

ATTACHMENT D4

**CHEMICAL DAILY INTAKE
CALCULATIONS**

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**Attachment D4.1. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil
at the Outfall 008 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.11E+03	8.91E-05	3.83E-04	1.11E-09	NA
Antimony	9.70E+00	9.49E-08	4.08E-07	1.18E-12	NA
Arsenic	5.70E+00	5.57E-08	1.44E-07	6.94E-13	NA
Barium	7.30E+01	7.14E-07	3.07E-06	8.89E-12	NA
Beryllium	5.30E-01	5.18E-09	2.23E-08	6.46E-14	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.40E+01	1.37E-07	5.89E-07	1.71E-12	NA
Copper	1.80E+01	1.76E-07	7.57E-07	2.19E-12	NA
Iron	1.24E+04	1.21E-04	5.22E-04	1.51E-09	NA
Lead	2.20E+01	2.15E-07	9.25E-07	2.68E-12	NA
Manganese	4.69E+02	4.59E-06	1.97E-05	5.71E-11	NA
Mercury	1.00E-01	9.78E-10	4.21E-09	1.22E-14	NA
Molybdenum	8.20E+00	8.02E-08	3.45E-07	9.99E-13	NA
Nickel	1.70E+01	1.66E-07	7.15E-07	2.07E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	2.35E-08	1.01E-07	2.92E-13	NA
Uranium	9.60E+01	9.39E-07	4.04E-06	1.17E-11	NA
Vanadium	2.10E+01	2.05E-07	8.83E-07	2.56E-12	NA
Zinc	5.00E+01	4.89E-07	2.10E-06	6.09E-12	NA
<u>Organic Compounds</u>					
Fluoranthene	5.80E-01	5.67E-09	6.34E-08	7.06E-14	NA
Pyrene	5.00E-01	4.89E-09	4.21E-08	6.09E-14	NA
Total PCB (1)	3.20E+01	3.13E-07	3.77E-06	3.90E-12	NA
Total PAH (2)	1.20E+00	1.17E-08	1.31E-07	1.46E-13	NA
<u>Radionuclides</u>					
Americium-241	1.00E+00	1.75E+01	NA	2.18E-04	2.56E-01
Cesium-137	5.50E-01	9.63E+00	NA	1.20E-04	1.41E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.60E-01	1.16E+01	NA	1.44E-04	1.69E-01
Plutonium-239/240	9.10E+00	1.59E+02	NA	1.98E-03	2.33E+00
Technetium-99	7.40E+00	1.30E+02	NA	1.61E-03	1.89E+00
Thorium-228	5.90E-01	1.03E+01	NA	1.29E-04	1.51E-01
Thorium-230	8.40E+01	1.47E+03	NA	1.83E-02	2.15E+01
Thorium-232	6.70E-01	1.17E+01	NA	1.46E-04	1.72E-01
Uranium-234	3.10E+00	5.43E+01	NA	6.76E-04	7.94E-01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.60E+00	8.05E+01	NA	1.00E-03	1.18E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.2. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Surface Water
at the Outfall 008 Hot Spot**

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.3. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at the Outfall 008 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.11E+03	2.50E-04	1.08E-03	3.12E-09	NA
Antimony	9.70E+00	2.66E-07	1.14E-06	3.32E-12	NA
Arsenic	5.70E+00	1.56E-07	4.04E-07	1.95E-12	NA
Barium	7.30E+01	2.00E-06	8.61E-06	2.50E-11	NA
Beryllium	5.30E-01	1.45E-08	6.25E-08	1.82E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.40E+01	3.84E-07	1.65E-06	4.80E-12	NA
Copper	1.80E+01	4.93E-07	2.12E-06	6.17E-12	NA
Iron	1.24E+04	3.40E-04	1.47E-03	4.26E-09	NA
Lead	2.20E+01	6.03E-07	2.60E-06	7.54E-12	NA
Manganese	4.69E+02	1.29E-05	5.53E-05	1.61E-10	NA
Mercury	1.00E-01	2.74E-09	1.18E-08	3.43E-14	NA
Molybdenum	8.20E+00	2.25E-07	9.68E-07	2.81E-12	NA
Nickel	1.70E+01	4.66E-07	2.01E-06	5.83E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	6.58E-08	2.83E-07	8.22E-13	NA
Uranium	9.60E+01	2.63E-06	1.13E-05	3.29E-11	NA
Vanadium	2.10E+01	5.75E-07	2.48E-06	7.20E-12	NA
Zinc	5.00E+01	1.37E-06	5.90E-06	1.71E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	5.80E-01	1.59E-08	1.78E-07	1.99E-13	NA
Pyrene	5.00E-01	1.37E-08	1.18E-07	1.71E-13	NA
Total PCB (1)	3.20E+01	8.77E-07	1.06E-05	1.10E-11	NA
Total PAH (2)	1.20E+00	3.29E-08	3.68E-07	4.11E-13	NA
<u>Radionuclides</u>					
Americium-241	1.00E+00	NA	NA	NA	NA
Cesium-137	5.50E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.60E-01	NA	NA	NA	NA
Plutonium-239/240	9.10E+00	NA	NA	NA	NA
Technetium-99	7.40E+00	NA	NA	NA	NA
Thorium-228	5.90E-01	NA	NA	NA	NA
Thorium-230	8.40E+01	NA	NA	NA	NA
Thorium-232	6.70E-01	NA	NA	NA	NA
Uranium-234	3.10E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.60E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.4. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Surface Water at the Outfall 008 Hot Spot

Exposure Route - Chronic Daily Intake		
COPC	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.5. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 008 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.11E+03	1.59E-03	6.83E-03	1.98E-08	NA
Antimony	9.70E+00	1.70E-06	7.28E-06	2.11E-11	NA
Arsenic	5.70E+00	9.98E-07	2.57E-06	1.24E-11	NA
Barium	7.30E+01	1.28E-05	5.48E-05	1.59E-10	NA
Beryllium	5.30E-01	9.28E-08	3.98E-07	1.15E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.40E+01	2.45E-06	1.05E-05	3.05E-11	NA
Copper	1.80E+01	3.15E-06	1.35E-05	3.92E-11	NA
Iron	1.24E+04	2.17E-03	9.31E-03	2.70E-08	NA
Lead	2.20E+01	3.85E-06	1.65E-05	4.79E-11	NA
Manganese	4.69E+02	8.21E-05	3.52E-04	1.02E-09	NA
Mercury	1.00E-01	1.75E-08	7.50E-08	2.18E-13	NA
Molybdenum	8.20E+00	1.44E-06	6.15E-06	1.79E-11	NA
Nickel	1.70E+01	2.98E-06	1.28E-05	3.70E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	4.20E-07	1.80E-06	5.23E-12	NA
Uranium	9.60E+01	1.68E-05	7.20E-05	2.09E-10	NA
Vanadium	2.10E+01	3.68E-06	1.58E-05	4.57E-11	NA
Zinc	5.00E+01	8.75E-06	3.75E-05	1.09E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	5.80E-01	1.02E-07	1.13E-06	1.26E-12	NA
Pyrene	5.00E-01	8.75E-08	7.50E-07	1.09E-12	NA
Total PCB (1)	3.20E+01	5.60E-06	6.72E-05	6.97E-11	NA
Total PAH (2)	1.20E+00	2.10E-07	2.34E-06	2.61E-12	NA
<u>Radionuclides</u>					
Americium-241	1.00E+00	3.13E+02	NA	3.89E-03	4.57E+00
Cesium-137	5.50E-01	1.72E+02	NA	2.14E-03	2.51E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.60E-01	2.07E+02	NA	2.57E-03	3.02E+00
Plutonium-239/240	9.10E+00	2.85E+03	NA	3.54E-02	4.16E+01
Technetium-99	7.40E+00	2.32E+03	NA	2.88E-02	3.38E+01
Thorium-228	5.90E-01	1.85E+02	NA	2.30E-03	2.70E+00
Thorium-230	8.40E+01	2.63E+04	NA	3.27E-01	3.84E+02
Thorium-232	6.70E-01	2.10E+02	NA	2.61E-03	3.06E+00
Uranium-234	3.10E+00	9.70E+02	NA	1.21E-02	1.42E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.60E+00	1.44E+03	NA	1.79E-02	2.10E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.6. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water
at the Outfall 008 Hot Spot**

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.7. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 008 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.11E+03	4.46E-03	1.92E-02	5.56E-08	NA
Antimony	9.70E+00	4.74E-06	2.04E-05	5.92E-11	NA
Arsenic	5.70E+00	2.79E-06	7.20E-06	3.48E-11	NA
Barium	7.30E+01	3.57E-05	1.54E-04	4.46E-10	NA
Beryllium	5.30E-01	2.59E-07	1.12E-06	3.24E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.40E+01	6.85E-06	2.95E-05	8.55E-11	NA
Copper	1.80E+01	8.80E-06	3.79E-05	1.10E-10	NA
Iron	1.24E+04	6.07E-03	2.61E-02	7.58E-08	NA
Lead	2.20E+01	1.08E-05	4.63E-05	1.34E-10	NA
Manganese	4.69E+02	2.29E-04	9.87E-04	2.86E-09	NA
Mercury	1.00E-01	4.89E-08	2.11E-07	6.11E-13	NA
Molybdenum	8.20E+00	4.01E-06	1.73E-05	5.01E-11	NA
Nickel	1.70E+01	8.31E-06	3.58E-05	1.04E-10	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	1.17E-06	5.05E-06	1.47E-11	NA
Uranium	9.60E+01	4.69E-05	2.02E-04	5.86E-10	NA
Vanadium	2.10E+01	1.03E-05	4.42E-05	1.28E-10	NA
Zinc	5.00E+01	2.45E-05	1.05E-04	3.05E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	5.80E-01	2.84E-07	3.17E-06	3.54E-12	NA
Pyrene	5.00E-01	2.45E-07	2.11E-06	3.05E-12	NA
Total PCB (1)	3.20E+01	1.56E-05	1.89E-04	1.95E-10	NA
Total PAH (2)	1.20E+00	5.87E-07	6.57E-06	7.33E-12	NA
<u>Radionuclides</u>					
Americium-241	1.00E+00	NA	NA	NA	NA
Cesium-137	5.50E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.60E-01	NA	NA	NA	NA
Plutonium-239/240	9.10E+00	NA	NA	NA	NA
Technetium-99	7.40E+00	NA	NA	NA	NA
Thorium-228	5.90E-01	NA	NA	NA	NA
Thorium-230	8.40E+01	NA	NA	NA	NA
Thorium-232	6.70E-01	NA	NA	NA	NA
Uranium-234	3.10E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.60E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.8. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water at the Outfall 008 Hot Spot

Exposure Route - Chronic Daily Intake		
COPC	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.9. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 008 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.11E+03	1.13E-02	5.06E-03	1.47E-08	NA
Antimony	9.70E+00	1.20E-05	5.38E-06	1.56E-11	NA
Arsenic	5.70E+00	7.07E-06	1.90E-06	9.18E-12	NA
Barium	7.30E+01	9.05E-05	4.05E-05	1.18E-10	NA
Beryllium	5.30E-01	6.57E-07	2.94E-07	8.54E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.40E+01	1.74E-05	7.77E-06	2.25E-11	NA
Copper	1.80E+01	2.23E-05	9.99E-06	2.90E-11	NA
Iron	1.24E+04	1.54E-02	6.89E-03	2.00E-08	NA
Lead	2.20E+01	2.73E-05	1.22E-05	3.54E-11	NA
Manganese	4.69E+02	5.82E-04	2.60E-04	7.55E-10	NA
Mercury	1.00E-01	1.24E-07	5.55E-08	1.61E-13	NA
Molybdenum	8.20E+00	1.02E-05	4.55E-06	1.32E-11	NA
Nickel	1.70E+01	2.11E-05	9.44E-06	2.74E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	2.98E-06	1.33E-06	3.87E-12	NA
Uranium	9.60E+01	1.19E-04	5.33E-05	1.55E-10	NA
Vanadium	2.10E+01	2.60E-05	1.17E-05	3.38E-11	NA
Zinc	5.00E+01	6.20E-05	2.78E-05	8.05E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	5.80E-01	7.19E-07	8.37E-07	9.34E-13	NA
Pyrene	5.00E-01	6.20E-07	5.55E-07	8.05E-13	NA
Total PCB (1)	3.20E+01	3.97E-05	4.97E-05	5.15E-11	NA
Total PAH (2)	1.20E+00	1.49E-06	1.73E-06	1.93E-12	NA
<u>Radionuclides</u>					
Americium-241	1.00E+00	2.22E+03	NA	2.88E-03	3.38E+00
Cesium-137	5.50E-01	1.22E+03	NA	1.58E-03	1.86E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.60E-01	1.47E+03	NA	1.90E-03	2.23E+00
Plutonium-239/240	9.10E+00	2.02E+04	NA	2.62E-02	3.08E+01
Technetium-99	7.40E+00	1.64E+04	NA	2.13E-02	2.50E+01
Thorium-228	5.90E-01	1.31E+03	NA	1.70E-03	1.99E+00
Thorium-230	8.40E+01	1.86E+05	NA	2.42E-01	2.84E+02
Thorium-232	6.70E-01	1.49E+03	NA	1.93E-03	2.26E+00
Uranium-234	3.10E+00	6.88E+03	NA	8.93E-03	1.05E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.60E+00	1.02E+04	NA	1.33E-02	1.55E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.10. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 008 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.11E+03	3.17E-02	1.42E-02	4.12E-08	NA
Antimony	9.70E+00	3.38E-05	1.51E-05	4.38E-11	NA
Arsenic	5.70E+00	1.98E-05	5.32E-06	2.57E-11	NA
Barium	7.30E+01	2.54E-04	1.14E-04	3.30E-10	NA
Beryllium	5.30E-01	1.84E-06	8.24E-07	2.39E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.40E+01	4.87E-05	2.18E-05	6.32E-11	NA
Copper	1.80E+01	6.26E-05	2.80E-05	8.13E-11	NA
Iron	1.24E+04	4.32E-02	1.93E-02	5.61E-08	NA
Lead	2.20E+01	7.66E-05	3.42E-05	9.94E-11	NA
Manganese	4.69E+02	1.63E-03	7.29E-04	2.12E-09	NA
Mercury	1.00E-01	3.48E-07	1.56E-07	4.52E-13	NA
Molybdenum	8.20E+00	2.85E-05	1.28E-05	3.70E-11	NA
Nickel	1.70E+01	5.92E-05	2.64E-05	7.68E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	8.35E-06	3.73E-06	1.08E-11	NA
Uranium	9.60E+01	3.34E-04	1.49E-04	4.34E-10	NA
Vanadium	2.10E+01	7.31E-05	3.27E-05	9.49E-11	NA
Zinc	5.00E+01	1.74E-04	7.78E-05	2.26E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	5.80E-01	2.02E-06	2.34E-06	2.62E-12	NA
Pyrene	5.00E-01	1.74E-06	1.56E-06	2.26E-12	NA
Total PCB (1)	3.20E+01	1.11E-04	1.39E-04	1.45E-10	NA
Total PAH (2)	1.20E+00	4.18E-06	4.85E-06	5.42E-12	NA
<u>Radionuclides</u>					
Americium-241	1.00E+00	NA	NA	NA	NA
Cesium-137	5.50E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.60E-01	NA	NA	NA	NA
Plutonium-239/240	9.10E+00	NA	NA	NA	NA
Technetium-99	7.40E+00	NA	NA	NA	NA
Thorium-228	5.90E-01	NA	NA	NA	NA
Thorium-230	8.40E+01	NA	NA	NA	NA
Thorium-232	6.70E-01	NA	NA	NA	NA
Uranium-234	3.10E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.60E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.11. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil at the Outfall 010 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.29E+04	1.26E-04	5.42E-04	1.57E-09	NA
Antimony	9.67E+00	9.46E-08	4.07E-07	1.18E-12	NA
Arsenic	1.26E+01	1.23E-07	3.18E-07	1.53E-12	NA
Barium	9.51E+01	9.30E-07	4.00E-06	1.16E-11	NA
Beryllium	4.80E-01	4.69E-09	2.02E-08	5.85E-14	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.33E+01	2.28E-07	9.80E-07	2.84E-12	NA
Copper	1.83E+01	1.79E-07	7.70E-07	2.23E-12	NA
Iron	1.56E+04	1.53E-04	6.56E-04	1.90E-09	NA
Lead	7.52E+01	7.35E-07	3.16E-06	9.16E-12	NA
Manganese	3.23E+02	3.16E-06	1.36E-05	3.93E-11	NA
Mercury	3.10E-01	3.03E-09	1.30E-08	3.78E-14	NA
Molybdenum	1.39E+01	1.36E-07	5.84E-07	1.69E-12	NA
Nickel	2.18E+01	2.13E-07	9.17E-07	2.66E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.42E+00	2.37E-08	1.02E-07	2.95E-13	NA
Uranium	2.64E+01	2.58E-07	1.11E-06	3.22E-12	NA
Vanadium	2.78E+01	2.72E-07	1.17E-06	3.39E-12	NA
Zinc	2.52E+02	2.46E-06	1.06E-05	3.07E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	5.10E+00	4.99E-08	5.58E-07	6.21E-13	NA
Pyrene	3.50E+00	3.42E-08	2.94E-07	4.26E-13	NA
Total PCB (1)	1.90E+01	1.86E-07	2.24E-06	2.31E-12	NA
Total PAH (2)	3.10E+00	3.03E-08	3.39E-07	3.78E-13	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	7.26E-01	1.27E+01	NA	1.58E-04	1.86E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.36E-02	1.11E+00	NA	1.39E-05	1.63E-02
Plutonium-239/240	1.09E-01	1.91E+00	NA	2.38E-05	2.79E-02
Technetium-99	8.44E+00	1.48E+02	NA	1.84E-03	2.16E+00
Thorium-228	3.28E-01	5.74E+00	NA	7.15E-05	8.40E-02
Thorium-230	8.21E-01	1.44E+01	NA	1.79E-04	2.10E-01
Thorium-232	2.71E-01	4.74E+00	NA	5.91E-05	6.94E-02
Uranium-234	7.42E+00	1.30E+02	NA	1.62E-03	1.90E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	8.81E+00	1.54E+02	NA	1.92E-03	2.26E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.12. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Surface Water at the Outfall 010 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.13. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at the Outfall 010 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.29E+04	3.53E-04	1.52E-03	4.42E-09	NA
Antimony	9.67E+00	2.65E-07	1.14E-06	3.31E-12	NA
Arsenic	1.26E+01	3.45E-07	8.92E-07	4.32E-12	NA
Barium	9.51E+01	2.61E-06	1.12E-05	3.26E-11	NA
Beryllium	4.80E-01	1.32E-08	5.66E-08	1.64E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.33E+01	6.38E-07	2.75E-06	7.98E-12	NA
Copper	1.83E+01	5.01E-07	2.16E-06	6.27E-12	NA
Iron	1.56E+04	4.27E-04	1.84E-03	5.35E-09	NA
Lead	7.52E+01	2.06E-06	8.87E-06	2.58E-11	NA
Manganese	3.23E+02	8.85E-06	3.81E-05	1.11E-10	NA
Mercury	3.10E-01	8.49E-09	3.66E-08	1.06E-13	NA
Molybdenum	1.39E+01	3.81E-07	1.64E-06	4.76E-12	NA
Nickel	2.18E+01	5.97E-07	2.57E-06	7.47E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.42E+00	6.63E-08	2.86E-07	8.29E-13	NA
Uranium	2.64E+01	7.23E-07	3.12E-06	9.05E-12	NA
Vanadium	2.78E+01	7.62E-07	3.28E-06	9.53E-12	NA
Zinc	2.52E+02	6.90E-06	2.97E-05	8.64E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	5.10E+00	1.40E-07	1.56E-06	1.75E-12	NA
Pyrene	3.50E+00	9.59E-08	8.26E-07	1.20E-12	NA
Total PCB (1)	1.90E+01	5.21E-07	6.28E-06	6.51E-12	NA
Total PAH (2)	3.10E+00	8.49E-08	9.51E-07	1.06E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	7.26E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.36E-02	NA	NA	NA	NA
Plutonium-239/240	1.09E-01	NA	NA	NA	NA
Technetium-99	8.44E+00	NA	NA	NA	NA
Thorium-228	3.28E-01	NA	NA	NA	NA
Thorium-230	8.21E-01	NA	NA	NA	NA
Thorium-232	2.71E-01	NA	NA	NA	NA
Uranium-234	7.42E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	8.81E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.14. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for
Surface Water at the Outfall 010 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.15. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 010 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.29E+04	2.26E-03	9.68E-03	2.81E-08	NA
Antimony	9.67E+00	1.69E-06	7.25E-06	2.11E-11	NA
Arsenic	1.26E+01	2.21E-06	5.67E-06	2.74E-11	NA
Barium	9.51E+01	1.66E-05	7.13E-05	2.07E-10	NA
Beryllium	4.80E-01	8.40E-08	3.60E-07	1.05E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.33E+01	4.08E-06	1.75E-05	5.07E-11	NA
Copper	1.83E+01	3.20E-06	1.37E-05	3.98E-11	NA
Iron	1.56E+04	2.73E-03	1.17E-02	3.40E-08	NA
Lead	7.52E+01	1.32E-05	5.64E-05	1.64E-10	NA
Manganese	3.23E+02	5.65E-05	2.42E-04	7.03E-10	NA
Mercury	3.10E-01	5.43E-08	2.33E-07	6.75E-13	NA
Molybdenum	1.39E+01	2.43E-06	1.04E-05	3.03E-11	NA
Nickel	2.18E+01	3.82E-06	1.64E-05	4.75E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.42E+00	4.24E-07	1.82E-06	5.27E-12	NA
Uranium	2.64E+01	4.62E-06	1.98E-05	5.75E-11	NA
Vanadium	2.78E+01	4.87E-06	2.09E-05	6.05E-11	NA
Zinc	2.52E+02	4.41E-05	1.89E-04	5.49E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	5.10E+00	8.93E-07	9.95E-06	1.11E-11	NA
Pyrene	3.50E+00	6.13E-07	5.25E-06	7.62E-12	NA
Total PCB (1)	1.90E+01	3.33E-06	3.99E-05	4.14E-11	NA
Total PAH (2)	3.10E+00	5.43E-07	6.05E-06	6.75E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	7.26E-01	2.27E+02	NA	2.83E-03	3.32E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.36E-02	1.99E+01	NA	2.48E-04	2.91E-01
Plutonium-239/240	1.09E-01	3.41E+01	NA	4.24E-04	4.98E-01
Technetium-99	8.44E+00	2.64E+03	NA	3.29E-02	3.86E+01
Thorium-228	3.28E-01	1.03E+02	NA	1.28E-03	1.50E+00
Thorium-230	8.21E-01	2.57E+02	NA	3.20E-03	3.75E+00
Thorium-232	2.71E-01	8.48E+01	NA	1.06E-03	1.24E+00
Uranium-234	7.42E+00	2.32E+03	NA	2.89E-02	3.39E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	8.81E+00	2.76E+03	NA	3.43E-02	4.03E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.17. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 010 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.29E+04	6.31E-03	2.72E-02	7.88E-08	NA
Antimony	9.67E+00	4.73E-06	2.04E-05	5.90E-11	NA
Arsenic	1.26E+01	6.16E-06	1.59E-05	7.69E-11	NA
Barium	9.51E+01	4.65E-05	2.00E-04	5.81E-10	NA
Beryllium	4.80E-01	2.35E-07	1.01E-06	2.93E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.33E+01	1.14E-05	4.90E-05	1.42E-10	NA
Copper	1.83E+01	8.95E-06	3.85E-05	1.12E-10	NA
Iron	1.56E+04	7.63E-03	3.28E-02	9.53E-08	NA
Lead	7.52E+01	3.68E-05	1.58E-04	4.59E-10	NA
Manganese	3.23E+02	1.58E-04	6.80E-04	1.97E-09	NA
Mercury	3.10E-01	1.52E-07	6.53E-07	1.89E-12	NA
Molybdenum	1.39E+01	6.80E-06	2.93E-05	8.49E-11	NA
Nickel	2.18E+01	1.07E-05	4.59E-05	1.33E-10	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.42E+00	1.18E-06	5.09E-06	1.48E-11	NA
Uranium	2.64E+01	1.29E-05	5.56E-05	1.61E-10	NA
Vanadium	2.78E+01	1.36E-05	5.85E-05	1.70E-10	NA
Zinc	2.52E+02	1.23E-04	5.30E-04	1.54E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	5.10E+00	2.49E-06	2.79E-05	3.11E-11	NA
Pyrene	3.50E+00	1.71E-06	1.47E-05	2.14E-11	NA
Total PCB (1)	1.90E+01	9.29E-06	1.12E-04	1.16E-10	NA
Total PAH (2)	3.10E+00	1.52E-06	1.70E-05	1.89E-11	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	7.26E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.36E-02	NA	NA	NA	NA
Plutonium-239/240	1.09E-01	NA	NA	NA	NA
Technetium-99	8.44E+00	NA	NA	NA	NA
Thorium-228	3.28E-01	NA	NA	NA	NA
Thorium-230	8.21E-01	NA	NA	NA	NA
Thorium-232	2.71E-01	NA	NA	NA	NA
Uranium-234	7.42E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	8.81E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.16. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water at the Outfall 010 Hot Spot

