total risk or hazard summed across all routes of exposure for all COPCs.

*No COCs = There are no COCs.

ELCR for Future Adult Resident and Future Child Resident are the combined lifetime scenario.

ELCR for Future Adult Recreational User, Future Teen Recreational User and Future Child Recreational User are the combined lifetime scenario.