COPC	Exposure Point Concentration	HIDE	HIDE COLUMN	Exposure Route - Chronic Daily Intake
		Pc	Dermal Intake without Cs	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	NS	1.00E-03	3.91E-02	NA
Antimony	NS	1.00E-03	3.91E-02	NA
Arsenic	NS	1.00E-03	3.91E-02	NA
Barium	NS	1.00E-03	3.91E-02	NA
Beryllium	NS	1.00E-03	3.91E-02	NA
Cadmium	NS	1.00E-03	3.91E-02	NA
Chromium	NS	1.00E-03	3.91E-02	NA
Copper	NS	1.00E-03	3.91E-02	NA
Iron	NS	1.00E-03	3.91E-02	NA
Lead	NS	1.00E-04	3.91E-02	NA
Manganese	NS	1.00E-03	3.91E-02	NA
Mercury	NS	1.00E-03	3.91E-02	NA
Molybdenum	NS	1.00E-03	3.91E-02	NA
Nickel	NS	2.00E-04	3.91E-02	NA
Selenium	NS	1.00E-03	3.91E-02	NA
Silver	NS	6.00E-04	3.91E-02	NA
Uranium	NS	1.00E-03	3.91E-02	NA
Vanadium	NS	1.00E-03	3.91E-02	NA
Zinc	NS	6.00E-04	3.91E-02	NA
<u>Organic Compounds</u>				
Fluoranthene	NS	5.13E-01	3.91E-02	NA
Pyrene	NS	3.24E-01	3.91E-02	NA
Total PCB (1)	NA	9.22E-01	3.91E-02	NA
Total PAH (2)	NS	1.24E+00	3.91E-02	NA
<u>Radionuclides</u>				
Americium-241	NS	0.00E+00	NA	NA
Cesium-137	NS	0.00E+00	NA	NA
Cobalt-60	NS	0.00E+00	NA	NA
Neptunium-237	NS	0.00E+00	NA	NA
Plutonium-239/240	NS	0.00E+00	NA	NA
Technetium-99	NS	0.00E+00	NA	NA
Thorium-228	NS	0.00E+00	NA	NA
Thorium-230	NS	0.00E+00	NA	NA
Thorium-232	NS	0.00E+00	NA	NA
Uranium-234	NS	0.00E+00	NA	NA
Uranium-235	NS	0.00E+00	NA	NA
Uranium-238	NA	0.00E+00	NA	NA
<u>YOCs</u>				
Trichloroethene	NA	1.57E-02	3.91E-02	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.18. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for
Surface Water at the Outfall 010 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.19. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 010 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.29E+04	1.60E-02	7.16E-03	2.08E-08	NA
Antimony	9.67E+00	1.20E-05	5.37E-06	1.56E-11	NA
Arsenic	1.26E+01	1.56E-05	4.20E-06	2.03E-11	NA
Barium	9.51E+01	1.18E-04	5.28E-05	1.53E-10	NA
Beryllium	4.80E-01	5.95E-07	2.66E-07	7.73E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.33E+01	2.89E-05	1.29E-05	3.75E-11	NA
Copper	1.83E+01	2.27E-05	1.02E-05	2.95E-11	NA
Iron	1.56E+04	1.93E-02	8.66E-03	2.51E-08	NA
Lead	7.52E+01	9.32E-05	4.17E-05	1.21E-10	NA
Manganese	3.23E+02	4.01E-04	1.79E-04	5.20E-10	NA
Mercury	3.10E-01	3.84E-07	1.72E-07	4.99E-13	NA
Molybdenum	1.39E+01	1.72E-05	7.71E-06	2.24E-11	NA
Nickel	2.18E+01	2.70E-05	1.21E-05	3.51E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.42E+00	3.00E-06	1.34E-06	3.90E-12	NA
Uranium	2.64E+01	3.27E-05	1.47E-05	4.25E-11	NA
Vanadium	2.78E+01	3.45E-05	1.54E-05	4.48E-11	NA
Zinc	2.52E+02	3.12E-04	1.40E-04	4.06E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	5.10E+00	6.32E-06	7.36E-06	8.21E-12	NA
Pyrene	3.50E+00	4.34E-06	3.89E-06	5.64E-12	NA
Total PCB (1)	1.90E+01	2.36E-05	2.95E-05	3.06E-11	NA
Total PAH (2)	3.10E+00	3.84E-06	4.47E-06	4.99E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	7.26E-01	1.61E+03	NA	2.09E-03	2.45E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.36E-02	1.41E+02	NA	1.83E-04	2.15E-01
Plutonium-239/240	1.09E-01	2.42E+02	NA	3.14E-04	3.68E-01
Technetium-99	8.44E+00	1.87E+04	NA	2.43E-02	2.85E+01
Thorium-228	3.28E-01	7.28E+02	NA	9.45E-04	1.11E+00
Thorium-230	8.21E-01	1.82E+03	NA	2.37E-03	2.77E+00
Thorium-232	2.71E-01	6.02E+02	NA	7.81E-04	9.16E-01
Uranium-234	7.42E+00	1.65E+04	NA	2.14E-02	2.51E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	8.81E+00	1.96E+04	NA	2.54E-02	2.98E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.20. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 010 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.29E+04	4.49E-02	2.01E-02	5.83E-08	NA
Antimony	9.67E+00	3.37E-05	1.50E-05	4.37E-11	NA
Arsenic	1.26E+01	4.38E-05	1.18E-05	5.69E-11	NA
Barium	9.51E+01	3.31E-04	1.48E-04	4.30E-10	NA
Beryllium	4.80E-01	1.67E-06	7.46E-07	2.17E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.33E+01	8.11E-05	3.62E-05	1.05E-10	NA
Copper	1.83E+01	6.37E-05	2.85E-05	8.27E-11	NA
Iron	1.56E+04	5.43E-02	2.43E-02	7.05E-08	NA
Lead	7.52E+01	2.62E-04	1.17E-04	3.40E-10	NA
Manganese	3.23E+02	1.12E-03	5.02E-04	1.46E-09	NA
Mercury	3.10E-01	1.08E-06	4.82E-07	1.40E-12	NA
Molybdenum	1.39E+01	4.84E-05	2.16E-05	6.28E-11	NA
Nickel	2.18E+01	7.59E-05	3.39E-05	9.85E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.42E+00	8.42E-06	3.76E-06	1.09E-11	NA
Uranium	2.64E+01	9.19E-05	4.11E-05	1.19E-10	NA
Vanadium	2.78E+01	9.67E-05	4.32E-05	1.26E-10	NA
Zinc	2.52E+02	8.77E-04	3.92E-04	1.14E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	5.10E+00	1.77E-05	2.06E-05	2.30E-11	NA
Pyrene	3.50E+00	1.22E-05	1.09E-05	1.58E-11	NA
Total PCB (1)	1.90E+01	6.61E-05	8.27E-05	8.58E-11	NA
Total PAH (2)	3.10E+00	1.08E-05	1.25E-05	1.40E-11	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	7.26E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.36E-02	NA	NA	NA	NA
Plutonium-239/240	1.09E-01	NA	NA	NA	NA
Technetium-99	8.44E+00	NA	NA	NA	NA
Thorium-228	3.28E-01	NA	NA	NA	NA
Thorium-230	8.21E-01	NA	NA	NA	NA
Thorium-232	2.71E-01	NA	NA	NA	NA
Uranium-234	7.42E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	8.81E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.21. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil
at the Outfall 011 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.04E+04	1.01E-04	4.36E-04	1.26E-09	NA
Antimony	1.70E+01	1.66E-07	7.15E-07	2.07E-12	NA
Arsenic	1.30E+01	1.27E-07	3.28E-07	1.58E-12	NA
Barium	9.20E+01	9.00E-07	3.87E-06	1.12E-11	NA
Beryllium	9.60E-01	9.39E-09	4.04E-08	1.17E-13	NA
Cadmium	2.80E+00	2.74E-08	2.35E-09	3.41E-13	NA
Chromium	1.49E+02	1.46E-06	6.27E-06	1.81E-11	NA
Copper	2.02E+02	1.98E-06	8.49E-06	2.46E-11	NA
Iron	2.33E+04	2.28E-04	9.81E-04	2.84E-09	NA
Lead	5.20E+01	5.09E-07	2.19E-06	6.33E-12	NA
Manganese	5.95E+02	5.82E-06	2.50E-05	7.25E-11	NA
Mercury	1.70E-01	1.66E-09	7.15E-09	2.07E-14	NA
Molybdenum	7.30E+00	7.14E-08	3.07E-07	8.89E-13	NA
Nickel	1.40E+01	1.37E-07	5.89E-07	1.71E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.50E+00	2.45E-08	1.05E-07	3.05E-13	NA
Uranium	4.39E+02	4.29E-06	1.85E-05	5.35E-11	NA
Vanadium	4.20E+01	4.11E-07	1.77E-06	5.12E-12	NA
Zinc	7.64E+02	7.47E-06	3.21E-05	9.31E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	4.30E+01	4.21E-07	4.70E-06	5.24E-12	NA
Pyrene	1.30E+02	1.27E-06	1.09E-05	1.58E-11	NA
Total PCB (1)	7.60E+00	7.43E-08	8.95E-07	9.26E-13	NA
Total PAH (2)	5.80E+01	5.67E-07	6.34E-06	7.06E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	5.40E-01	9.45E+00	NA	1.18E-04	1.38E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	ND	ND	NA	ND	ND
Plutonium-239/240	4.60E-02	8.05E-01	NA	1.00E-05	1.18E-02
Technetium-99	7.50E+00	1.31E+02	NA	1.64E-03	1.92E+00
Thorium-228	4.80E-01	8.40E+00	NA	1.05E-04	1.23E-01
Thorium-230	1.10E+00	1.93E+01	NA	2.40E-04	2.82E-01
Thorium-232	5.00E-01	8.75E+00	NA	1.09E-04	1.28E-01
Uranium-234	3.10E+00	5.43E+01	NA	6.76E-04	7.94E-01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.70E+01	2.98E+02	NA	3.71E-03	4.35E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.22. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for
Surface Water at the Outfall 011 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.14E-04	8.36E-07
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	ND	NA
<u>VOCs</u>		
Trichloroethene	1.30E-01	4.47E-06

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.23. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at the Outfall 011 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.04E+04	2.84E-04	1.22E-03	3.56E-09	NA
Antimony	1.70E+01	4.66E-07	2.01E-06	5.83E-12	NA
Arsenic	1.30E+01	3.56E-07	9.20E-07	4.45E-12	NA
Barium	9.20E+01	2.52E-06	1.09E-05	3.15E-11	NA
Beryllium	9.60E-01	2.63E-08	1.13E-07	3.29E-13	NA
Cadmium	2.80E+00	7.67E-08	6.61E-09	9.60E-13	NA
Chromium	1.49E+02	4.08E-06	1.76E-05	5.11E-11	NA
Copper	2.02E+02	5.53E-06	2.38E-05	6.92E-11	NA
Iron	2.33E+04	6.39E-04	2.75E-03	7.99E-09	NA
Lead	5.20E+01	1.42E-06	6.14E-06	1.78E-11	NA
Manganese	5.95E+02	1.63E-05	7.02E-05	2.04E-10	NA
Mercury	1.70E-01	4.66E-09	2.01E-08	5.83E-14	NA
Molybdenum	7.30E+00	2.00E-07	8.61E-07	2.50E-12	NA
Nickel	1.40E+01	3.84E-07	1.65E-06	4.80E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.50E+00	6.85E-08	2.95E-07	8.57E-13	NA
Uranium	4.39E+02	1.20E-05	5.18E-05	1.50E-10	NA
Vanadium	4.20E+01	1.15E-06	4.96E-06	1.44E-11	NA
Zinc	7.64E+02	2.09E-05	9.02E-05	2.62E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	4.30E+01	1.18E-06	1.32E-05	1.47E-11	NA
Pyrene	1.30E+02	3.56E-06	3.07E-05	4.45E-11	NA
Total PCB (1)	7.60E+00	2.08E-07	2.51E-06	2.60E-12	NA
Total PAH (2)	5.80E+01	1.59E-06	1.78E-05	1.99E-11	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	5.40E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	ND	NA	NA	NA	NA
Plutonium-239/240	4.60E-02	NA	NA	NA	NA
Technetium-99	7.50E+00	NA	NA	NA	NA
Thorium-228	4.80E-01	NA	NA	NA	NA
Thorium-230	1.10E+00	NA	NA	NA	NA
Thorium-232	5.00E-01	NA	NA	NA	NA
Uranium-234	3.10E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.70E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.24. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Surface Water at the Outfall 011 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.14E-04	2.34E-06
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	ND	NA
<u>VOCs</u>		
Trichloroethene	1.30E-01	1.25E-05

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.26. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water
at the Outfall 011 Hot Spot**

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.14E-04	1.49E-06
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	ND	NA
<u>VOCs</u>		
Trichloroethene	1.30E-01	3.19E-06

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.27. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 011 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.04E+04	5.07E-03	2.18E-02	6.34E-08	NA
Antimony	1.70E+01	8.31E-06	3.58E-05	1.04E-10	NA
Arsenic	1.30E+01	6.36E-06	1.64E-05	7.94E-11	NA
Barium	9.20E+01	4.50E-05	1.94E-04	5.62E-10	NA
Beryllium	9.60E-01	4.69E-07	2.02E-06	5.86E-12	NA
Cadmium	2.80E+00	1.37E-06	1.18E-07	1.71E-11	NA
Chromium	1.49E+02	7.29E-05	3.14E-04	9.10E-10	NA
Copper	2.02E+02	9.88E-05	4.25E-04	1.23E-09	NA
Iron	2.33E+04	1.14E-02	4.91E-02	1.42E-07	NA
Lead	5.20E+01	2.54E-05	1.09E-04	3.18E-10	NA
Manganese	5.95E+02	2.91E-04	1.25E-03	3.63E-09	NA
Mercury	1.70E-01	8.31E-08	3.58E-07	1.04E-12	NA
Molybdenum	7.30E+00	3.57E-06	1.54E-05	4.46E-11	NA
Nickel	1.40E+01	6.85E-06	2.95E-05	8.55E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.50E+00	1.22E-06	5.26E-06	1.53E-11	NA
Uranium	4.39E+02	2.15E-04	9.24E-04	2.68E-09	NA
Vanadium	4.20E+01	2.05E-05	8.84E-05	2.56E-10	NA
Zinc	7.64E+02	3.74E-04	1.61E-03	4.66E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	4.30E+01	2.10E-05	2.35E-04	2.63E-10	NA
Pyrene	1.30E+02	6.36E-05	5.47E-04	7.94E-10	NA
Total PCB (1)	7.60E+00	3.72E-06	4.48E-05	4.64E-11	NA
Total PAH (2)	5.80E+01	2.84E-05	3.17E-04	3.54E-10	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	5.40E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	ND	NA	NA	NA	NA
Plutonium-239/240	4.60E-02	NA	NA	NA	NA
Technetium-99	7.50E+00	NA	NA	NA	NA
Thorium-228	4.80E-01	NA	NA	NA	NA
Thorium-230	1.10E+00	NA	NA	NA	NA
Thorium-232	5.00E-01	NA	NA	NA	NA
Uranium-234	3.10E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.70E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.25. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 011 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.04E+04	1.82E-03	7.78E-03	2.26E-08	NA
Antimony	1.70E+01	2.98E-06	1.28E-05	3.70E-11	NA
Arsenic	1.30E+01	2.28E-06	5.85E-06	2.83E-11	NA
Barium	9.20E+01	1.61E-05	6.90E-05	2.00E-10	NA
Beryllium	9.60E-01	1.68E-07	7.20E-07	2.09E-12	NA
Cadmium	2.80E+00	4.90E-07	4.20E-08	6.10E-12	NA
Chromium	1.49E+02	2.61E-05	1.12E-04	3.24E-10	NA
Copper	2.02E+02	3.54E-05	1.52E-04	4.40E-10	NA
Iron	2.33E+04	4.08E-03	1.75E-02	5.08E-08	NA
Lead	5.20E+01	9.10E-06	3.90E-05	1.13E-10	NA
Manganese	5.95E+02	1.04E-04	4.46E-04	1.30E-09	NA
Mercury	1.70E-01	2.98E-08	1.28E-07	3.70E-13	NA
Molybdenum	7.30E+00	1.28E-06	5.48E-06	1.59E-11	NA
Nickel	1.40E+01	2.45E-06	1.05E-05	3.05E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.50E+00	4.38E-07	1.88E-06	5.44E-12	NA
Uranium	4.39E+02	7.68E-05	3.29E-04	9.56E-10	NA
Vanadium	4.20E+01	7.35E-06	3.15E-05	9.15E-11	NA
Zinc	7.64E+02	1.34E-04	5.73E-04	1.66E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	4.30E+01	7.53E-06	8.39E-05	9.36E-11	NA
Pyrene	1.30E+02	2.28E-05	1.95E-04	2.83E-10	NA
Total PCB (1)	7.60E+00	1.33E-06	1.60E-05	1.65E-11	NA
Total PAH (2)	5.80E+01	1.02E-05	1.13E-04	1.26E-10	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	5.40E-01	1.69E+02	NA	2.10E-03	2.47E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	ND	ND	NA	ND	ND
Plutonium-239/240	4.60E-02	1.44E+01	NA	1.79E-04	2.10E-01
Technetium-99	7.50E+00	2.35E+03	NA	2.92E-02	3.43E+01
Thorium-228	4.80E-01	1.50E+02	NA	1.87E-03	2.19E+00
Thorium-230	1.10E+00	3.44E+02	NA	4.28E-03	5.03E+00
Thorium-232	5.00E-01	1.57E+02	NA	1.95E-03	2.29E+00
Uranium-234	3.10E+00	9.70E+02	NA	1.21E-02	1.42E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.70E+01	5.32E+03	NA	6.62E-02	7.77E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.28. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water at the Outfall 011 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.14E-04	4.16E-06
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	ND	NA
<u>VOCs</u>		
Trichloroethene	1.30E-01	8.90E-06

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.29. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 011 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.04E+04	1.29E-02	5.76E-03	1.67E-08	NA
Antimony	1.70E+01	2.11E-05	9.44E-06	2.74E-11	NA
Arsenic	1.30E+01	1.61E-05	4.33E-06	2.09E-11	NA
Barium	9.20E+01	1.14E-04	5.11E-05	1.48E-10	NA
Beryllium	9.60E-01	1.19E-06	5.33E-07	1.55E-12	NA
Cadmium	2.80E+00	3.47E-06	3.11E-08	4.51E-12	NA
Chromium	1.49E+02	1.85E-04	8.27E-05	2.40E-10	NA
Copper	2.02E+02	2.50E-04	1.12E-04	3.25E-10	NA
Iron	2.33E+04	2.89E-02	1.29E-02	3.76E-08	NA
Lead	5.20E+01	6.45E-05	2.89E-05	8.38E-11	NA
Manganese	5.95E+02	7.38E-04	3.30E-04	9.58E-10	NA
Mercury	1.70E-01	2.11E-07	9.44E-08	2.74E-13	NA
Molybdenum	7.30E+00	9.05E-06	4.05E-06	1.18E-11	NA
Nickel	1.40E+01	1.74E-05	7.77E-06	2.25E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.50E+00	3.10E-06	1.39E-06	4.03E-12	NA
Uranium	4.39E+02	5.44E-04	2.44E-04	7.07E-10	NA
Vanadium	4.20E+01	5.21E-05	2.33E-05	6.76E-11	NA
Zinc	7.64E+02	9.47E-04	4.24E-04	1.23E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	4.30E+01	5.33E-05	6.20E-05	6.93E-11	NA
Pyrene	1.30E+02	1.61E-04	1.44E-04	2.09E-10	NA
Total PCB (1)	7.60E+00	9.42E-06	1.18E-05	1.22E-11	NA
Total PAH (2)	5.80E+01	7.19E-05	8.37E-05	9.34E-11	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	5.40E-01	1.20E+03	NA	1.56E-03	1.83E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	ND	ND	NA	ND	ND
Plutonium-239/240	4.60E-02	1.02E+02	NA	1.33E-04	1.55E-01
Technetium-99	7.50E+00	1.67E+04	NA	2.16E-02	2.54E+01
Thorium-228	4.80E-01	1.07E+03	NA	1.38E-03	1.62E+00
Thorium-230	1.10E+00	2.44E+03	NA	3.17E-03	3.72E+00
Thorium-232	5.00E-01	1.11E+03	NA	1.44E-03	1.69E+00
Uranium-234	3.10E+00	6.88E+03	NA	8.93E-03	1.05E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.70E+01	3.77E+04	NA	4.90E-02	5.75E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.30. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 011 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.04E+04	3.61E-02	1.61E-02	4.69E-08	NA
Antimony	1.70E+01	5.92E-05	2.64E-05	7.68E-11	NA
Arsenic	1.30E+01	4.52E-05	1.21E-05	5.87E-11	NA
Barium	9.20E+01	3.20E-04	1.43E-04	4.16E-10	NA
Beryllium	9.60E-01	3.34E-06	1.49E-06	4.34E-12	NA
Cadmium	2.80E+00	9.74E-06	8.71E-08	1.26E-11	NA
Chromium	1.49E+02	5.19E-04	2.32E-04	6.73E-10	NA
Copper	2.02E+02	7.03E-04	3.14E-04	9.12E-10	NA
Iron	2.33E+04	8.12E-02	3.63E-02	1.05E-07	NA
Lead	5.20E+01	1.81E-04	8.09E-05	2.35E-10	NA
Manganese	5.95E+02	2.07E-03	9.25E-04	2.69E-09	NA
Mercury	1.70E-01	5.92E-07	2.64E-07	7.68E-13	NA
Molybdenum	7.30E+00	2.54E-05	1.14E-05	3.30E-11	NA
Nickel	1.40E+01	4.87E-05	2.18E-05	6.32E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.50E+00	8.70E-06	3.89E-06	1.13E-11	NA
Uranium	4.39E+02	1.53E-03	6.83E-04	1.98E-09	NA
Vanadium	4.20E+01	1.46E-04	6.53E-05	1.90E-10	NA
Zinc	7.64E+02	2.66E-03	1.19E-03	3.45E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	4.30E+01	1.50E-04	1.74E-04	1.94E-10	NA
Pyrene	1.30E+02	4.52E-04	4.04E-04	5.87E-10	NA
Total PCB (1)	7.60E+00	2.64E-05	3.31E-05	3.43E-11	NA
Total PAH (2)	5.80E+01	2.02E-04	2.34E-04	2.62E-10	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	5.40E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	ND	NA	NA	NA	NA
Plutonium-239/240	4.60E-02	NA	NA	NA	NA
Technetium-99	7.50E+00	NA	NA	NA	NA
Thorium-228	4.80E-01	NA	NA	NA	NA
Thorium-230	1.10E+00	NA	NA	NA	NA
Thorium-232	5.00E-01	NA	NA	NA	NA
Uranium-234	3.10E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.70E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.31. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil
at the Outfall 015 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.72E+03	6.57E-05	2.83E-04	8.19E-10	NA
Antimony	1.10E+01	1.08E-07	4.63E-07	1.34E-12	NA
Arsenic	1.00E+01	9.78E-08	2.52E-07	1.22E-12	NA
Barium	7.70E+01	7.53E-07	3.24E-06	9.38E-12	NA
Beryllium	5.70E-01	5.57E-09	2.40E-08	6.94E-14	NA
Cadmium	2.10E+00	2.05E-08	1.77E-09	2.56E-13	NA
Chromium	2.30E+01	2.25E-07	9.67E-07	2.80E-12	NA
Copper	2.00E+01	1.96E-07	8.41E-07	2.44E-12	NA
Iron	1.47E+04	1.43E-04	6.17E-04	1.79E-09	NA
Lead	4.50E+01	4.40E-07	1.89E-06	5.48E-12	NA
Manganese	5.30E+02	5.18E-06	2.23E-05	6.46E-11	NA
Mercury	1.60E-01	1.56E-09	6.73E-09	1.95E-14	NA
Molybdenum	5.50E+00	5.38E-08	2.31E-07	6.70E-13	NA
Nickel	2.90E+01	2.84E-07	1.22E-06	3.53E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.60E+00	2.54E-08	1.09E-07	3.17E-13	NA
Uranium	9.20E+02	9.00E-06	3.87E-05	1.12E-10	NA
Vanadium	1.90E+01	1.86E-07	7.99E-07	2.31E-12	NA
Zinc	1.14E+02	1.11E-06	4.79E-06	1.39E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	6.65E-09	7.43E-08	8.28E-14	NA
Pyrene	6.30E-01	6.16E-09	5.30E-08	7.67E-14	NA
Total PCB (1)	1.10E+00	1.08E-08	1.30E-07	1.34E-13	NA
Total PAH (2)	1.10E+00	1.08E-08	1.20E-07	1.34E-13	NA
<u>Radionuclides</u>					
Americium-241	5.60E-01	9.80E+00	NA	1.22E-04	1.43E-01
Cesium-137	3.10E+01	5.43E+02	NA	6.76E-03	7.94E+00
Cobalt-60	1.80E-01	3.15E+00	NA	3.93E-05	4.61E-02
Neptunium-237	4.20E-01	7.35E+00	NA	9.16E-05	1.08E-01
Plutonium-239/240	2.70E+01	4.73E+02	NA	5.89E-03	6.91E+00
Technetium-99	2.10E+01	3.68E+02	NA	4.58E-03	5.38E+00
Thorium-228	5.10E-01	8.93E+00	NA	1.11E-04	1.31E-01
Thorium-230	1.60E+01	2.80E+02	NA	3.49E-03	4.10E+00
Thorium-232	5.50E-01	9.63E+00	NA	1.20E-04	1.41E-01
Uranium-234	6.10E+00	1.07E+02	NA	1.33E-03	1.56E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	3.30E+01	5.78E+02	NA	7.20E-03	8.45E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.32. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Surface Water
at the Outfall 015 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	7.50E-05	1.51E-07
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	2.00E-03	6.88E-08

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.33. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at the Outfall 015 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.72E+03	1.84E-04	7.93E-04	2.30E-09	NA
Antimony	1.10E+01	3.01E-07	1.30E-06	3.77E-12	NA
Arsenic	1.00E+01	2.74E-07	7.08E-07	3.43E-12	NA
Barium	7.70E+01	2.11E-06	9.09E-06	2.64E-11	NA
Beryllium	5.70E-01	1.56E-08	6.73E-08	1.95E-13	NA
Cadmium	2.10E+00	5.75E-08	4.96E-09	7.20E-13	NA
Chromium	2.30E+01	6.30E-07	2.71E-06	7.88E-12	NA
Copper	2.00E+01	5.48E-07	2.36E-06	6.85E-12	NA
Iron	1.47E+04	4.02E-04	1.73E-03	5.03E-09	NA
Lead	4.50E+01	1.23E-06	5.31E-06	1.54E-11	NA
Manganese	5.30E+02	1.45E-05	6.25E-05	1.82E-10	NA
Mercury	1.60E-01	4.38E-09	1.89E-08	5.48E-14	NA
Molybdenum	5.50E+00	1.51E-07	6.49E-07	1.88E-12	NA
Nickel	2.90E+01	7.95E-07	3.42E-06	9.94E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.60E+00	7.12E-08	3.07E-07	8.91E-13	NA
Uranium	9.20E+02	2.52E-05	1.09E-04	3.15E-10	NA
Vanadium	1.90E+01	5.21E-07	2.24E-06	6.51E-12	NA
Zinc	1.14E+02	3.12E-06	1.35E-05	3.91E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	1.86E-08	2.09E-07	2.33E-13	NA
Pyrene	6.30E-01	1.73E-08	1.49E-07	2.16E-13	NA
Total PCB (1)	1.10E+00	3.01E-08	3.63E-07	3.77E-13	NA
Total PAH (2)	1.10E+00	3.01E-08	3.37E-07	3.77E-13	NA
<u>Radionuclides</u>					
Americium-241	5.60E-01	NA	NA	NA	NA
Cesium-137	3.10E+01	NA	NA	NA	NA
Cobalt-60	1.80E-01	NA	NA	NA	NA
Neptunium-237	4.20E-01	NA	NA	NA	NA
Plutonium-239/240	2.70E+01	NA	NA	NA	NA
Technetium-99	2.10E+01	NA	NA	NA	NA
Thorium-228	5.10E-01	NA	NA	NA	NA
Thorium-230	1.60E+01	NA	NA	NA	NA
Thorium-232	5.50E-01	NA	NA	NA	NA
Uranium-234	6.10E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	3.30E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.34. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Surface Water at the Outfall 015 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	7.50E-05	4.24E-07
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	2.00E-03	1.92E-07

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.35. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 015 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.72E+03	1.18E-03	5.04E-03	1.46E-08	NA
Antimony	1.10E+01	1.93E-06	8.25E-06	2.40E-11	NA
Arsenic	1.00E+01	1.75E-06	4.50E-06	2.18E-11	NA
Barium	7.70E+01	1.35E-05	5.78E-05	1.68E-10	NA
Beryllium	5.70E-01	9.98E-08	4.28E-07	1.24E-12	NA
Cadmium	2.10E+00	3.68E-07	3.15E-08	4.57E-12	NA
Chromium	2.30E+01	4.03E-06	1.73E-05	5.01E-11	NA
Copper	2.00E+01	3.50E-06	1.50E-05	4.36E-11	NA
Iron	1.47E+04	2.57E-03	1.10E-02	3.19E-08	NA
Lead	4.50E+01	7.88E-06	3.38E-05	9.80E-11	NA
Manganese	5.30E+02	9.28E-05	3.98E-04	1.15E-09	NA
Mercury	1.60E-01	2.80E-08	1.20E-07	3.48E-13	NA
Molybdenum	5.50E+00	9.63E-07	4.13E-06	1.20E-11	NA
Nickel	2.90E+01	5.08E-06	2.18E-05	6.31E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.60E+00	4.55E-07	1.95E-06	5.66E-12	NA
Uranium	9.20E+02	1.61E-04	6.90E-04	2.00E-09	NA
Vanadium	1.90E+01	3.33E-06	1.43E-05	4.14E-11	NA
Zinc	1.14E+02	2.00E-05	8.55E-05	2.48E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	1.19E-07	1.33E-06	1.48E-12	NA
Pyrene	6.30E-01	1.10E-07	9.45E-07	1.37E-12	NA
Total PCB (1)	1.10E+00	1.93E-07	2.31E-06	2.40E-12	NA
Total PAH (2)	1.10E+00	1.93E-07	2.15E-06	2.40E-12	NA
<u>Radionuclides</u>					
Americium-241	5.60E-01	1.75E+02	NA	2.18E-03	2.56E+00
Cesium-137	3.10E+01	9.70E+03	NA	1.21E-01	1.42E+02
Cobalt-60	1.80E-01	5.63E+01	NA	7.01E-04	8.23E-01
Neptunium-237	4.20E-01	1.31E+02	NA	1.64E-03	1.92E+00
Plutonium-239/240	2.70E+01	8.45E+03	NA	1.05E-01	1.23E+02
Technetium-99	2.10E+01	6.57E+03	NA	8.18E-02	9.60E+01
Thorium-228	5.10E-01	1.60E+02	NA	1.99E-03	2.33E+00
Thorium-230	1.60E+01	5.01E+03	NA	6.23E-02	7.31E+01
Thorium-232	5.50E-01	1.72E+02	NA	2.14E-03	2.51E+00
Uranium-234	6.10E+00	1.91E+03	NA	2.38E-02	2.79E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	3.30E+01	1.03E+04	NA	1.29E-01	1.51E+02

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.36. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water
at the Outfall 015 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	7.50E-05	2.70E-06
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	2.00E-03	1.23E-06

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.37. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 015 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.72E+03	3.29E-03	1.41E-02	4.10E-08	NA
Antimony	1.10E+01	5.38E-06	2.32E-05	6.72E-11	NA
Arsenic	1.00E+01	4.89E-06	1.26E-05	6.11E-11	NA
Barium	7.70E+01	3.77E-05	1.62E-04	4.70E-10	NA
Beryllium	5.70E-01	2.79E-07	1.20E-06	3.48E-12	NA
Cadmium	2.10E+00	1.03E-06	8.84E-08	1.28E-11	NA
Chromium	2.30E+01	1.12E-05	4.84E-05	1.40E-10	NA
Copper	2.00E+01	9.78E-06	4.21E-05	1.22E-10	NA
Iron	1.47E+04	7.17E-03	3.09E-02	8.95E-08	NA
Lead	4.50E+01	2.20E-05	9.47E-05	2.75E-10	NA
Manganese	5.30E+02	2.59E-04	1.12E-03	3.24E-09	NA
Mercury	1.60E-01	7.82E-08	3.37E-07	9.77E-13	NA
Molybdenum	5.50E+00	2.69E-06	1.16E-05	3.36E-11	NA
Nickel	2.90E+01	1.42E-05	6.10E-05	1.77E-10	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.60E+00	1.27E-06	5.47E-06	1.59E-11	NA
Uranium	9.20E+02	4.50E-04	1.94E-03	5.62E-09	NA
Vanadium	1.90E+01	9.29E-06	4.00E-05	1.16E-10	NA
Zinc	1.14E+02	5.57E-05	2.40E-04	6.96E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	3.33E-07	3.72E-06	4.15E-12	NA
Pyrene	6.30E-01	3.08E-07	2.65E-06	3.85E-12	NA
Total PCB (1)	1.10E+00	5.38E-07	6.48E-06	6.72E-12	NA
Total PAH (2)	1.10E+00	5.38E-07	6.02E-06	6.72E-12	NA
<u>Radionuclides</u>					
Americium-241	5.60E-01	NA	NA	NA	NA
Cesium-137	3.10E+01	NA	NA	NA	NA
Cobalt-60	1.80E-01	NA	NA	NA	NA
Neptunium-237	4.20E-01	NA	NA	NA	NA
Plutonium-239/240	2.70E+01	NA	NA	NA	NA
Technetium-99	2.10E+01	NA	NA	NA	NA
Thorium-228	5.10E-01	NA	NA	NA	NA
Thorium-230	1.60E+01	NA	NA	NA	NA
Thorium-232	5.50E-01	NA	NA	NA	NA
Uranium-234	6.10E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	3.30E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.38. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water at the Outfall 015 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	7.50E-05	7.54E-06
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	2.00E-03	3.42E-06

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.39. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 015 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.72E+03	8.33E-03	3.73E-03	1.08E-08	NA
Antimony	1.10E+01	1.36E-05	6.11E-06	1.77E-11	NA
Arsenic	1.00E+01	1.24E-05	3.33E-06	1.61E-11	NA
Barium	7.70E+01	9.55E-05	4.27E-05	1.24E-10	NA
Beryllium	5.70E-01	7.07E-07	3.16E-07	9.18E-13	NA
Cadmium	2.10E+00	2.60E-06	2.33E-08	3.38E-12	NA
Chromium	2.30E+01	2.85E-05	1.28E-05	3.70E-11	NA
Copper	2.00E+01	2.48E-05	1.11E-05	3.22E-11	NA
Iron	1.47E+04	1.82E-02	8.14E-03	2.36E-08	NA
Lead	4.50E+01	5.58E-05	2.50E-05	7.25E-11	NA
Manganese	5.30E+02	6.57E-04	2.94E-04	8.54E-10	NA
Mercury	1.60E-01	1.98E-07	8.88E-08	2.58E-13	NA
Molybdenum	5.50E+00	6.82E-06	3.05E-06	8.86E-12	NA
Nickel	2.90E+01	3.60E-05	1.61E-05	4.67E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.60E+00	3.22E-06	1.44E-06	4.19E-12	NA
Uranium	9.20E+02	1.14E-03	5.11E-04	1.48E-09	NA
Vanadium	1.90E+01	2.36E-05	1.05E-05	3.06E-11	NA
Zinc	1.14E+02	1.41E-04	6.33E-05	1.84E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	8.43E-07	9.81E-07	1.10E-12	NA
Pyrene	6.30E-01	7.81E-07	6.99E-07	1.01E-12	NA
Total PCB (1)	1.10E+00	1.36E-06	1.71E-06	1.77E-12	NA
Total PAH (2)	1.10E+00	1.36E-06	1.59E-06	1.77E-12	NA
<u>Radionuclides</u>					
Americium-241	5.60E-01	1.24E+03	NA	1.61E-03	1.89E+00
Cesium-137	3.10E+01	6.88E+04	NA	8.93E-02	1.05E+02
Cobalt-60	1.80E-01	4.00E+02	NA	5.19E-04	6.08E-01
Neptunium-237	4.20E-01	9.32E+02	NA	1.21E-03	1.42E+00
Plutonium-239/240	2.70E+01	5.99E+04	NA	7.78E-02	9.13E+01
Technetium-99	2.10E+01	4.66E+04	NA	6.05E-02	7.10E+01
Thorium-228	5.10E-01	1.13E+03	NA	1.47E-03	1.72E+00
Thorium-230	1.60E+01	3.55E+04	NA	4.61E-02	5.41E+01
Thorium-232	5.50E-01	1.22E+03	NA	1.58E-03	1.86E+00
Uranium-234	6.10E+00	1.35E+04	NA	1.76E-02	2.06E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	3.30E+01	7.33E+04	NA	9.51E-02	1.12E+02

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.40. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 015 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.72E+03	2.34E-02	1.04E-02	3.04E-08	NA
Antimony	1.10E+01	3.83E-05	1.71E-05	4.97E-11	NA
Arsenic	1.00E+01	3.48E-05	9.33E-06	4.52E-11	NA
Barium	7.70E+01	2.68E-04	1.20E-04	3.48E-10	NA
Beryllium	5.70E-01	1.98E-06	8.86E-07	2.57E-12	NA
Cadmium	2.10E+00	7.31E-06	6.53E-08	9.49E-12	NA
Chromium	2.30E+01	8.00E-05	3.58E-05	1.04E-10	NA
Copper	2.00E+01	6.96E-05	3.11E-05	9.03E-11	NA
Iron	1.47E+04	5.10E-02	2.28E-02	6.62E-08	NA
Lead	4.50E+01	1.57E-04	7.00E-05	2.03E-10	NA
Manganese	5.30E+02	1.84E-03	8.24E-04	2.39E-09	NA
Mercury	1.60E-01	5.57E-07	2.49E-07	7.23E-13	NA
Molybdenum	5.50E+00	1.91E-05	8.55E-06	2.48E-11	NA
Nickel	2.90E+01	1.01E-04	4.51E-05	1.31E-10	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.60E+00	9.05E-06	4.04E-06	1.17E-11	NA
Uranium	9.20E+02	3.20E-03	1.43E-03	4.16E-09	NA
Vanadium	1.90E+01	6.61E-05	2.95E-05	8.58E-11	NA
Zinc	1.14E+02	3.97E-04	1.77E-04	5.15E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	2.37E-06	2.75E-06	3.07E-12	NA
Pyrene	6.30E-01	2.19E-06	1.96E-06	2.85E-12	NA
Total PCB (1)	1.10E+00	3.83E-06	4.79E-06	4.97E-12	NA
Total PAH (2)	1.10E+00	3.83E-06	4.45E-06	4.97E-12	NA
<u>Radionuclides</u>					
Americium-241	5.60E-01	NA	NA	NA	NA
Cesium-137	3.10E+01	NA	NA	NA	NA
Cobalt-60	1.80E-01	NA	NA	NA	NA
Neptunium-237	4.20E-01	NA	NA	NA	NA
Plutonium-239/240	2.70E+01	NA	NA	NA	NA
Technetium-99	2.10E+01	NA	NA	NA	NA
Thorium-228	5.10E-01	NA	NA	NA	NA
Thorium-230	1.60E+01	NA	NA	NA	NA
Thorium-232	5.50E-01	NA	NA	NA	NA
Uranium-234	6.10E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	3.30E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.41. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 13 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.88E+03	8.68E-05	3.73E-04	1.08E-09	NA
Antimony	9.86E+00	9.64E-08	4.15E-07	1.20E-12	NA
Arsenic	5.17E+00	5.06E-08	1.30E-07	6.30E-13	NA
Barium	9.14E+01	8.94E-07	3.84E-06	1.11E-11	NA
Beryllium	4.93E-01	4.82E-09	2.07E-08	6.01E-14	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	4.35E+01	4.25E-07	1.83E-06	5.30E-12	NA
Copper	1.29E+01	1.26E-07	5.42E-07	1.57E-12	NA
Iron	1.52E+04	1.49E-04	6.39E-04	1.85E-09	NA
Lead	2.19E+01	2.14E-07	9.21E-07	2.67E-12	NA
Manganese	7.88E+02	7.71E-06	3.31E-05	9.60E-11	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.27E+01	1.24E-07	5.34E-07	1.55E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.47E+00	2.42E-08	1.04E-07	3.01E-13	NA
Uranium	4.85E+01	4.74E-07	2.04E-06	5.91E-12	NA
Vanadium	1.65E+01	1.61E-07	6.94E-07	2.01E-12	NA
Zinc	1.12E+02	1.10E-06	4.71E-06	1.36E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	4.79E-09	5.36E-08	5.97E-14	NA
Pyrene	4.90E-01	4.79E-09	4.12E-08	5.97E-14	NA
Total PCB (1)	3.30E+00	3.23E-08	3.89E-07	4.02E-13	NA
Total PAH (2)	1.10E+00	1.08E-08	1.20E-07	1.34E-13	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	3.01E-01	5.27E+00	NA	6.56E-05	7.71E-02
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.00E-01	1.05E+01	NA	1.31E-04	1.54E-01
Plutonium-239/240	6.99E-02	1.22E+00	NA	1.52E-05	1.79E-02
Technetium-99	1.03E+01	1.80E+02	NA	2.25E-03	2.64E+00
Thorium-228	3.47E-01	6.07E+00	NA	7.57E-05	8.88E-02
Thorium-230	2.98E+00	5.22E+01	NA	6.50E-04	7.63E-01
Thorium-232	4.48E-01	7.84E+00	NA	9.77E-05	1.15E-01
Uranium-234	4.40E+00	7.70E+01	NA	9.60E-04	1.13E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.63E+01	2.85E+02	NA	3.55E-03	4.17E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.42. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Surface Water at the Outfall 001 EU 13 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.44. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Surface Water at the Outfall 001 EU 13 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
		Dermal Intake Hazard	
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	NA		NA
<u>VOCs</u>			
Trichloroethene	NA		NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.45. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 13 Hot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.88E+03	1.55E-03	6.66E-03	1.93E-08	NA
Antimony	9.86E+00	1.73E-06	7.40E-06	2.15E-11	NA
Arsenic	5.17E+00	9.05E-07	3.88E-06	1.13E-11	NA
Barium	9.14E+01	1.60E-05	6.86E-05	1.99E-10	NA
Beryllium	4.93E-01	8.63E-08	3.70E-07	1.07E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	4.35E+01	7.61E-06	3.26E-05	9.47E-11	NA
Copper	1.29E+01	2.26E-06	9.68E-06	2.81E-11	NA
Iron	1.52E+04	2.66E-03	1.14E-02	3.31E-08	NA
Lead	2.19E+01	3.83E-06	1.64E-05	4.77E-11	NA
Manganese	7.88E+02	1.38E-04	5.91E-04	1.72E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.27E+01	2.22E-06	9.53E-06	2.77E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.47E+00	4.32E-07	1.85E-06	5.38E-12	NA
Uranium	4.85E+01	8.49E-06	3.64E-05	1.06E-10	NA
Vanadium	1.65E+01	2.89E-06	1.24E-05	3.59E-11	NA
Zinc	1.12E+02	1.96E-05	8.40E-05	2.44E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	8.58E-08	7.35E-07	1.07E-12	NA
Pyrene	4.90E-01	8.58E-08	7.35E-07	1.07E-12	NA
Total PCB (1)	3.30E+00	5.78E-07	2.97E-06	7.19E-12	NA
Total PAH (2)	1.10E+00	1.93E-07	1.65E-06	2.40E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	3.01E-01	9.42E+01	NA	1.17E-03	1.38E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.00E-01	1.88E+02	NA	2.34E-03	2.74E+00
Plutonium-239/240	6.99E-02	2.19E+01	NA	2.72E-04	3.19E-01
Technetium-99	1.03E+01	3.22E+03	NA	4.01E-02	4.71E+01
Thorium-228	3.47E-01	1.09E+02	NA	1.35E-03	1.59E+00
Thorium-230	2.98E+00	9.33E+02	NA	1.16E-02	1.36E+01
Thorium-232	4.48E-01	1.40E+02	NA	1.74E-03	2.05E+00
Uranium-234	4.40E+00	1.38E+03	NA	1.71E-02	2.01E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.63E+01	5.10E+03	NA	6.35E-02	7.45E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.46. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water at the Outfall 001 EU 13 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.47. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 13 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.88E+03	4.34E-03	1.87E-02	5.42E-08	NA
Antimony	9.86E+00	4.82E-06	2.08E-05	6.02E-11	NA
Arsenic	5.17E+00	2.53E-06	1.09E-05	3.16E-11	NA
Barium	9.14E+01	4.47E-05	1.92E-04	5.58E-10	NA
Beryllium	4.93E-01	2.41E-07	1.04E-06	3.01E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	4.35E+01	2.13E-05	9.16E-05	2.66E-10	NA
Copper	1.29E+01	6.31E-06	2.72E-05	7.88E-11	NA
Iron	1.52E+04	7.43E-03	3.20E-02	9.28E-08	NA
Lead	2.19E+01	1.07E-05	4.61E-05	1.34E-10	NA
Manganese	7.88E+02	3.85E-04	1.66E-03	4.81E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.27E+01	6.21E-06	2.67E-05	7.75E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.47E+00	1.21E-06	5.20E-06	1.51E-11	NA
Uranium	4.85E+01	2.37E-05	1.02E-04	2.96E-10	NA
Vanadium	1.65E+01	8.07E-06	3.47E-05	1.01E-10	NA
Zinc	1.12E+02	5.48E-05	2.36E-04	6.84E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	2.40E-07	2.06E-06	2.99E-12	NA
Pyrene	4.90E-01	2.40E-07	2.06E-06	2.99E-12	NA
Total PCB (1)	3.30E+00	1.61E-06	8.34E-06	2.01E-11	NA
Total PAH (2)	1.10E+00	5.38E-07	4.63E-06	6.72E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	3.01E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.00E-01	NA	NA	NA	NA
Plutonium-239/240	6.99E-02	NA	NA	NA	NA
Technetium-99	1.03E+01	NA	NA	NA	NA
Thorium-228	3.47E-01	NA	NA	NA	NA
Thorium-230	2.98E+00	NA	NA	NA	NA
Thorium-232	4.48E-01	NA	NA	NA	NA
Uranium-234	4.40E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.63E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.43. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 13 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.88E+03	2.43E-04	1.05E-03	3.04E-09	NA
Antimony	9.86E+00	2.70E-07	1.16E-06	3.38E-12	NA
Arsenic	5.17E+00	1.42E-07	3.66E-07	1.77E-12	NA
Barium	9.14E+01	2.50E-06	1.08E-05	3.13E-11	NA
Beryllium	4.93E-01	1.35E-08	5.82E-08	1.69E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	4.35E+01	1.19E-06	5.13E-06	1.49E-11	NA
Copper	1.29E+01	3.53E-07	1.52E-06	4.42E-12	NA
Iron	1.52E+04	4.16E-04	1.79E-03	5.21E-09	NA
Lead	2.19E+01	6.00E-07	2.58E-06	7.50E-12	NA
Manganese	7.88E+02	2.16E-05	9.30E-05	2.70E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.27E+01	3.48E-07	1.50E-06	4.35E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.47E+00	6.77E-08	2.91E-07	8.46E-13	NA
Uranium	4.85E+01	1.33E-06	5.72E-06	1.66E-11	NA
Vanadium	1.65E+01	4.52E-07	1.95E-06	5.65E-12	NA
Zinc	1.12E+02	3.07E-06	1.32E-05	3.84E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	1.34E-08	1.50E-07	1.68E-13	NA
Pyrene	4.90E-01	1.34E-08	1.16E-07	1.68E-13	NA
Total PCB (1)	3.30E+00	9.04E-08	1.09E-06	1.13E-12	NA
Total PAH (2)	1.10E+00	3.01E-08	3.37E-07	3.77E-13	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	3.01E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.00E-01	NA	NA	NA	NA
Plutonium-239/240	6.99E-02	NA	NA	NA	NA
Technetium-99	1.03E+01	NA	NA	NA	NA
Thorium-228	3.47E-01	NA	NA	NA	NA
Thorium-230	2.98E+00	NA	NA	NA	NA
Thorium-232	4.48E-01	NA	NA	NA	NA
Uranium-234	4.40E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.63E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.48. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water at the Outfall 001 EU 13 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
		Dermal Intake Hazard	
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	NA		NA
<u>VOCs</u>			
Trichloroethene	NA		NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.49. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 13 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.88E+03	1.10E-02	4.93E-03	1.43E-08	NA
Antimony	9.86E+00	1.22E-05	5.47E-06	1.59E-11	NA
Arsenic	5.17E+00	6.41E-06	1.72E-06	8.33E-12	NA
Barium	9.14E+01	1.13E-04	5.07E-05	1.47E-10	NA
Beryllium	4.93E-01	6.11E-07	2.74E-07	7.94E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	4.35E+01	5.39E-05	2.41E-05	7.01E-11	NA
Copper	1.29E+01	1.60E-05	7.16E-06	2.08E-11	NA
Iron	1.52E+04	1.88E-02	8.44E-03	2.45E-08	NA
Lead	2.19E+01	2.72E-05	1.22E-05	3.53E-11	NA
Manganese	7.88E+02	9.77E-04	4.37E-04	1.27E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.27E+01	1.57E-05	7.05E-06	2.05E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.47E+00	3.06E-06	1.37E-06	3.98E-12	NA
Uranium	4.85E+01	6.01E-05	2.69E-05	7.81E-11	NA
Vanadium	1.65E+01	2.05E-05	9.16E-06	2.66E-11	NA
Zinc	1.12E+02	1.39E-04	6.22E-05	1.80E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	6.08E-07	7.07E-07	7.89E-13	NA
Pyrene	4.90E-01	6.08E-07	5.44E-07	7.89E-13	NA
Total PCB (1)	3.30E+00	4.09E-06	5.13E-06	5.31E-12	NA
Total PAH (2)	1.10E+00	1.36E-06	1.59E-06	1.77E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	3.01E-01	6.68E+02	NA	8.67E-04	1.02E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.00E-01	1.33E+03	NA	1.73E-03	2.03E+00
Plutonium-239/240	6.99E-02	1.55E+02	NA	2.01E-04	2.36E-01
Technetium-99	1.03E+01	2.29E+04	NA	2.97E-02	3.48E+01
Thorium-228	3.47E-01	7.70E+02	NA	1.00E-03	1.17E+00
Thorium-230	2.98E+00	6.62E+03	NA	8.59E-03	1.01E+01
Thorium-232	4.48E-01	9.95E+02	NA	1.29E-03	1.51E+00
Uranium-234	4.40E+00	9.77E+03	NA	1.27E-02	1.49E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.63E+01	3.62E+04	NA	4.70E-02	5.51E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.50. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 13 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.88E+03	3.09E-02	2.76E-04	4.01E-08	NA
Antimony	9.86E+00	3.43E-05	3.07E-07	4.45E-11	NA
Arsenic	5.17E+00	1.80E-05	9.65E-08	2.34E-11	NA
Barium	9.14E+01	3.18E-04	2.84E-06	4.13E-10	NA
Beryllium	4.93E-01	1.72E-06	1.53E-08	2.23E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	4.35E+01	1.51E-04	1.35E-06	1.96E-10	NA
Copper	1.29E+01	4.49E-05	4.01E-07	5.83E-11	NA
Iron	1.52E+04	5.29E-02	4.73E-04	6.87E-08	NA
Lead	2.19E+01	7.62E-05	6.81E-07	9.89E-11	NA
Manganese	7.88E+02	2.74E-03	2.45E-05	3.56E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.27E+01	4.42E-05	3.95E-07	5.74E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.47E+00	8.60E-06	7.68E-08	1.12E-11	NA
Uranium	4.85E+01	1.69E-04	1.51E-06	2.19E-10	NA
Vanadium	1.65E+01	5.74E-05	5.13E-07	7.45E-11	NA
Zinc	1.12E+02	3.90E-04	3.48E-06	5.06E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	1.71E-06	1.98E-06	2.21E-12	NA
Pyrene	4.90E-01	1.71E-06	1.52E-06	2.21E-12	NA
Total PCB (1)	3.30E+00	1.15E-05	1.44E-06	1.49E-11	NA
Total PAH (2)	1.10E+00	3.83E-06	4.45E-06	4.97E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	3.01E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.00E-01	NA	NA	NA	NA
Plutonium-239/240	6.99E-02	NA	NA	NA	NA
Technetium-99	1.03E+01	NA	NA	NA	NA
Thorium-228	3.47E-01	NA	NA	NA	NA
Thorium-230	2.98E+00	NA	NA	NA	NA
Thorium-232	4.48E-01	NA	NA	NA	NA
Uranium-234	4.40E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.63E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.51. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 14 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.16E+03	7.98E-05	3.43E-04	9.94E-10	NA
Antimony	1.50E+01	1.47E-07	6.31E-07	1.83E-12	NA
Arsenic	5.00E+00	4.89E-08	1.26E-07	6.09E-13	NA
Barium	8.70E+01	8.51E-07	3.66E-06	1.06E-11	NA
Beryllium	4.80E-01	4.69E-09	2.02E-08	5.85E-14	NA
Cadmium	1.90E+00	1.86E-08	1.60E-09	2.31E-13	NA
Chromium	7.10E+01	6.94E-07	2.99E-06	8.65E-12	NA
Copper	4.30E+01	4.21E-07	1.81E-06	5.24E-12	NA
Iron	1.15E+04	1.13E-04	4.85E-04	1.40E-09	NA
Lead	2.30E+01	2.25E-07	9.67E-07	2.80E-12	NA
Manganese	3.39E+02	3.32E-06	1.43E-05	4.13E-11	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	4.68E+00	4.58E-08	1.97E-07	5.70E-13	NA
Nickel	1.60E+01	1.56E-07	6.73E-07	1.95E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	2.35E-08	1.01E-07	2.92E-13	NA
Uranium	7.80E+00	7.63E-08	3.28E-07	9.50E-13	NA
Vanadium	1.90E+01	1.86E-07	7.99E-07	2.31E-12	NA
Zinc	1.55E+02	1.52E-06	6.52E-06	1.89E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.00E+02	1.96E-06	2.19E-05	2.44E-11	NA
Pyrene	4.60E+01	4.50E-07	3.87E-06	5.60E-12	NA
Total PCB (1)	2.20E+01	2.15E-07	2.59E-06	2.68E-12	NA
Total PAH (2)	1.84E+02	1.80E-06	2.01E-05	2.24E-11	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	1.20E-01	2.10E+00	NA	2.62E-05	3.07E-02
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.80E-02	1.19E+00	NA	1.48E-05	1.74E-02
Plutonium-239/240	7.90E-02	1.38E+00	NA	1.72E-05	2.02E-02
Technetium-99	4.70E+00	8.23E+01	NA	1.02E-03	1.20E+00
Thorium-228	3.90E-01	6.83E+00	NA	8.50E-05	9.98E-02
Thorium-230	1.80E+00	3.15E+01	NA	3.93E-04	4.61E-01
Thorium-232	4.40E-01	7.70E+00	NA	9.60E-05	1.13E-01
Uranium-234	2.00E+00	3.50E+01	NA	4.36E-04	5.12E-01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+00	4.55E+01	NA	5.67E-04	6.66E-01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.52. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for
Surface Water at the Outfall 001 EU 14 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.70E-04	1.28E-06
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	ND	NA
<u>VOCs</u>		
Trichloroethene	ND	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

ND: Not detected.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.53. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 14 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.16E+03	2.24E-04	9.63E-04	2.80E-09	NA
Antimony	1.50E+01	4.11E-07	1.77E-06	5.14E-12	NA
Arsenic	5.00E+00	1.37E-07	3.54E-07	1.71E-12	NA
Barium	8.70E+01	2.38E-06	1.03E-05	2.98E-11	NA
Beryllium	4.80E-01	1.32E-08	5.66E-08	1.64E-13	NA
Cadmium	1.90E+00	5.21E-08	4.48E-09	6.51E-13	NA
Chromium	7.10E+01	1.95E-06	8.38E-06	2.43E-11	NA
Copper	4.30E+01	1.18E-06	5.07E-06	1.47E-11	NA
Iron	1.15E+04	3.16E-04	1.36E-03	3.95E-09	NA
Lead	2.30E+01	6.30E-07	2.71E-06	7.88E-12	NA
Manganese	3.39E+02	9.29E-06	4.00E-05	1.16E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	4.68E+00	1.28E-07	5.52E-07	1.60E-12	NA
Nickel	1.60E+01	4.38E-07	1.89E-06	5.48E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	6.58E-08	2.83E-07	8.22E-13	NA
Uranium	7.80E+00	2.14E-07	9.20E-07	2.67E-12	NA
Vanadium	1.90E+01	5.21E-07	2.24E-06	6.51E-12	NA
Zinc	1.55E+02	4.25E-06	1.83E-05	5.31E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.00E+02	5.48E-06	6.14E-05	6.85E-11	NA
Pyrene	4.60E+01	1.26E-06	1.09E-05	1.58E-11	NA
Total PCB (1)	2.20E+01	6.03E-07	7.27E-06	7.54E-12	NA
Total PAH (2)	1.84E+02	5.04E-06	5.65E-05	6.31E-11	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	1.20E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.80E-02	NA	NA	NA	NA
Plutonium-239/240	7.90E-02	NA	NA	NA	NA
Technetium-99	4.70E+00	NA	NA	NA	NA
Thorium-228	3.90E-01	NA	NA	NA	NA
Thorium-230	1.80E+00	NA	NA	NA	NA
Thorium-232	4.40E-01	NA	NA	NA	NA
Uranium-234	2.00E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.54. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for
Surface Water at the Outfall 001 EU 14 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Molybdenum	NS	NA
Mercury	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.70E-04	2.66E-06
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	ND	NA
<u>VOCs</u>		
Trichloroethene	ND	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

ND: Not detected.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.55. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 14 Hot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.16E+03	1.43E-03	6.12E-03	1.78E-08	NA
Antimony	1.50E+01	2.63E-06	1.13E-05	3.27E-11	NA
Arsenic	5.00E+00	8.75E-07	2.25E-06	1.09E-11	NA
Barium	8.70E+01	1.52E-05	6.53E-05	1.89E-10	NA
Beryllium	4.80E-01	8.40E-08	3.60E-07	1.05E-12	NA
Cadmium	1.90E+00	3.33E-07	2.85E-08	4.14E-12	NA
Chromium	7.10E+01	1.24E-05	5.33E-05	1.55E-10	NA
Copper	4.30E+01	7.53E-06	3.23E-05	9.36E-11	NA
Iron	1.15E+04	2.02E-03	8.65E-03	2.51E-08	NA
Lead	2.30E+01	4.03E-06	1.73E-05	5.01E-11	NA
Manganese	3.39E+02	5.93E-05	2.54E-04	7.38E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	4.68E+00	8.19E-07	3.51E-06	1.02E-11	NA
Nickel	1.60E+01	2.80E-06	1.20E-05	3.48E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	4.20E-07	1.80E-06	5.23E-12	NA
Uranium	7.80E+00	1.37E-06	5.85E-06	1.70E-11	NA
Vanadium	1.90E+01	3.33E-06	1.43E-05	4.14E-11	NA
Zinc	1.55E+02	2.71E-05	1.16E-04	3.38E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	2.00E+02	3.50E-05	3.90E-04	4.36E-10	NA
Pyrene	4.60E+01	8.05E-06	6.90E-05	1.00E-10	NA
Total PCB (1)	2.20E+01	3.85E-06	4.62E-05	4.79E-11	NA
Total PAH (2)	1.84E+02	3.22E-05	3.59E-04	4.01E-10	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	1.20E-01	3.76E+01	NA	4.67E-04	5.48E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.80E-02	2.13E+01	NA	2.65E-04	3.11E-01
Plutonium-239/240	7.90E-02	2.47E+01	NA	3.08E-04	3.61E-01
Technetium-99	4.70E+00	1.47E+03	NA	1.83E-02	2.15E+01
Thorium-228	3.90E-01	1.22E+02	NA	1.52E-03	1.78E+00
Thorium-230	1.80E+00	5.63E+02	NA	7.01E-03	8.23E+00
Thorium-232	4.40E-01	1.38E+02	NA	1.71E-03	2.01E+00
Uranium-234	2.00E+00	6.26E+02	NA	7.79E-03	9.14E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+00	8.14E+02	NA	1.01E-02	1.19E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.56. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for
Surface Water at the Outfall 001 EU 14 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.70E-04	2.28E-05
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	ND	NA
<u>VOCs</u>		
Trichloroethene	ND	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

ND: Not detected.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.57. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 14 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.16E+03	3.99E-03	1.72E-02	4.98E-08	NA
Antimony	1.50E+01	7.34E-06	3.16E-05	9.16E-11	NA
Arsenic	5.00E+00	2.45E-06	6.32E-06	3.05E-11	NA
Barium	8.70E+01	4.25E-05	1.83E-04	5.31E-10	NA
Beryllium	4.80E-01	2.35E-07	1.01E-06	2.93E-12	NA
Cadmium	1.90E+00	9.29E-07	8.00E-08	1.16E-11	NA
Chromium	7.10E+01	3.47E-05	1.49E-04	4.34E-10	NA
Copper	4.30E+01	2.10E-05	9.05E-05	2.63E-10	NA
Iron	1.15E+04	5.64E-03	2.43E-02	7.04E-08	NA
Lead	2.30E+01	1.12E-05	4.84E-05	1.40E-10	NA
Manganese	3.39E+02	1.66E-04	7.14E-04	2.07E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	4.68E+00	2.29E-06	9.85E-06	2.86E-11	NA
Nickel	1.60E+01	7.82E-06	3.37E-05	9.77E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.40E+00	1.17E-06	5.05E-06	1.47E-11	NA
Uranium	7.80E+00	3.81E-06	1.64E-05	4.76E-11	NA
Vanadium	1.90E+01	9.29E-06	4.00E-05	1.16E-10	NA
Zinc	1.55E+02	7.58E-05	3.26E-04	9.46E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	2.00E+02	9.78E-05	1.09E-03	1.22E-09	NA
Pyrene	4.60E+01	2.25E-05	1.94E-04	2.81E-10	NA
Total PCB (1)	2.20E+01	1.08E-05	1.30E-04	1.34E-10	NA
Total PAH (2)	1.84E+02	9.00E-05	1.01E-03	1.12E-09	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	1.20E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.80E-02	NA	NA	NA	NA
Plutonium-239/240	7.90E-02	NA	NA	NA	NA
Technetium-99	4.70E+00	NA	NA	NA	NA
Thorium-228	3.90E-01	NA	NA	NA	NA
Thorium-230	1.80E+00	NA	NA	NA	NA
Thorium-232	4.40E-01	NA	NA	NA	NA
Uranium-234	2.00E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.58. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water at the Outfall 001 EU 14 Hot Spot

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Molybdenum	NS	NA
Mercury	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.70E-04	4.72E-05
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	ND	NA
<u>VOCs</u>		
Trichloroethene	ND	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

ND: Not detected.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.59. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 14 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.54E+03	9.35E-03	4.19E-03	1.21E-08	NA
Antimony	1.90E+01	2.36E-05	1.05E-05	3.06E-11	NA
Arsenic	5.30E+00	6.57E-06	1.76E-06	8.54E-12	NA
Barium	9.10E+01	1.13E-04	5.05E-05	1.47E-10	NA
Beryllium	4.90E-01	6.08E-07	2.72E-07	7.89E-13	NA
Cadmium	2.00E+00	2.48E-06	2.22E-08	3.22E-12	NA
Chromium	7.70E+01	9.55E-05	4.27E-05	1.24E-10	NA
Copper	4.40E+01	5.46E-05	2.44E-05	7.09E-11	NA
Iron	1.17E+04	1.45E-02	6.48E-03	1.88E-08	NA
Lead	2.20E+01	2.73E-05	1.22E-05	3.54E-11	NA
Manganese	3.54E+02	4.39E-04	1.96E-04	5.70E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	4.70E+00	5.83E-06	2.61E-06	7.57E-12	NA
Nickel	1.90E+01	2.36E-05	1.05E-05	3.06E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.50E+00	3.10E-06	1.39E-06	4.03E-12	NA
Uranium	7.80E+00	9.67E-06	4.33E-06	1.26E-11	NA
Vanadium	2.10E+01	2.60E-05	1.17E-05	3.38E-11	NA
Zinc	1.65E+02	2.05E-04	9.16E-05	2.66E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	2.00E+02	2.48E-04	2.89E-04	3.22E-10	NA
Pyrene	4.60E+01	5.70E-05	5.11E-05	7.41E-11	NA
Total PCB (1)	2.20E+01	2.73E-05	3.42E-05	3.54E-11	NA
Total PAH (2)	1.84E+02	2.28E-04	2.66E-04	2.96E-10	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	9.40E-02	2.09E+02	NA	2.71E-04	3.18E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.90E-02	1.31E+02	NA	1.70E-04	1.99E-01
Plutonium-239/240	7.90E-02	1.75E+02	NA	2.28E-04	2.67E-01
Technetium-99	4.30E+00	9.55E+03	NA	1.24E-02	1.45E+01
Thorium-228	4.40E-01	9.77E+02	NA	1.27E-03	1.49E+00
Thorium-230	2.60E+00	5.77E+03	NA	7.49E-03	8.79E+00
Thorium-232	4.70E-01	1.04E+03	NA	1.35E-03	1.59E+00
Uranium-234	2.40E+00	5.33E+03	NA	6.92E-03	8.11E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.20E+00	4.88E+03	NA	6.34E-03	7.44E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.60. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 14 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.54E+03	2.62E-02	1.17E-02	3.41E-08	NA
Antimony	1.90E+01	6.61E-05	2.95E-05	8.58E-11	NA
Arsenic	5.30E+00	1.84E-05	4.94E-06	2.39E-11	NA
Barium	9.10E+01	3.17E-04	1.42E-04	4.11E-10	NA
Beryllium	4.90E-01	1.71E-06	7.62E-07	2.21E-12	NA
Cadmium	2.00E+00	6.96E-06	6.22E-08	9.03E-12	NA
Chromium	7.70E+01	2.68E-04	1.20E-04	3.48E-10	NA
Copper	4.40E+01	1.53E-04	6.84E-05	1.99E-10	NA
Iron	1.17E+04	4.06E-02	1.81E-02	5.27E-08	NA
Lead	2.20E+01	7.66E-05	3.42E-05	9.94E-11	NA
Manganese	3.54E+02	1.23E-03	5.50E-04	1.60E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	4.70E+00	1.64E-05	7.31E-06	2.12E-11	NA
Nickel	1.90E+01	6.61E-05	2.95E-05	8.58E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.50E+00	8.70E-06	3.89E-06	1.13E-11	NA
Uranium	7.80E+00	2.71E-05	1.21E-05	3.52E-11	NA
Vanadium	2.10E+01	7.31E-05	3.27E-05	9.49E-11	NA
Zinc	1.65E+02	5.74E-04	2.57E-04	7.45E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	2.00E+02	6.96E-04	8.09E-04	9.03E-10	NA
Pyrene	4.60E+01	1.60E-04	1.43E-04	2.08E-10	NA
Total PCB (1)	2.20E+01	7.66E-05	9.58E-05	9.94E-11	NA
Total PAH (2)	1.84E+02	6.40E-04	7.44E-04	8.31E-10	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	9.40E-02	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.90E-02	NA	NA	NA	NA
Plutonium-239/240	7.90E-02	NA	NA	NA	NA
Technetium-99	4.30E+00	NA	NA	NA	NA
Thorium-228	4.40E-01	NA	NA	NA	NA
Thorium-230	2.60E+00	NA	NA	NA	NA
Thorium-232	4.70E-01	NA	NA	NA	NA
Uranium-234	2.40E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.20E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.61. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 15 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.49E+03	7.33E-05	3.15E-04	9.12E-10	NA
Antimony	9.79E+00	9.57E-08	4.12E-07	1.19E-12	NA
Arsenic	9.55E+00	9.34E-08	2.41E-07	1.16E-12	NA
Barium	4.84E+01	4.73E-07	2.04E-06	5.90E-12	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	2.80E+00	2.74E-08	2.35E-09	3.41E-13	NA
Chromium	7.27E+01	7.11E-07	3.06E-06	8.86E-12	NA
Copper	4.77E+01	4.67E-07	2.01E-06	5.81E-12	NA
Iron	1.17E+04	1.14E-04	4.92E-04	1.43E-09	NA
Lead	6.46E+01	6.32E-07	2.72E-06	7.87E-12	NA
Manganese	3.42E+02	3.34E-06	1.44E-05	4.17E-11	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.39E+01	2.34E-07	1.00E-06	2.91E-12	NA
Nickel	5.20E+02	5.09E-06	2.19E-05	6.33E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.45E+00	2.40E-08	1.03E-07	2.98E-13	NA
Uranium	6.42E+02	6.28E-06	2.70E-05	7.82E-11	NA
Vanadium	1.56E+01	1.53E-07	6.56E-07	1.90E-12	NA
Zinc	1.37E+03	1.34E-05	5.76E-05	1.67E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	7.60E+00	7.43E-08	8.31E-07	9.26E-13	NA
Pyrene	5.60E+00	5.48E-08	4.71E-07	6.82E-13	NA
Total PCB (1)	5.20E+01	5.09E-07	6.12E-06	6.33E-12	NA
Total PAH (2)	5.20E+00	5.09E-08	5.69E-07	6.33E-13	NA
<u>Radionuclides</u>					
Americium-241	1.27E-01	2.22E+00	NA	2.77E-05	3.25E-02
Cesium-137	6.81E-01	1.19E+01	NA	1.49E-04	1.74E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	3.35E-01	5.86E+00	NA	7.31E-05	8.58E-02
Plutonium-239/240	6.25E-01	1.09E+01	NA	1.36E-04	1.60E-01
Technetium-99	3.65E+01	6.39E+02	NA	7.96E-03	9.34E+00
Thorium-228	3.24E-01	5.67E+00	NA	7.07E-05	8.29E-02
Thorium-230	4.32E+00	7.56E+01	NA	9.42E-04	1.11E+00
Thorium-232	3.49E-01	6.11E+00	NA	7.61E-05	8.93E-02
Uranium-234	1.14E+01	2.00E+02	NA	2.49E-03	2.92E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.15E+01	2.01E+02	NA	2.51E-03	2.94E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.62. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for
Surface Water at the Outfall 001 EU 15 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
			Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	NA		NA
<u>VOCs</u>			
Trichloroethene	NA		NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.63. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at Outfall 001 and EU 15 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.49E+03	2.05E-04	8.84E-04	2.57E-09	NA
Antimony	9.79E+00	2.68E-07	1.16E-06	3.35E-12	NA
Arsenic	9.55E+00	2.62E-07	6.76E-07	3.27E-12	NA
Barium	4.84E+01	1.33E-06	5.71E-06	1.66E-11	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	2.80E+00	7.67E-08	6.61E-09	9.60E-13	NA
Chromium	7.27E+01	1.99E-06	8.58E-06	2.49E-11	NA
Copper	4.77E+01	1.31E-06	5.63E-06	1.63E-11	NA
Iron	1.17E+04	3.21E-04	1.38E-03	4.01E-09	NA
Lead	6.46E+01	1.77E-06	7.62E-06	2.21E-11	NA
Manganese	3.42E+02	9.37E-06	4.04E-05	1.17E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.39E+01	6.55E-07	2.82E-06	8.19E-12	NA
Nickel	5.20E+02	1.42E-05	6.14E-05	1.78E-10	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.45E+00	6.71E-08	2.89E-07	8.40E-13	NA
Uranium	6.42E+02	1.76E-05	7.58E-05	2.20E-10	NA
Vanadium	1.56E+01	4.27E-07	1.84E-06	5.35E-12	NA
Zinc	1.37E+03	3.75E-05	1.62E-04	4.69E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	7.60E+00	2.08E-07	2.33E-06	2.60E-12	NA
Pyrene	5.60E+00	1.53E-07	1.32E-06	1.92E-12	NA
Total PCB (1)	5.20E+01	1.42E-06	1.72E-05	1.78E-11	NA
Total PAH (2)	5.20E+00	1.42E-07	1.60E-06	1.78E-12	NA
<u>Radionuclides</u>					
Americium-241	1.27E-01	NA	NA	NA	NA
Cesium-137	6.81E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	3.35E-01	NA	NA	NA	NA
Plutonium-239/240	6.25E-01	NA	NA	NA	NA
Technetium-99	3.65E+01	NA	NA	NA	NA
Thorium-228	3.24E-01	NA	NA	NA	NA
Thorium-230	4.32E+00	NA	NA	NA	NA
Thorium-232	3.49E-01	NA	NA	NA	NA
Uranium-234	1.14E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.15E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.65. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 15 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.49E+03	1.31E-03	5.62E-03	1.63E-08	NA
Antimony	9.79E+00	1.71E-06	7.34E-06	2.13E-11	NA
Arsenic	9.55E+00	1.67E-06	4.30E-06	2.08E-11	NA
Barium	4.84E+01	8.47E-06	3.63E-05	1.05E-10	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	2.80E+00	4.90E-07	4.20E-08	6.10E-12	NA
Chromium	7.27E+01	1.27E-05	5.45E-05	1.58E-10	NA
Copper	4.77E+01	8.35E-06	3.58E-05	1.04E-10	NA
Iron	1.17E+04	2.05E-03	8.78E-03	2.55E-08	NA
Lead	6.46E+01	1.13E-05	4.85E-05	1.41E-10	NA
Manganese	3.42E+02	5.99E-05	2.57E-04	7.45E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.39E+01	4.18E-06	1.79E-05	5.20E-11	NA
Nickel	5.20E+02	9.10E-05	3.90E-04	1.13E-09	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.45E+00	4.29E-07	1.84E-06	5.34E-12	NA
Uranium	6.42E+02	1.12E-04	4.82E-04	1.40E-09	NA
Vanadium	1.56E+01	2.73E-06	1.17E-05	3.40E-11	NA
Zinc	1.37E+03	2.40E-04	1.03E-03	2.98E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	7.60E+00	1.33E-06	1.48E-05	1.65E-11	NA
Pyrene	5.60E+00	9.80E-07	8.40E-06	1.22E-11	NA
Total PCB (1)	5.20E+01	9.10E-06	1.09E-04	1.13E-10	NA
Total PAH (2)	5.20E+00	9.10E-07	1.01E-05	1.13E-11	NA
<u>Radionuclides</u>					
Americium-241	1.27E-01	3.98E+01	NA	4.95E-04	5.80E-01
Cesium-137	6.81E-01	2.13E+02	NA	2.65E-03	3.11E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	3.35E-01	1.05E+02	NA	1.30E-03	1.53E+00
Plutonium-239/240	6.25E-01	1.96E+02	NA	2.43E-03	2.86E+00
Technetium-99	3.65E+01	1.14E+04	NA	1.42E-01	1.67E+02
Thorium-228	3.24E-01	1.01E+02	NA	1.26E-03	1.48E+00
Thorium-230	4.32E+00	1.35E+03	NA	1.68E-02	1.97E+01
Thorium-232	3.49E-01	1.09E+02	NA	1.36E-03	1.59E+00
Uranium-234	1.14E+01	3.57E+03	NA	4.44E-02	5.21E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.15E+01	3.60E+03	NA	4.48E-02	5.26E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.66. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for
Surface Water at the Outfall 001 EU 15 Hot Spot**

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.67. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 15 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.49E+03	3.66E-03	1.58E-02	4.57E-08	NA
Antimony	9.79E+00	4.79E-06	2.06E-05	5.98E-11	NA
Arsenic	9.55E+00	4.67E-06	1.21E-05	5.83E-11	NA
Barium	4.84E+01	2.37E-05	1.02E-04	2.96E-10	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	2.80E+00	1.37E-06	1.18E-07	1.71E-11	NA
Chromium	7.27E+01	3.56E-05	1.53E-04	4.44E-10	NA
Copper	4.77E+01	2.33E-05	1.00E-04	2.91E-10	NA
Iron	1.17E+04	5.72E-03	2.46E-02	7.14E-08	NA
Lead	6.46E+01	3.16E-05	1.36E-04	3.94E-10	NA
Manganese	3.42E+02	1.67E-04	7.20E-04	2.09E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.39E+01	1.17E-05	5.03E-05	1.46E-10	NA
Nickel	5.20E+02	2.54E-04	1.09E-03	3.18E-09	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.45E+00	1.20E-06	5.16E-06	1.50E-11	NA
Uranium	6.42E+02	3.14E-04	1.35E-03	3.92E-09	NA
Vanadium	1.56E+01	7.63E-06	3.28E-05	9.53E-11	NA
Zinc	1.37E+03	6.70E-04	2.88E-03	8.37E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	7.60E+00	3.72E-06	4.16E-05	4.64E-11	NA
Pyrene	5.60E+00	2.74E-06	2.36E-05	3.42E-11	NA
Total PCB (1)	5.20E+01	2.54E-05	3.06E-04	3.18E-10	NA
Total PAH (2)	5.20E+00	2.54E-06	2.85E-05	3.18E-11	NA
<u>Radionuclides</u>					
Americium-241	1.27E-01	NA	NA	NA	NA
Cesium-137	6.81E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	3.35E-01	NA	NA	NA	NA
Plutonium-239/240	6.25E-01	NA	NA	NA	NA
Technetium-99	3.65E+01	NA	NA	NA	NA
Thorium-228	3.24E-01	NA	NA	NA	NA
Thorium-230	4.32E+00	NA	NA	NA	NA
Thorium-232	3.49E-01	NA	NA	NA	NA
Uranium-234	1.14E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.15E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.68. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water at the Outfall 001 EU 15 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
			Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	NA		NA
<u>VOCs</u>			
Trichloroethene	NA		NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.69. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 15 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.49E+03	9.29E-03	4.16E-03	1.21E-08	NA
Antimony	9.79E+00	1.21E-05	5.43E-06	1.58E-11	NA
Arsenic	9.55E+00	1.18E-05	3.18E-06	1.54E-11	NA
Barium	4.84E+01	6.00E-05	2.69E-05	7.80E-11	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	2.80E+00	3.47E-06	3.11E-08	4.51E-12	NA
Chromium	7.27E+01	9.01E-05	4.03E-05	1.17E-10	NA
Copper	4.77E+01	5.91E-05	2.65E-05	7.68E-11	NA
Iron	1.17E+04	1.45E-02	6.49E-03	1.88E-08	NA
Lead	6.46E+01	8.01E-05	3.59E-05	1.04E-10	NA
Manganese	3.42E+02	4.24E-04	1.90E-04	5.51E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.39E+01	2.96E-05	1.33E-05	3.85E-11	NA
Nickel	5.20E+02	6.45E-04	2.89E-04	8.38E-10	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.45E+00	3.04E-06	1.36E-06	3.95E-12	NA
Uranium	6.42E+02	7.96E-04	3.56E-04	1.03E-09	NA
Vanadium	1.56E+01	1.93E-05	8.66E-06	2.51E-11	NA
Zinc	1.37E+03	1.70E-03	7.60E-04	2.21E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	7.60E+00	9.42E-06	1.10E-05	1.22E-11	NA
Pyrene	5.60E+00	6.94E-06	6.22E-06	9.02E-12	NA
Total PCB (1)	5.20E+01	6.45E-05	8.08E-05	8.38E-11	NA
Total PAH (2)	5.20E+00	6.45E-06	7.50E-06	8.38E-12	NA
<u>Radionuclides</u>					
Americium-241	1.27E-01	2.82E+02	NA	3.66E-04	4.29E-01
Cesium-137	6.81E-01	1.51E+03	NA	1.96E-03	2.30E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	3.35E-01	7.44E+02	NA	9.65E-04	1.13E+00
Plutonium-239/240	6.25E-01	1.39E+03	NA	1.80E-03	2.11E+00
Technetium-99	3.65E+01	8.10E+04	NA	1.05E-01	1.23E+02
Thorium-228	3.24E-01	7.19E+02	NA	9.34E-04	1.10E+00
Thorium-230	4.32E+00	9.59E+03	NA	1.24E-02	1.46E+01
Thorium-232	3.49E-01	7.75E+02	NA	1.01E-03	1.18E+00
Uranium-234	1.14E+01	2.53E+04	NA	3.29E-02	3.85E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.15E+01	2.55E+04	NA	3.31E-02	3.89E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.70. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 15 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.49E+03	2.61E-02	1.16E-02	3.38E-08	NA
Antimony	9.79E+00	3.41E-05	1.52E-05	4.42E-11	NA
Arsenic	9.55E+00	3.32E-05	8.91E-06	4.31E-11	NA
Barium	4.84E+01	1.68E-04	7.53E-05	2.19E-10	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	2.80E+00	9.74E-06	8.71E-08	1.26E-11	NA
Chromium	7.27E+01	2.53E-04	1.13E-04	3.28E-10	NA
Copper	4.77E+01	1.66E-04	7.42E-05	2.15E-10	NA
Iron	1.17E+04	4.07E-02	1.82E-02	5.29E-08	NA
Lead	6.46E+01	2.25E-04	1.00E-04	2.92E-10	NA
Manganese	3.42E+02	1.19E-03	5.32E-04	1.54E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.39E+01	8.32E-05	3.72E-05	1.08E-10	NA
Nickel	5.20E+02	1.81E-03	8.09E-04	2.35E-09	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.45E+00	8.53E-06	3.81E-06	1.11E-11	NA
Uranium	6.42E+02	2.23E-03	9.98E-04	2.90E-09	NA
Vanadium	1.56E+01	5.43E-05	2.43E-05	7.05E-11	NA
Zinc	1.37E+03	4.77E-03	2.13E-03	6.19E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	7.60E+00	2.64E-05	3.07E-05	3.43E-11	NA
Pyrene	5.60E+00	1.95E-05	1.74E-05	2.53E-11	NA
Total PCB (1)	5.20E+01	1.81E-04	2.26E-04	2.35E-10	NA
Total PAH (2)	5.20E+00	1.81E-05	2.10E-05	2.35E-11	NA
<u>Radionuclides</u>					
Americium-241	1.27E-01	NA	NA	NA	NA
Cesium-137	6.81E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	3.35E-01	NA	NA	NA	NA
Plutonium-239/240	6.25E-01	NA	NA	NA	NA
Technetium-99	3.65E+01	NA	NA	NA	NA
Thorium-228	3.24E-01	NA	NA	NA	NA
Thorium-230	4.32E+00	NA	NA	NA	NA
Thorium-232	3.49E-01	NA	NA	NA	NA
Uranium-234	1.14E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.15E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.71. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 16 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.19E+03	8.01E-05	3.44E-04	9.98E-10	NA
Antimony	9.62E+00	9.41E-08	4.05E-07	1.17E-12	NA
Arsenic	1.07E+01	1.05E-07	2.70E-07	1.30E-12	NA
Barium	7.10E+01	6.94E-07	2.99E-06	8.65E-12	NA
Beryllium	6.63E-01	6.48E-09	2.79E-08	8.08E-14	NA
Cadmium	1.93E+01	1.89E-07	1.62E-08	2.35E-12	NA
Chromium	2.35E+01	2.30E-07	9.88E-07	2.86E-12	NA
Copper	1.39E+01	1.36E-07	5.84E-07	1.69E-12	NA
Iron	1.82E+05	1.78E-03	7.65E-03	2.22E-08	NA
Lead	2.11E+01	2.06E-07	8.87E-07	2.57E-12	NA
Manganese	1.54E+03	1.51E-05	6.48E-05	1.88E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.03E+01	1.01E-07	4.33E-07	1.25E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.41E+00	2.36E-08	1.01E-07	2.94E-13	NA
Uranium	1.43E+01	1.40E-07	6.01E-07	1.74E-12	NA
Vanadium	2.53E+01	2.47E-07	1.06E-06	3.08E-12	NA
Zinc	6.78E+01	6.63E-07	2.85E-06	8.26E-12	NA
<u>Organic Compounds</u>					
Fluoranthene	1.10E+00	1.08E-08	1.20E-07	1.34E-13	NA
Pyrene	1.20E+00	1.17E-08	1.01E-07	1.46E-13	NA
Total PCB (1)	1.80E+00	1.76E-08	2.12E-07	2.19E-13	NA
Total PAH (2)	1.40E+00	1.37E-08	1.53E-07	1.71E-13	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	1.75E-01	3.06E+00	NA	3.82E-05	4.48E-02
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.97E-02	1.22E+00	NA	1.52E-05	1.78E-02
Plutonium-239/240	5.65E-02	9.89E-01	NA	1.23E-05	1.45E-02
Technetium-99	6.12E+00	1.07E+02	NA	1.33E-03	1.57E+00
Thorium-228	ND	ND	NA	ND	ND
Thorium-230	6.58E-01	1.15E+01	NA	1.43E-04	1.68E-01
Thorium-232	1.96E-01	3.43E+00	NA	4.27E-05	5.02E-02
Uranium-234	7.25E-01	1.27E+01	NA	1.58E-04	1.86E-01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.96E+00	3.43E+01	NA	4.27E-04	5.02E-01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.72. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Surface Water at the Outfall 001 EU 16 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.73. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 16 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.19E+03	2.24E-04	9.66E-04	2.81E-09	NA
Antimony	9.62E+00	2.64E-07	1.14E-06	3.30E-12	NA
Arsenic	1.07E+01	2.93E-07	7.58E-07	3.67E-12	NA
Barium	7.10E+01	1.95E-06	8.38E-06	2.43E-11	NA
Beryllium	6.63E-01	1.82E-08	7.82E-08	2.27E-13	NA
Cadmium	1.93E+01	5.29E-07	4.55E-08	6.61E-12	NA
Chromium	2.35E+01	6.44E-07	2.77E-06	8.05E-12	NA
Copper	1.39E+01	3.81E-07	1.64E-06	4.76E-12	NA
Iron	1.82E+05	4.99E-03	2.15E-02	6.24E-08	NA
Lead	2.11E+01	5.78E-07	2.49E-06	7.23E-12	NA
Manganese	1.54E+03	4.22E-05	1.82E-04	5.28E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.03E+01	2.82E-07	1.22E-06	3.53E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.41E+00	6.60E-08	2.84E-07	8.26E-13	NA
Uranium	1.43E+01	3.92E-07	1.69E-06	4.90E-12	NA
Vanadium	2.53E+01	6.93E-07	2.99E-06	8.67E-12	NA
Zinc	6.78E+01	1.86E-06	8.00E-06	2.32E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	1.10E+00	3.01E-08	3.37E-07	3.77E-13	NA
Pyrene	1.20E+00	3.29E-08	2.83E-07	4.11E-13	NA
Total PCB (1)	1.80E+00	4.93E-08	5.95E-07	6.17E-13	NA
Total PAH (2)	1.40E+00	3.84E-08	4.30E-07	4.80E-13	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	1.75E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.97E-02	NA	NA	NA	NA
Plutonium-239/240	5.65E-02	NA	NA	NA	NA
Technetium-99	6.12E+00	NA	NA	NA	NA
Thorium-228	ND	NA	NA	NA	NA
Thorium-230	6.58E-01	NA	NA	NA	NA
Thorium-232	1.96E-01	NA	NA	NA	NA
Uranium-234	7.25E-01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.96E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.74. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for
Surface Water at the Outfall 001 EU 16 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.75. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 16 Hot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.19E+03	1.43E-03	6.14E-03	1.78E-08	NA
Antimony	9.62E+00	1.68E-06	7.22E-06	2.09E-11	NA
Arsenic	1.07E+01	1.87E-06	4.82E-06	2.33E-11	NA
Barium	7.10E+01	1.24E-05	5.33E-05	1.55E-10	NA
Beryllium	6.63E-01	1.16E-07	4.97E-07	1.44E-12	NA
Cadmium	1.93E+01	3.38E-06	2.90E-07	4.20E-11	NA
Chromium	2.35E+01	4.11E-06	1.76E-05	5.12E-11	NA
Copper	1.39E+01	2.43E-06	1.04E-05	3.03E-11	NA
Iron	1.82E+05	3.19E-02	1.37E-01	3.96E-07	NA
Lead	2.11E+01	3.69E-06	1.58E-05	4.59E-11	NA
Manganese	1.54E+03	2.70E-04	1.16E-03	3.35E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.03E+01	1.80E-06	7.73E-06	2.24E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.41E+00	4.22E-07	1.81E-06	5.25E-12	NA
Uranium	1.43E+01	2.50E-06	1.07E-05	3.11E-11	NA
Vanadium	2.53E+01	4.43E-06	1.90E-05	5.51E-11	NA
Zinc	6.78E+01	1.19E-05	5.09E-05	1.48E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	1.10E+00	1.93E-07	2.15E-06	2.40E-12	NA
Pyrene	1.20E+00	2.10E-07	1.80E-06	2.61E-12	NA
Total PCB (1)	1.80E+00	3.15E-07	3.78E-06	3.92E-12	NA
Total PAH (2)	1.40E+00	2.45E-07	2.73E-06	3.05E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	1.75E-01	5.48E+01	NA	6.81E-04	8.00E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.97E-02	2.18E+01	NA	2.71E-04	3.19E-01
Plutonium-239/240	5.65E-02	1.77E+01	NA	2.20E-04	2.58E-01
Technetium-99	6.12E+00	1.92E+03	NA	2.38E-02	2.80E+01
Thorium-228	ND	ND	NA	ND	ND
Thorium-230	6.58E-01	2.06E+02	NA	2.56E-03	3.01E+00
Thorium-232	1.96E-01	6.13E+01	NA	7.63E-04	8.96E-01
Uranium-234	7.25E-01	2.27E+02	NA	2.82E-03	3.31E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.96E+00	6.13E+02	NA	7.63E-03	8.96E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.76. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water at the Outfall 001 EU 16 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.77. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 16 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.19E+03	4.00E-03	1.72E-02	5.00E-08	NA
Antimony	9.62E+00	4.70E-06	2.03E-05	5.87E-11	NA
Arsenic	1.07E+01	5.23E-06	1.35E-05	6.53E-11	NA
Barium	7.10E+01	3.47E-05	1.49E-04	4.34E-10	NA
Beryllium	6.63E-01	3.24E-07	1.40E-06	4.05E-12	NA
Cadmium	1.93E+01	9.44E-06	8.13E-07	1.18E-10	NA
Chromium	2.35E+01	1.15E-05	4.95E-05	1.43E-10	NA
Copper	1.39E+01	6.80E-06	2.93E-05	8.49E-11	NA
Iron	1.82E+05	8.90E-02	3.83E-01	1.11E-06	NA
Lead	2.11E+01	1.03E-05	4.44E-05	1.29E-10	NA
Manganese	1.54E+03	7.53E-04	3.24E-03	9.40E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.03E+01	5.04E-06	2.17E-05	6.29E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.41E+00	1.18E-06	5.07E-06	1.47E-11	NA
Uranium	1.43E+01	6.99E-06	3.01E-05	8.73E-11	NA
Vanadium	2.53E+01	1.24E-05	5.33E-05	1.54E-10	NA
Zinc	6.78E+01	3.32E-05	1.43E-04	4.14E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	1.10E+00	5.38E-07	6.02E-06	6.72E-12	NA
Pyrene	1.20E+00	5.87E-07	5.05E-06	7.33E-12	NA
Total PCB (1)	1.80E+00	8.80E-07	1.06E-05	1.10E-11	NA
Total PAH (2)	1.40E+00	6.85E-07	7.66E-06	8.55E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	1.75E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.97E-02	NA	NA	NA	NA
Plutonium-239/240	5.65E-02	NA	NA	NA	NA
Technetium-99	6.12E+00	NA	NA	NA	NA
Thorium-228	ND	NA	NA	NA	NA
Thorium-230	6.58E-01	NA	NA	NA	NA
Thorium-232	1.96E-01	NA	NA	NA	NA
Uranium-234	7.25E-01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.96E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.64. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for
Surface Water at the Outfall 001 EU 15 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
			Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	NA		NA
<u>VOCs</u>			
Trichloroethene	NA		NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.78. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water at the Outfall 001 EU 16 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.79. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 16 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.19E+03	1.02E-02	4.55E-03	1.32E-08	NA
Antimony	9.62E+00	1.19E-05	5.34E-06	1.55E-11	NA
Arsenic	1.07E+01	1.33E-05	3.56E-06	1.72E-11	NA
Barium	7.10E+01	8.80E-05	3.94E-05	1.14E-10	NA
Beryllium	6.63E-01	8.22E-07	3.68E-07	1.07E-12	NA
Cadmium	1.93E+01	2.39E-05	2.14E-07	3.11E-11	NA
Chromium	2.35E+01	2.91E-05	1.30E-05	3.78E-11	NA
Copper	1.39E+01	1.72E-05	7.71E-06	2.24E-11	NA
Iron	1.82E+05	2.26E-01	1.01E-01	2.93E-07	NA
Lead	2.11E+01	2.62E-05	1.17E-05	3.40E-11	NA
Manganese	1.54E+03	1.91E-03	8.55E-04	2.48E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.03E+01	1.28E-05	5.72E-06	1.66E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.41E+00	2.99E-06	1.34E-06	3.88E-12	NA
Uranium	1.43E+01	1.77E-05	7.94E-06	2.30E-11	NA
Vanadium	2.53E+01	3.14E-05	1.40E-05	4.07E-11	NA
Zinc	6.78E+01	8.41E-05	3.76E-05	1.09E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	1.10E+00	1.36E-06	1.59E-06	1.77E-12	NA
Pyrene	1.20E+00	1.49E-06	1.33E-06	1.93E-12	NA
Total PCB (1)	1.80E+00	2.23E-06	2.80E-06	2.90E-12	NA
Total PAH (2)	1.40E+00	1.74E-06	2.02E-06	2.25E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	ND	NA	ND	ND
Cesium-137	1.75E-01	3.89E+02	NA	5.04E-04	5.92E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	6.97E-02	1.55E+02	NA	2.01E-04	2.36E-01
Plutonium-239/240	5.65E-02	1.25E+02	NA	1.63E-04	1.91E-01
Technetium-99	6.12E+00	1.36E+04	NA	1.76E-02	2.07E+01
Thorium-228	ND	ND	NA	ND	ND
Thorium-230	6.58E-01	1.46E+03	NA	1.90E-03	2.22E+00
Thorium-232	1.96E-01	4.35E+02	NA	5.65E-04	6.62E-01
Uranium-234	7.25E-01	1.61E+03	NA	2.09E-03	2.45E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.96E+00	4.35E+03	NA	5.65E-03	6.62E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.80. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 16 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.19E+03	2.85E-02	1.27E-02	3.70E-08	NA
Antimony	9.62E+00	3.35E-05	1.50E-05	4.35E-11	NA
Arsenic	1.07E+01	3.72E-05	9.98E-06	4.83E-11	NA
Barium	7.10E+01	2.47E-04	1.10E-04	3.21E-10	NA
Beryllium	6.63E-01	2.31E-06	1.03E-06	2.99E-12	NA
Cadmium	1.93E+01	6.72E-05	6.00E-07	8.72E-11	NA
Chromium	2.35E+01	8.18E-05	3.65E-05	1.06E-10	NA
Copper	1.39E+01	4.84E-05	2.16E-05	6.28E-11	NA
Iron	1.82E+05	6.33E-01	2.83E-01	8.22E-07	NA
Lead	2.11E+01	7.34E-05	3.28E-05	9.53E-11	NA
Manganese	1.54E+03	5.36E-03	2.39E-03	6.96E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	1.03E+01	3.58E-05	1.60E-05	4.65E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.41E+00	8.39E-06	3.75E-06	1.09E-11	NA
Uranium	1.43E+01	4.98E-05	2.22E-05	6.46E-11	NA
Vanadium	2.53E+01	8.80E-05	3.93E-05	1.14E-10	NA
Zinc	6.78E+01	2.36E-04	1.05E-04	3.06E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	1.10E+00	3.83E-06	4.45E-06	4.97E-12	NA
Pyrene	1.20E+00	4.18E-06	3.73E-06	5.42E-12	NA
Total PCB (1)	1.80E+00	6.26E-06	7.84E-06	8.13E-12	NA
Total PAH (2)	1.40E+00	4.87E-06	5.66E-06	6.32E-12	NA
<u>Radionuclides</u>					
Americium-241	ND	NA	NA	NA	NA
Cesium-137	1.75E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	6.97E-02	NA	NA	NA	NA
Plutonium-239/240	5.65E-02	NA	NA	NA	NA
Technetium-99	6.12E+00	NA	NA	NA	NA
Thorium-228	ND	NA	NA	NA	NA
Thorium-230	6.58E-01	NA	NA	NA	NA
Thorium-232	1.96E-01	NA	NA	NA	NA
Uranium-234	7.25E-01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.96E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.81. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 18 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.15E+04	1.12E-04	4.84E-04	1.40E-09	NA
Antimony	9.93E+00	9.71E-08	4.18E-07	1.21E-12	NA
Arsenic	4.68E+00	4.58E-08	1.18E-07	5.70E-13	NA
Barium	6.14E+01	6.00E-07	2.58E-06	7.48E-12	NA
Beryllium	6.04E-01	5.91E-09	2.54E-08	7.36E-14	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.16E+01	2.11E-07	9.08E-07	2.63E-12	NA
Copper	4.90E+01	4.79E-07	2.06E-06	5.97E-12	NA
Iron	1.57E+04	1.54E-04	6.60E-04	1.91E-09	NA
Lead	ND	ND	ND	ND	NA
Manganese	8.47E+02	8.28E-06	3.56E-05	1.03E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.10E+01	2.05E-07	8.83E-07	2.56E-12	NA
Nickel	1.82E+02	1.78E-06	7.65E-06	2.22E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.48E+00	2.43E-08	1.04E-07	3.02E-13	NA
Uranium	9.08E+01	8.88E-07	3.82E-06	1.11E-11	NA
Vanadium	2.27E+01	2.22E-07	9.55E-07	2.77E-12	NA
Zinc	8.67E+01	8.48E-07	3.65E-06	1.06E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	5.00E-01	4.89E-09	5.47E-08	6.09E-14	NA
Pyrene	5.00E-01	4.89E-09	4.21E-08	6.09E-14	NA
Total PCB (1)	1.50E+00	1.47E-08	1.77E-07	1.83E-13	NA
Total PAH (2)	1.10E+00	1.08E-08	1.20E-07	1.34E-13	NA
<u>Radionuclides</u>					
Americium-241	5.21E-01	9.12E+00	NA	1.14E-04	1.33E-01
Cesium-137	9.38E+00	1.64E+02	NA	2.05E-03	2.40E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	2.88E+00	5.04E+01	NA	6.28E-04	7.37E-01
Plutonium-239/240	3.62E+00	6.34E+01	NA	7.89E-04	9.27E-01
Technetium-99	2.29E+02	4.01E+03	NA	4.99E-02	5.86E+01
Thorium-228	3.53E-01	6.18E+00	NA	7.70E-05	9.04E-02
Thorium-230	1.22E+01	2.14E+02	NA	2.66E-03	3.12E+00
Thorium-232	3.92E-01	6.86E+00	NA	8.55E-05	1.00E-01
Uranium-234	2.51E+00	4.39E+01	NA	5.47E-04	6.43E-01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.29E+01	2.26E+02	NA	2.81E-03	3.30E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.82. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Surface Water at the Outfall 001 EU 18 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.83. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 18 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.15E+04	3.15E-04	1.36E-03	3.94E-09	NA
Antimony	9.93E+00	2.72E-07	1.17E-06	3.40E-12	NA
Arsenic	4.68E+00	1.28E-07	3.31E-07	1.60E-12	NA
Barium	6.14E+01	1.68E-06	7.25E-06	2.10E-11	NA
Beryllium	6.04E-01	1.65E-08	7.13E-08	2.07E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.16E+01	5.92E-07	2.55E-06	7.40E-12	NA
Copper	4.90E+01	1.34E-06	5.78E-06	1.68E-11	NA
Iron	1.57E+04	4.30E-04	1.85E-03	5.38E-09	NA
Lead	ND	ND	ND	ND	NA
Manganese	8.47E+02	2.32E-05	9.99E-05	2.90E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.10E+01	5.75E-07	2.48E-06	7.20E-12	NA
Nickel	1.82E+02	4.99E-06	2.15E-05	6.24E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.48E+00	6.80E-08	2.93E-07	8.50E-13	NA
Uranium	9.08E+01	2.49E-06	1.07E-05	3.11E-11	NA
Vanadium	2.27E+01	6.22E-07	2.68E-06	7.78E-12	NA
Zinc	8.67E+01	2.38E-06	1.02E-05	2.97E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	5.00E-01	1.37E-08	1.53E-07	1.71E-13	NA
Pyrene	5.00E-01	1.37E-08	1.18E-07	1.71E-13	NA
Total PCB (1)	1.50E+00	4.11E-08	4.96E-07	5.14E-13	NA
Total PAH (2)	1.10E+00	3.01E-08	3.37E-07	3.77E-13	NA
<u>Radionuclides</u>					
Americium-241	5.21E-01	NA	NA	NA	NA
Cesium-137	9.38E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	2.88E+00	NA	NA	NA	NA
Plutonium-239/240	3.62E+00	NA	NA	NA	NA
Technetium-99	2.29E+02	NA	NA	NA	NA
Thorium-228	3.53E-01	NA	NA	NA	NA
Thorium-230	1.22E+01	NA	NA	NA	NA
Thorium-232	3.92E-01	NA	NA	NA	NA
Uranium-234	2.51E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.29E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.84. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for
Surface Water at the Outfall 001 EU 18 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
			Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	NA		NA
<u>VOCs</u>			
Trichloroethene	NA		NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.85. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 18 Hot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.15E+04	2.01E-03	8.63E-03	2.50E-08	NA
Antimony	9.93E+00	1.74E-06	7.45E-06	2.16E-11	NA
Arsenic	4.68E+00	8.19E-07	2.11E-06	1.02E-11	NA
Barium	6.14E+01	1.07E-05	4.61E-05	1.34E-10	NA
Beryllium	6.04E-01	1.06E-07	4.53E-07	1.32E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.16E+01	3.78E-06	1.62E-05	4.70E-11	NA
Copper	4.90E+01	8.58E-06	3.68E-05	1.07E-10	NA
Iron	1.57E+04	2.75E-03	1.18E-02	3.42E-08	NA
Lead	ND	ND	ND	ND	NA
Manganese	8.47E+02	1.48E-04	6.35E-04	1.84E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.10E+01	3.68E-06	1.58E-05	4.57E-11	NA
Nickel	1.82E+02	3.19E-05	1.37E-04	3.96E-10	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.48E+00	4.34E-07	1.86E-06	5.40E-12	NA
Uranium	9.08E+01	1.59E-05	6.81E-05	1.98E-10	NA
Vanadium	2.27E+01	3.97E-06	1.70E-05	4.94E-11	NA
Zinc	8.67E+01	1.52E-05	6.50E-05	1.89E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	5.00E-01	8.75E-08	9.75E-07	1.09E-12	NA
Pyrene	5.00E-01	8.75E-08	7.50E-07	1.09E-12	NA
Total PCB (1)	1.50E+00	2.63E-07	3.15E-06	3.27E-12	NA
Total PAH (2)	1.10E+00	1.93E-07	2.15E-06	2.40E-12	NA
<u>Radionuclides</u>					
Americium-241	5.21E-01	1.63E+02	NA	2.03E-03	2.38E+00
Cesium-137	9.38E+00	2.94E+03	NA	3.65E-02	4.29E+01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	2.88E+00	9.01E+02	NA	1.12E-02	1.32E+01
Plutonium-239/240	3.62E+00	1.13E+03	NA	1.41E-02	1.65E+01
Technetium-99	2.29E+02	7.17E+04	NA	8.92E-01	1.05E+03
Thorium-228	3.53E-01	1.10E+02	NA	1.37E-03	1.61E+00
Thorium-230	1.22E+01	3.82E+03	NA	4.75E-02	5.58E+01
Thorium-232	3.92E-01	1.23E+02	NA	1.53E-03	1.79E+00
Uranium-234	2.51E+00	7.86E+02	NA	9.77E-03	1.15E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.29E+01	4.04E+03	NA	5.02E-02	5.90E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.86. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water at the Outfall 001 EU 18 Hot Spot

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.87. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 001 EU 18 Hot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.15E+04	5.62E-03	2.42E-02	7.02E-08	NA
Antimony	9.93E+00	4.86E-06	2.09E-05	6.06E-11	NA
Arsenic	4.68E+00	2.29E-06	5.91E-06	2.86E-11	NA
Barium	6.14E+01	3.00E-05	1.29E-04	3.75E-10	NA
Beryllium	6.04E-01	2.95E-07	1.27E-06	3.69E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.16E+01	1.06E-05	4.55E-05	1.32E-10	NA
Copper	4.90E+01	2.40E-05	1.03E-04	2.99E-10	NA
Iron	1.57E+04	7.68E-03	3.30E-02	9.59E-08	NA
Lead	ND	ND	ND	ND	NA
Manganese	8.47E+02	4.14E-04	1.78E-03	5.17E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.10E+01	1.03E-05	4.42E-05	1.28E-10	NA
Nickel	1.82E+02	8.90E-05	3.83E-04	1.11E-09	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.48E+00	1.21E-06	5.22E-06	1.51E-11	NA
Uranium	9.08E+01	4.44E-05	1.91E-04	5.54E-10	NA
Vanadium	2.27E+01	1.11E-05	4.78E-05	1.39E-10	NA
Zinc	8.67E+01	4.24E-05	1.83E-04	5.29E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	5.00E-01	2.45E-07	2.74E-06	3.05E-12	NA
Pyrene	5.00E-01	2.45E-07	2.11E-06	3.05E-12	NA
Total PCB (1)	1.50E+00	7.34E-07	8.84E-06	9.16E-12	NA
Total PAH (2)	1.10E+00	5.38E-07	6.02E-06	6.72E-12	NA
<u>Radionuclides</u>					
Americium-241	5.21E-01	NA	NA	NA	NA
Cesium-137	9.38E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	2.88E+00	NA	NA	NA	NA
Plutonium-239/240	3.62E+00	NA	NA	NA	NA
Technetium-99	2.29E+02	NA	NA	NA	NA
Thorium-228	3.53E-01	NA	NA	NA	NA
Thorium-230	1.22E+01	NA	NA	NA	NA
Thorium-232	3.92E-01	NA	NA	NA	NA
Uranium-234	2.51E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.29E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.88. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for
Surface Water at the Outfall 001 EU 18 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
			Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	NA		NA
<u>VOCs</u>			
Trichloroethene	NA		NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.89. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 18 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.15E+04	1.43E-02	6.38E-03	1.85E-08	NA
Antimony	9.93E+00	1.23E-05	5.51E-06	1.60E-11	NA
Arsenic	4.68E+00	5.80E-06	1.56E-06	7.54E-12	NA
Barium	6.14E+01	7.61E-05	3.41E-05	9.89E-11	NA
Beryllium	6.04E-01	7.49E-07	3.35E-07	9.73E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.16E+01	2.68E-05	1.20E-05	3.48E-11	NA
Copper	4.90E+01	6.08E-05	2.72E-05	7.89E-11	NA
Iron	1.57E+04	1.95E-02	8.71E-03	2.53E-08	NA
Lead	ND	ND	ND	ND	NA
Manganese	8.47E+02	1.05E-03	4.70E-04	1.36E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.10E+01	2.60E-05	1.17E-05	3.38E-11	NA
Nickel	1.82E+02	2.26E-04	1.01E-04	2.93E-10	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.48E+00	3.08E-06	1.38E-06	3.99E-12	NA
Uranium	9.08E+01	1.13E-04	5.04E-05	1.46E-10	NA
Vanadium	2.27E+01	2.81E-05	1.26E-05	3.66E-11	NA
Zinc	8.67E+01	1.08E-04	4.81E-05	1.40E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	5.00E-01	6.20E-07	7.22E-07	8.05E-13	NA
Pyrene	5.00E-01	6.20E-07	5.55E-07	8.05E-13	NA
Total PCB (1)	1.50E+00	1.86E-06	2.33E-06	2.42E-12	NA
Total PAH (2)	1.10E+00	1.36E-06	1.59E-06	1.77E-12	NA
<u>Radionuclides</u>					
Americium-241	5.21E-01	1.16E+03	NA	1.50E-03	1.76E+00
Cesium-137	9.38E+00	2.08E+04	NA	2.70E-02	3.17E+01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	2.88E+00	6.39E+03	NA	8.30E-03	9.73E+00
Plutonium-239/240	3.62E+00	8.04E+03	NA	1.04E-02	1.22E+01
Technetium-99	2.29E+02	5.08E+05	NA	6.60E-01	7.74E+02
Thorium-228	3.53E-01	7.84E+02	NA	1.02E-03	1.19E+00
Thorium-230	1.22E+01	2.71E+04	NA	3.52E-02	4.12E+01
Thorium-232	3.92E-01	8.70E+02	NA	1.13E-03	1.32E+00
Uranium-234	2.51E+00	5.57E+03	NA	7.23E-03	8.48E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.29E+01	2.86E+04	NA	3.72E-02	4.36E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.90. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 18 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	1.15E+04	4.00E-02	1.79E-02	5.19E-08	NA
Antimony	9.93E+00	3.46E-05	1.54E-05	4.49E-11	NA
Arsenic	4.68E+00	1.63E-05	4.37E-06	2.11E-11	NA
Barium	6.14E+01	2.14E-04	9.55E-05	2.77E-10	NA
Beryllium	6.04E-01	2.10E-06	9.39E-07	2.73E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	2.16E+01	7.52E-05	3.36E-05	9.76E-11	NA
Copper	4.90E+01	1.71E-04	7.62E-05	2.21E-10	NA
Iron	1.57E+04	5.46E-02	2.44E-02	7.09E-08	NA
Lead	ND	ND	ND	ND	NA
Manganese	8.47E+02	2.95E-03	1.32E-03	3.83E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	2.10E+01	7.31E-05	3.27E-05	9.49E-11	NA
Nickel	1.82E+02	6.33E-04	2.83E-04	8.22E-10	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.48E+00	8.63E-06	3.86E-06	1.12E-11	NA
Uranium	9.08E+01	3.16E-04	1.41E-04	4.10E-10	NA
Vanadium	2.27E+01	7.90E-05	3.53E-05	1.03E-10	NA
Zinc	8.67E+01	3.02E-04	1.35E-04	3.92E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	5.00E-01	1.74E-06	2.02E-06	2.26E-12	NA
Pyrene	5.00E-01	1.74E-06	1.56E-06	2.26E-12	NA
Total PCB (1)	1.50E+00	5.22E-06	6.53E-06	6.78E-12	NA
Total PAH (2)	1.10E+00	3.83E-06	4.45E-06	4.97E-12	NA
<u>Radionuclides</u>					
Americium-241	5.21E-01	NA	NA	NA	NA
Cesium-137	9.38E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	2.88E+00	NA	NA	NA	NA
Plutonium-239/240	3.62E+00	NA	NA	NA	NA
Technetium-99	2.29E+02	NA	NA	NA	NA
Thorium-228	3.53E-01	NA	NA	NA	NA
Thorium-230	1.22E+01	NA	NA	NA	NA
Thorium-232	3.92E-01	NA	NA	NA	NA
Uranium-234	2.51E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.29E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.91. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 20 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.04E+03	8.84E-05	3.80E-04	1.10E-09	NA
Antimony	9.74E+00	9.53E-08	4.10E-07	1.19E-12	NA
Arsenic	6.84E+00	6.69E-08	1.73E-07	8.33E-13	NA
Barium	6.92E+01	6.77E-07	2.91E-06	8.43E-12	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.14E+01	1.11E-07	4.79E-07	1.39E-12	NA
Copper	ND	ND	ND	ND	NA
Iron	1.12E+04	1.10E-04	4.71E-04	1.36E-09	NA
Lead	ND	ND	ND	ND	NA
Manganese	4.71E+02	4.61E-06	1.98E-05	5.74E-11	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	7.24E+00	7.08E-08	3.04E-07	8.82E-13	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.44E+00	2.39E-08	1.03E-07	2.97E-13	NA
Uranium	1.94E+01	1.90E-07	8.16E-07	2.36E-12	NA
Vanadium	1.96E+01	1.92E-07	8.24E-07	2.39E-12	NA
Zinc	2.97E+01	2.90E-07	1.25E-06	3.62E-12	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	4.79E-09	5.36E-08	5.97E-14	NA
Pyrene	4.90E-01	4.79E-09	4.12E-08	5.97E-14	NA
Total PCB (1)	7.10E-01	6.94E-09	8.36E-08	8.65E-14	NA
Total PAH (2)	1.10E+00	1.08E-08	1.20E-07	1.34E-13	NA
<u>Radionuclides</u>					
Americium-241	6.10E-02	1.07E+00	NA	1.33E-05	1.56E-02
Cesium-137	2.82E-01	4.94E+00	NA	6.15E-05	7.22E-02
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.21E-01	9.12E+00	NA	1.14E-04	1.33E-01
Plutonium-239/240	4.04E-01	7.07E+00	NA	8.81E-05	1.03E-01
Technetium-99	6.22E+00	1.09E+02	NA	1.36E-03	1.59E+00
Thorium-228	6.32E-01	1.11E+01	NA	1.38E-04	1.62E-01
Thorium-230	4.33E+00	7.58E+01	NA	9.44E-04	1.11E+00
Thorium-232	6.64E-01	1.16E+01	NA	1.45E-04	1.70E-01
Uranium-234	3.72E+00	6.51E+01	NA	8.11E-04	9.52E-01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.29E+00	7.51E+01	NA	9.36E-04	1.10E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.92. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker)
for Surface Water at the Outfall 001 EU 20 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
Inorganic Chemicals (Metals)		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
Organic Compounds		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
Radionuclides		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
VOCs		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.93. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil
at the Outfall 001 EU 20 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.04E+03	2.48E-04	1.07E-03	3.10E-09	NA
Antimony	9.74E+00	2.67E-07	1.15E-06	3.34E-12	NA
Arsenic	6.84E+00	1.87E-07	4.84E-07	2.34E-12	NA
Barium	6.92E+01	1.90E-06	8.17E-06	2.37E-11	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.14E+01	3.12E-07	1.35E-06	3.91E-12	NA
Copper	ND	ND	ND	ND	NA
Iron	1.12E+04	3.07E-04	1.32E-03	3.84E-09	NA
Lead	ND	ND	ND	ND	NA
Manganese	4.71E+02	1.29E-05	5.56E-05	1.61E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	7.24E+00	1.98E-07	8.54E-07	2.48E-12	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.44E+00	6.69E-08	2.88E-07	8.36E-13	NA
Uranium	1.94E+01	5.32E-07	2.29E-06	6.65E-12	NA
Vanadium	1.96E+01	5.37E-07	2.31E-06	6.72E-12	NA
Zinc	2.97E+01	8.14E-07	3.50E-06	1.02E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	1.34E-08	1.50E-07	1.68E-13	NA
Pyrene	4.90E-01	1.34E-08	1.16E-07	1.68E-13	NA
Total PCB (1)	7.10E-01	1.95E-08	2.35E-07	2.43E-13	NA
Total PAH (2)	1.10E+00	3.01E-08	3.37E-07	3.77E-13	NA
<u>Radionuclides</u>					
Americium-241	6.10E-02	NA	NA	NA	NA
Cesium-137	2.82E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.21E-01	NA	NA	NA	NA
Plutonium-239/240	4.04E-01	NA	NA	NA	NA
Technetium-99	6.22E+00	NA	NA	NA	NA
Thorium-228	6.32E-01	NA	NA	NA	NA
Thorium-230	4.33E+00	NA	NA	NA	NA
Thorium-232	6.64E-01	NA	NA	NA	NA
Uranium-234	3.72E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.29E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.94. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Surface Water at the Outfall 001 EU 20 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.96. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water at the Outfall 1 EU 020 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
Inorganic Chemicals (Metals)		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
Organic Compounds		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
Radionuclides		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
VOCs		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.97. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the Outfall 1 EU 020 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.04E+03	4.42E-03	1.90E-02	5.52E-08	NA
Antimony	9.74E+00	4.76E-06	2.05E-05	5.95E-11	NA
Arsenic	6.84E+00	3.34E-06	8.64E-06	4.18E-11	NA
Barium	6.92E+01	3.38E-05	1.46E-04	4.23E-10	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.14E+01	5.57E-06	2.40E-05	6.96E-11	NA
Copper	ND	ND	ND	ND	NA
Iron	1.12E+04	5.48E-03	2.36E-02	6.84E-08	NA
Lead	ND	ND	ND	ND	NA
Manganese	4.71E+02	2.30E-04	9.91E-04	2.88E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	7.24E+00	3.54E-06	1.52E-05	4.42E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.44E+00	1.19E-06	5.14E-06	1.49E-11	NA
Uranium	1.94E+01	9.49E-06	4.08E-05	1.18E-10	NA
Vanadium	1.96E+01	9.58E-06	4.13E-05	1.20E-10	NA
Zinc	2.97E+01	1.45E-05	6.25E-05	1.81E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	2.40E-07	2.68E-06	2.99E-12	NA
Pyrene	4.90E-01	2.40E-07	2.06E-06	2.99E-12	NA
Total PCB (1)	7.10E-01	3.47E-07	4.18E-06	4.34E-12	NA
Total PAH (2)	1.10E+00	5.38E-07	6.02E-06	6.72E-12	NA
<u>Radionuclides</u>					
Americium-241	6.10E-02	NA	NA	NA	NA
Cesium-137	2.82E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.21E-01	NA	NA	NA	NA
Plutonium-239/240	4.04E-01	NA	NA	NA	NA
Technetium-99	6.22E+00	NA	NA	NA	NA
Thorium-228	6.32E-01	NA	NA	NA	NA
Thorium-230	4.33E+00	NA	NA	NA	NA
Thorium-232	6.64E-01	NA	NA	NA	NA
Uranium-234	3.72E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.29E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.98. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water at the Outfall 1 EU 020 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.99. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 20 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.04E+03	1.12E-02	5.02E-03	1.46E-08	NA
Antimony	9.74E+00	1.21E-05	5.41E-06	1.57E-11	NA
Arsenic	6.84E+00	8.48E-06	2.28E-06	1.10E-11	NA
Barium	6.92E+01	8.58E-05	3.84E-05	1.11E-10	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.14E+01	1.41E-05	6.33E-06	1.84E-11	NA
Copper	ND	ND	ND	ND	NA
Iron	1.12E+04	1.39E-02	6.22E-03	1.80E-08	NA
Lead	ND	ND	ND	ND	NA
Manganese	4.71E+02	5.84E-04	2.61E-04	7.59E-10	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	7.24E+00	8.98E-06	4.02E-06	1.17E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.44E+00	3.03E-06	1.35E-06	3.93E-12	NA
Uranium	1.94E+01	2.41E-05	1.08E-05	3.12E-11	NA
Vanadium	1.96E+01	2.43E-05	1.09E-05	3.16E-11	NA
Zinc	2.97E+01	3.68E-05	1.65E-05	4.78E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	6.08E-07	7.07E-07	7.89E-13	NA
Pyrene	4.90E-01	6.08E-07	5.44E-07	7.89E-13	NA
Total PCB (1)	7.10E-01	8.80E-07	1.10E-06	1.14E-12	NA
Total PAH (2)	1.10E+00	1.36E-06	1.59E-06	1.77E-12	NA
<u>Radionuclides</u>					
Americium-241	6.10E-02	1.35E+02	NA	1.76E-04	2.06E-01
Cesium-137	2.82E-01	6.26E+02	NA	8.13E-04	9.53E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.21E-01	1.16E+03	NA	1.50E-03	1.76E+00
Plutonium-239/240	4.04E-01	8.97E+02	NA	1.16E-03	1.37E+00
Technetium-99	6.22E+00	1.38E+04	NA	1.79E-02	2.10E+01
Thorium-228	6.32E-01	1.40E+03	NA	1.82E-03	2.14E+00
Thorium-230	4.33E+00	9.61E+03	NA	1.25E-02	1.46E+01
Thorium-232	6.64E-01	1.47E+03	NA	1.91E-03	2.24E+00
Uranium-234	3.72E+00	8.26E+03	NA	1.07E-02	1.26E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.29E+00	9.52E+03	NA	1.24E-02	1.45E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.100. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil
at the Outfall 001 EU 20 Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.04E+03	3.15E-02	1.41E-02	4.08E-08	NA
Antimony	9.74E+00	3.39E-05	1.51E-05	4.40E-11	NA
Arsenic	6.84E+00	2.38E-05	6.38E-06	3.09E-11	NA
Barium	6.92E+01	2.41E-04	1.08E-04	3.13E-10	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.14E+01	3.97E-05	1.77E-05	5.15E-11	NA
Copper	ND	ND	ND	ND	NA
Iron	1.12E+04	3.90E-02	1.74E-02	5.06E-08	NA
Lead	ND	ND	ND	ND	NA
Manganese	4.71E+02	1.64E-03	7.32E-04	2.13E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	7.24E+00	2.52E-05	1.13E-05	3.27E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.44E+00	8.49E-06	3.79E-06	1.10E-11	NA
Uranium	1.94E+01	6.75E-05	3.02E-05	8.76E-11	NA
Vanadium	1.96E+01	6.82E-05	3.05E-05	8.85E-11	NA
Zinc	2.97E+01	1.03E-04	4.62E-05	1.34E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	1.71E-06	1.98E-06	2.21E-12	NA
Pyrene	4.90E-01	1.71E-06	1.52E-06	2.21E-12	NA
Total PCB (1)	7.10E-01	2.47E-06	3.09E-06	3.21E-12	NA
Total PAH (2)	1.10E+00	3.83E-06	4.45E-06	4.97E-12	NA
<u>Radionuclides</u>					
Americium-241	6.10E-02	NA	NA	NA	NA
Cesium-137	2.82E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.21E-01	NA	NA	NA	NA
Plutonium-239/240	4.04E-01	NA	NA	NA	NA
Technetium-99	6.22E+00	NA	NA	NA	NA
Thorium-228	6.32E-01	NA	NA	NA	NA
Thorium-230	4.33E+00	NA	NA	NA	NA
Thorium-232	6.64E-01	NA	NA	NA	NA
Uranium-234	3.72E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.29E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.101. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil Within the Fence, Excluding Hot Spots

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.17E+03	7.01E-05	3.01E-04	8.73E-10	NA
Antimony	1.10E+01	1.08E-07	4.63E-07	1.34E-12	NA
Arsenic	6.00E+00	5.87E-08	1.51E-07	7.31E-13	NA
Barium	7.00E+01	6.85E-07	2.94E-06	8.53E-12	NA
Beryllium	5.20E-01	5.09E-09	2.19E-08	6.33E-14	NA
Cadmium	3.60E+00	3.52E-08	3.03E-09	4.39E-13	NA
Chromium	1.70E+01	1.66E-07	7.15E-07	2.07E-12	NA
Copper	1.10E+01	1.08E-07	4.63E-07	1.34E-12	NA
Iron	1.07E+04	1.05E-04	4.51E-04	1.31E-09	NA
Lead	2.10E+01	2.05E-07	8.83E-07	2.56E-12	NA
Manganese	3.45E+02	3.37E-06	1.45E-05	4.20E-11	NA
Mercury	1.10E-01	1.08E-09	4.63E-09	1.34E-14	NA
Molybdenum	6.30E+00	6.16E-08	2.65E-07	7.67E-13	NA
Nickel	9.90E+00	9.68E-08	4.16E-07	1.21E-12	NA
Selenium	2.00E+01	1.96E-07	8.41E-07	2.44E-12	NA
Silver	2.60E+00	2.54E-08	1.09E-07	3.17E-13	NA
Uranium	2.08E+02	2.03E-06	8.75E-06	2.53E-11	NA
Vanadium	1.80E+01	1.76E-07	7.57E-07	2.19E-12	NA
Zinc	7.20E+01	7.04E-07	3.03E-06	8.77E-12	NA
<u>Organic Compounds</u>					
Fluoranthene	7.30E-01	7.14E-09	7.98E-08	8.89E-14	NA
Pyrene	6.80E-01	6.65E-09	5.72E-08	8.28E-14	NA
Total PCB (1)	6.30E-01	6.16E-09	7.42E-08	7.67E-14	NA
Total PAH (2)	1.00E+00	9.78E-09	1.09E-07	1.22E-13	NA
<u>Radionuclides</u>					
Americium-241	2.00E-01	3.50E+00	NA	4.36E-05	5.12E-02
Cesium-137	4.30E-01	7.53E+00	NA	9.38E-05	1.10E-01
Cobalt-60	1.40E-01	2.45E+00	NA	3.05E-05	3.58E-02
Neptunium-237	6.50E-02	1.14E+00	NA	1.42E-05	1.66E-02
Plutonium-239/240	5.00E-02	8.75E-01	NA	1.09E-05	1.28E-02
Technetium-99	5.90E+00	1.03E+02	NA	1.29E-03	1.51E+00
Thorium-228	3.20E-01	5.60E+00	NA	6.98E-05	8.19E-02
Thorium-230	7.70E-01	1.35E+01	NA	1.68E-04	1.97E-01
Thorium-232	3.30E-01	5.78E+00	NA	7.20E-05	8.45E-02
Uranium-234	1.40E+00	2.45E+01	NA	3.05E-04	3.58E-01
Uranium-235	5.90E+00	1.03E+02	NA	1.29E-03	1.51E+00
Uranium-238	3.70E+00	6.48E+01	NA	8.07E-04	9.47E-01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.102. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Surface Water
Within the Fence, Excluding Hot Spots**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.70E-04	9.49E-07
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	1.65E+03	NA
<u>VOCs</u>		
Trichloroethene	2.00E-03	6.88E-08

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.103. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil Within the Fence,
Excluding Hot Spots**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.17E+03	1.96E-04	8.46E-04	2.46E-09	NA
Antimony	1.10E+01	3.01E-07	1.30E-06	3.77E-12	NA
Arsenic	6.00E+00	1.64E-07	4.25E-07	2.06E-12	NA
Barium	7.00E+01	1.92E-06	8.26E-06	2.40E-11	NA
Beryllium	5.20E-01	1.42E-08	6.14E-08	1.78E-13	NA
Cadmium	3.60E+00	9.86E-08	8.50E-09	1.23E-12	NA
Chromium	1.70E+01	4.66E-07	2.01E-06	5.83E-12	NA
Copper	1.10E+01	3.01E-07	1.30E-06	3.77E-12	NA
Iron	1.07E+04	2.94E-04	1.26E-03	3.67E-09	NA
Lead	2.10E+01	5.75E-07	2.48E-06	7.20E-12	NA
Manganese	3.45E+02	9.45E-06	4.07E-05	1.18E-10	NA
Mercury	1.10E-01	3.01E-09	1.30E-08	3.77E-14	NA
Molybdenum	6.30E+00	1.73E-07	7.43E-07	2.16E-12	NA
Nickel	9.90E+00	2.71E-07	1.17E-06	3.39E-12	NA
Selenium	2.00E+01	5.48E-07	2.36E-06	6.85E-12	NA
Silver	2.60E+00	7.12E-08	3.07E-07	8.91E-13	NA
Uranium	2.08E+02	5.70E-06	2.45E-05	7.13E-11	NA
Vanadium	1.80E+01	4.93E-07	2.12E-06	6.17E-12	NA
Zinc	7.20E+01	1.97E-06	8.50E-06	2.47E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	7.30E-01	2.00E-08	2.24E-07	2.50E-13	NA
Pyrene	6.80E-01	1.86E-08	1.60E-07	2.33E-13	NA
Total PCB (1)	6.30E-01	1.73E-08	2.08E-07	2.16E-13	NA
Total PAH (2)	1.00E+00	2.74E-08	3.07E-07	3.43E-13	NA
<u>Radionuclides</u>					
Americium-241	2.00E-01	NA	NA	NA	NA
Cesium-137	4.30E-01	NA	NA	NA	NA
Cobalt-60	1.40E-01	NA	NA	NA	NA
Neptunium-237	6.50E-02	NA	NA	NA	NA
Plutonium-239/240	5.00E-02	NA	NA	NA	NA
Technetium-99	5.90E+00	NA	NA	NA	NA
Thorium-228	3.20E-01	NA	NA	NA	NA
Thorium-230	7.70E-01	NA	NA	NA	NA
Thorium-232	3.30E-01	NA	NA	NA	NA
Uranium-234	1.40E+00	NA	NA	NA	NA
Uranium-235	5.90E+00	NA	NA	NA	NA
Uranium-238	3.70E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.104. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Surface Water Within the Fence, Excluding Hot Spots

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.70E-04	2.66E-06
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	1.65E+03	NA
<u>VOCs</u>		
Trichloroethene	2.00E-03	1.92E-07

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.105. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil within the Fence, Excluding Hot Spots

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.17E+03	1.25E-03	5.38E-03	1.56E-08	NA
Antimony	1.10E+01	1.93E-06	8.25E-06	2.40E-11	NA
Arsenic	6.00E+00	1.05E-06	2.70E-06	1.31E-11	NA
Barium	7.00E+01	1.23E-05	5.25E-05	1.52E-10	NA
Beryllium	5.20E-01	9.10E-08	3.90E-07	1.13E-12	NA
Cadmium	3.60E+00	6.30E-07	5.40E-08	7.84E-12	NA
Chromium	1.70E+01	2.98E-06	1.28E-05	3.70E-11	NA
Copper	1.10E+01	1.93E-06	8.25E-06	2.40E-11	NA
Iron	1.07E+04	1.88E-03	8.04E-03	2.33E-08	NA
Lead	2.10E+01	3.68E-06	1.58E-05	4.57E-11	NA
Manganese	3.45E+02	6.04E-05	2.59E-04	7.51E-10	NA
Mercury	1.10E-01	1.93E-08	8.25E-08	2.40E-13	NA
Molybdenum	6.30E+00	1.10E-06	4.73E-06	1.37E-11	NA
Nickel	9.90E+00	1.73E-06	7.43E-06	2.16E-11	NA
Selenium	2.00E+01	3.50E-06	1.50E-05	4.36E-11	NA
Silver	2.60E+00	4.55E-07	1.95E-06	5.66E-12	NA
Uranium	2.08E+02	3.64E-05	1.56E-04	4.53E-10	NA
Vanadium	1.80E+01	3.15E-06	1.35E-05	3.92E-11	NA
Zinc	7.20E+01	1.26E-05	5.40E-05	1.57E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	7.30E-01	1.28E-07	1.42E-06	1.59E-12	NA
Pyrene	6.80E-01	1.19E-07	1.02E-06	1.48E-12	NA
Total PCB (1)	6.30E-01	1.10E-07	1.32E-06	1.37E-12	NA
Total PAH (2)	1.00E+00	1.75E-07	1.95E-06	2.18E-12	NA
<u>Radionuclides</u>					
Americium-241	2.00E-01	6.26E+01	NA	7.79E-04	9.14E-01
Cesium-137	4.30E-01	1.35E+02	NA	1.67E-03	1.97E+00
Cobalt-60	1.40E-01	4.38E+01	NA	5.45E-04	6.40E-01
Neptunium-237	6.50E-02	2.03E+01	NA	2.53E-04	2.97E-01
Plutonium-239/240	5.00E-02	1.57E+01	NA	1.95E-04	2.29E-01
Technetium-99	5.90E+00	1.85E+03	NA	2.30E-02	2.70E+01
Thorium-228	3.20E-01	1.00E+02	NA	1.25E-03	1.46E+00
Thorium-230	7.70E-01	2.41E+02	NA	3.00E-03	3.52E+00
Thorium-232	3.30E-01	1.03E+02	NA	1.29E-03	1.51E+00
Uranium-234	1.40E+00	4.38E+02	NA	5.45E-03	6.40E+00
Uranium-235	5.90E+00	1.85E+03	NA	2.30E-02	2.70E+01
Uranium-238	3.70E+00	1.16E+03	NA	1.44E-02	1.69E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.106. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water within the Fence, Excluding Hot Spots

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.70E-04	1.69E-05
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	1.65E+03	NA
<u>VOCs</u>		
Trichloroethene	2.00E-03	1.23E-06

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.107. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil within the Fence, Excluding Hot Spots

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.17E+03	3.51E-03	1.51E-02	4.38E-08	NA
Antimony	1.10E+01	5.38E-06	2.32E-05	6.72E-11	NA
Arsenic	6.00E+00	2.93E-06	7.58E-06	3.66E-11	NA
Barium	7.00E+01	3.42E-05	1.47E-04	4.27E-10	NA
Beryllium	5.20E-01	2.54E-07	1.09E-06	3.18E-12	NA
Cadmium	3.60E+00	1.76E-06	1.52E-07	2.20E-11	NA
Chromium	1.70E+01	8.31E-06	3.58E-05	1.04E-10	NA
Copper	1.10E+01	5.38E-06	2.32E-05	6.72E-11	NA
Iron	1.07E+04	5.24E-03	2.26E-02	6.55E-08	NA
Lead	2.10E+01	1.03E-05	4.42E-05	1.28E-10	NA
Manganese	3.45E+02	1.69E-04	7.26E-04	2.11E-09	NA
Mercury	1.10E-01	5.38E-08	2.32E-07	6.72E-13	NA
Molybdenum	6.30E+00	3.08E-06	1.33E-05	3.85E-11	NA
Nickel	9.90E+00	4.84E-06	2.08E-05	6.04E-11	NA
Selenium	2.00E+01	9.78E-06	4.21E-05	1.22E-10	NA
Silver	2.60E+00	1.27E-06	5.47E-06	1.59E-11	NA
Uranium	2.08E+02	1.02E-04	4.38E-04	1.27E-09	NA
Vanadium	1.80E+01	8.80E-06	3.79E-05	1.10E-10	NA
Zinc	7.20E+01	3.52E-05	1.52E-04	4.40E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	7.30E-01	3.57E-07	4.00E-06	4.46E-12	NA
Pyrene	6.80E-01	3.33E-07	2.86E-06	4.15E-12	NA
Total PCB (1)	6.30E-01	3.08E-07	3.71E-06	3.85E-12	NA
Total PAH (2)	1.00E+00	4.89E-07	5.47E-06	6.11E-12	NA
<u>Radionuclides</u>					
Americium-241	2.00E-01	NA	NA	NA	NA
Cesium-137	4.30E-01	NA	NA	NA	NA
Cobalt-60	1.40E-01	NA	NA	NA	NA
Neptunium-237	6.50E-02	NA	NA	NA	NA
Plutonium-239/240	5.00E-02	NA	NA	NA	NA
Technetium-99	5.90E+00	NA	NA	NA	NA
Thorium-228	3.20E-01	NA	NA	NA	NA
Thorium-230	7.70E-01	NA	NA	NA	NA
Thorium-232	3.30E-01	NA	NA	NA	NA
Uranium-234	1.40E+00	NA	NA	NA	NA
Uranium-235	5.90E+00	NA	NA	NA	NA
Uranium-238	3.70E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.95. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the Outfall 1 EU 020 Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	9.04E+03	1.58E-03	6.78E-03	1.97E-08	NA
Antimony	9.74E+00	1.70E-06	7.31E-06	2.12E-11	NA
Arsenic	6.84E+00	1.20E-06	3.08E-06	1.49E-11	NA
Barium	6.92E+01	1.21E-05	5.19E-05	1.51E-10	NA
Beryllium	ND	ND	ND	ND	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	1.14E+01	2.00E-06	8.55E-06	2.48E-11	NA
Copper	ND	ND	ND	ND	NA
Iron	1.12E+04	1.96E-03	8.40E-03	2.44E-08	NA
Lead	ND	ND	ND	ND	NA
Manganese	4.71E+02	8.24E-05	3.53E-04	1.03E-09	NA
Mercury	ND	ND	ND	ND	NA
Molybdenum	ND	ND	ND	ND	NA
Nickel	7.24E+00	1.27E-06	5.43E-06	1.58E-11	NA
Selenium	ND	ND	ND	ND	NA
Silver	2.44E+00	4.27E-07	1.83E-06	5.31E-12	NA
Uranium	1.94E+01	3.40E-06	1.46E-05	4.22E-11	NA
Vanadium	1.96E+01	3.43E-06	1.47E-05	4.27E-11	NA
Zinc	2.97E+01	5.20E-06	2.23E-05	6.47E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	4.90E-01	8.58E-08	9.56E-07	1.07E-12	NA
Pyrene	4.90E-01	8.58E-08	7.35E-07	1.07E-12	NA
Total PCB (1)	7.10E-01	1.24E-07	1.49E-06	1.55E-12	NA
Total PAH (2)	1.10E+00	1.93E-07	2.15E-06	2.40E-12	NA
<u>Radionuclides</u>					
Americium-241	6.10E-02	1.91E+01	NA	2.38E-04	2.79E-01
Cesium-137	2.82E-01	8.83E+01	NA	1.10E-03	1.29E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.21E-01	1.63E+02	NA	2.03E-03	2.38E+00
Plutonium-239/240	4.04E-01	1.26E+02	NA	1.57E-03	1.85E+00
Technetium-99	6.22E+00	1.95E+03	NA	2.42E-02	2.84E+01
Thorium-228	6.32E-01	1.98E+02	NA	2.46E-03	2.89E+00
Thorium-230	4.33E+00	1.36E+03	NA	1.69E-02	1.98E+01
Thorium-232	6.64E-01	2.08E+02	NA	2.59E-03	3.03E+00
Uranium-234	3.72E+00	1.16E+03	NA	1.45E-02	1.70E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.29E+00	1.34E+03	NA	1.67E-02	1.96E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.108. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water within the Fence, Excluding Hot Spots

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	4.70E-04	4.72E-05
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	1.65E+03	NA
<u>VOCs</u>		
Trichloroethene	2.00E-03	3.42E-06

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected a a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D.109. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil Within the Fence,
Excluding Hot Spots**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.17E+03	8.89E-03	3.98E-03	1.15E-08	NA
Antimony	1.10E+01	1.36E-05	6.11E-06	1.77E-11	NA
Arsenic	6.00E+00	7.44E-06	2.00E-06	9.66E-12	NA
Barium	7.00E+01	8.68E-05	3.89E-05	1.13E-10	NA
Beryllium	5.20E-01	6.45E-07	2.89E-07	8.38E-13	NA
Cadmium	3.60E+00	4.46E-06	4.00E-08	5.80E-12	NA
Chromium	1.70E+01	2.11E-05	9.44E-06	2.74E-11	NA
Copper	1.10E+01	1.36E-05	6.11E-06	1.77E-11	NA
Iron	1.07E+04	1.33E-02	5.95E-03	1.73E-08	NA
Lead	2.10E+01	2.60E-05	1.17E-05	3.38E-11	NA
Manganese	3.45E+02	4.28E-04	1.91E-04	5.56E-10	NA
Mercury	1.10E-01	1.36E-07	6.11E-08	1.77E-13	NA
Molybdenum	6.30E+00	7.81E-06	3.50E-06	1.01E-11	NA
Nickel	9.90E+00	1.23E-05	5.49E-06	1.59E-11	NA
Selenium	2.00E+01	2.48E-05	1.11E-05	3.22E-11	NA
Silver	2.60E+00	3.22E-06	1.44E-06	4.19E-12	NA
Uranium	2.08E+02	2.58E-04	1.15E-04	3.35E-10	NA
Vanadium	1.80E+01	2.23E-05	9.99E-06	2.90E-11	NA
Zinc	7.20E+01	8.93E-05	4.00E-05	1.16E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	7.30E-01	9.05E-07	1.05E-06	1.18E-12	NA
Pyrene	6.80E-01	8.43E-07	7.55E-07	1.10E-12	NA
Total PCB (1)	6.30E-01	7.81E-07	9.79E-07	1.01E-12	NA
Total PAH (2)	1.00E+00	1.24E-06	1.44E-06	1.61E-12	NA
<u>Radionuclides</u>					
Americium-241	2.50E-01	5.55E+02	NA	7.20E-04	8.45E-01
Cesium-137	4.50E-01	9.99E+02	NA	1.30E-03	1.52E+00
Cobalt-60	1.50E-01	3.33E+02	NA	4.32E-04	5.07E-01
Neptunium-237	1.10E-01	2.44E+02	NA	3.17E-04	3.72E-01
Plutonium-239/240	5.60E-02	1.24E+02	NA	1.61E-04	1.89E-01
Technetium-99	5.90E+00	1.31E+04	NA	1.70E-02	1.99E+01
Thorium-228	3.20E-01	7.10E+02	NA	9.22E-04	1.08E+00
Thorium-230	7.70E-01	1.71E+03	NA	2.22E-03	2.60E+00
Thorium-232	3.30E-01	7.33E+02	NA	9.51E-04	1.12E+00
Uranium-234	1.40E+00	3.11E+03	NA	4.03E-03	4.73E+00
Uranium-235	5.90E+00	1.31E+04	NA	1.70E-02	1.99E+01
Uranium-238	3.80E+00	8.44E+03	NA	1.10E-02	1.28E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.110. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil Within the Fence, Excluding Hot Spots

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	7.17E+03	2.50E-02	1.11E-02	3.24E-08	NA
Antimony	1.10E+01	3.83E-05	1.71E-05	4.97E-11	NA
Arsenic	6.00E+00	2.09E-05	5.60E-06	2.71E-11	NA
Barium	7.00E+01	2.44E-04	1.09E-04	3.16E-10	NA
Beryllium	5.20E-01	1.81E-06	8.09E-07	2.35E-12	NA
Cadmium	3.60E+00	1.25E-05	1.12E-07	1.63E-11	NA
Chromium	1.70E+01	5.92E-05	2.64E-05	7.68E-11	NA
Copper	1.10E+01	3.83E-05	1.71E-05	4.97E-11	NA
Iron	1.07E+04	3.73E-02	1.67E-02	4.84E-08	NA
Lead	2.10E+01	7.31E-05	3.27E-05	9.49E-11	NA
Manganese	3.45E+02	1.20E-03	5.36E-04	1.56E-09	NA
Mercury	1.10E-01	3.83E-07	1.71E-07	4.97E-13	NA
Molybdenum	6.30E+00	2.19E-05	9.80E-06	2.85E-11	NA
Nickel	9.90E+00	3.45E-05	1.54E-05	4.47E-11	NA
Selenium	2.00E+01	6.96E-05	3.11E-05	9.03E-11	NA
Silver	2.60E+00	9.05E-06	4.04E-06	1.17E-11	NA
Uranium	2.08E+02	7.24E-04	3.23E-04	9.40E-10	NA
Vanadium	1.80E+01	6.26E-05	2.80E-05	8.13E-11	NA
Zinc	7.20E+01	2.51E-04	1.12E-04	3.25E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	7.30E-01	2.54E-06	2.95E-06	3.30E-12	NA
Pyrene	6.80E-01	2.37E-06	2.11E-06	3.07E-12	NA
Total PCB (1)	6.30E-01	2.19E-06	2.74E-06	2.85E-12	NA
Total PAH (2)	1.00E+00	3.48E-06	4.04E-06	4.52E-12	NA
<u>Radionuclides</u>					
Americium-241	2.50E-01	NA	NA	NA	NA
Cesium-137	4.50E-01	NA	NA	NA	NA
Cobalt-60	1.50E-01	NA	NA	NA	NA
Neptunium-237	1.10E-01	NA	NA	NA	NA
Plutonium-239/240	5.60E-02	NA	NA	NA	NA
Technetium-99	5.90E+00	NA	NA	NA	NA
Thorium-228	3.20E-01	NA	NA	NA	NA
Thorium-230	7.70E-01	NA	NA	NA	NA
Thorium-232	3.30E-01	NA	NA	NA	NA
Uranium-234	1.40E+00	NA	NA	NA	NA
Uranium-235	5.90E+00	NA	NA	NA	NA
Uranium-238	3.80E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.111. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
Inorganic Chemicals (Metals)					
Aluminum	8.09E+03	7.92E-05	3.40E-04	9.86E-10	NA
Antimony	1.40E+01	1.37E-07	5.89E-07	1.71E-12	NA
Arsenic	5.80E+00	5.67E-08	1.46E-07	7.06E-13	NA
Barium	7.85E+01	7.67E-07	3.30E-06	9.56E-12	NA
Beryllium	6.50E-01	6.36E-09	2.73E-08	7.92E-14	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	8.28E-07	3.56E-06	1.03E-11	NA
Copper	1.23E+02	1.20E-06	5.17E-06	1.50E-11	NA
Iron	1.12E+04	1.09E-04	4.70E-04	1.36E-09	NA
Lead	2.10E+01	2.05E-07	8.83E-07	2.56E-12	NA
Manganese	4.17E+02	4.08E-06	1.75E-05	5.08E-11	NA
Mercury	6.00E-01	5.87E-09	2.52E-08	7.31E-14	NA
Molybdenum	8.30E+00	8.12E-08	3.49E-07	1.01E-12	NA
Nickel	9.40E+01	9.19E-07	3.95E-06	1.14E-11	NA
Selenium	2.00E+01	1.96E-07	8.41E-07	2.44E-12	NA
Silver	3.40E+00	3.33E-08	1.43E-07	4.14E-13	NA
Uranium	3.28E+02	3.21E-06	1.38E-05	4.00E-11	NA
Vanadium	2.01E+01	1.96E-07	8.44E-07	2.45E-12	NA
Zinc	1.02E+02	1.00E-06	4.30E-06	1.25E-11	NA
Organic Compounds					
Fluoranthene	6.80E-01	6.65E-09	7.43E-08	8.28E-14	NA
Pyrene	5.60E-01	5.48E-09	4.71E-08	6.82E-14	NA
Total PCB (1)	2.70E+00	2.64E-08	3.18E-07	3.29E-13	NA
Total PAH (2)	1.00E+00	9.78E-09	1.09E-07	1.22E-13	NA
Radionuclides					
Americium-241	4.39E+00	7.68E+01	NA	9.57E-04	1.12E+00
Cesium-137	4.16E+00	7.28E+01	NA	9.07E-04	1.06E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.30E+00	9.28E+01	NA	1.16E-03	1.36E+00
Plutonium-239/240	2.06E+01	3.61E+02	NA	4.49E-03	5.27E+00
Technetium-99	5.96E+02	1.04E+04	NA	1.30E-01	1.53E+02
Thorium-228	2.00E+00	3.50E+01	NA	4.36E-04	5.12E-01
Thorium-230	4.97E+02	8.70E+03	NA	1.08E-01	1.27E+02
Thorium-232	2.43E+00	4.25E+01	NA	5.30E-04	6.22E-01
Uranium-234	2.90E+01	5.08E+02	NA	6.32E-03	7.42E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	4.55E+02	NA	5.67E-03	6.66E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.112. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Surface Water at the NSDD Hot Spot

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
Inorganic Chemicals (Metals)		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
Organic Compounds		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
Radionuclides		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
VOCs		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.113. Chronic Daily Intakes (Noncarcinogenic-Current Industrial worker) for Soil at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
Inorganic Chemicals (Metals)					
Aluminum	8.09E+03	2.22E-04	9.55E-04	2.77E-09	NA
Antimony	1.40E+01	3.84E-07	1.65E-06	4.80E-12	NA
Arsenic	5.80E+00	1.59E-07	4.11E-07	1.99E-12	NA
Barium	7.85E+01	2.15E-06	9.26E-06	2.69E-11	NA
Beryllium	6.50E-01	1.78E-08	7.67E-08	2.23E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	2.32E-06	9.99E-06	2.90E-11	NA
Copper	1.23E+02	3.37E-06	1.45E-05	4.21E-11	NA
Iron	1.12E+04	3.06E-04	1.32E-03	3.83E-09	NA
Lead	2.10E+01	5.75E-07	2.48E-06	7.20E-12	NA
Manganese	4.17E+02	1.14E-05	4.92E-05	1.43E-10	NA
Mercury	6.00E-01	1.64E-08	7.08E-08	2.06E-13	NA
Molybdenum	8.30E+00	2.27E-07	9.79E-07	2.84E-12	NA
Nickel	9.40E+01	2.58E-06	1.11E-05	3.22E-11	NA
Selenium	2.00E+01	5.48E-07	2.36E-06	6.85E-12	NA
Silver	3.40E+00	9.32E-08	4.01E-07	1.17E-12	NA
Uranium	3.28E+02	8.99E-06	3.87E-05	1.12E-10	NA
Vanadium	2.01E+01	5.50E-07	2.37E-06	6.88E-12	NA
Zinc	1.02E+02	2.80E-06	1.21E-05	3.50E-11	NA
Organic Compounds					
Fluoranthene	6.80E-01	1.86E-08	2.09E-07	2.33E-13	NA
Pyrene	5.60E-01	1.53E-08	1.32E-07	1.92E-13	NA
Total PCB (1)	2.70E+00	7.40E-08	8.92E-07	9.25E-13	NA
Total PAH (2)	1.00E+00	2.74E-08	3.07E-07	3.43E-13	NA
Radionuclides					
Americium-241	4.39E+00	NA	NA	NA	NA
Cesium-137	4.16E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA	NA
Plutonium-239/240	2.06E+01	NA	NA	NA	NA
Technetium-99	5.96E+02	NA	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA	NA
Uranium-234	2.90E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.114. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Surface Water at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake
		Dermal Intake Hazard
Inorganic Chemicals (Metals)		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
Organic Compounds		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
Radionuclides		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
VOCs		
Trichloroethene	NS	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.115. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Soil at the NDSS Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	1.42E-03	6.07E-03	1.76E-08	NA
Antimony	1.40E+01	2.45E-06	1.05E-05	3.05E-11	NA
Arsenic	5.80E+00	1.02E-06	2.61E-06	1.26E-11	NA
Barium	7.85E+01	1.37E-05	5.88E-05	1.71E-10	NA
Beryllium	6.50E-01	1.14E-07	4.88E-07	1.42E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	1.48E-05	6.35E-05	1.84E-10	NA
Copper	1.23E+02	2.15E-05	9.23E-05	2.68E-10	NA
Iron	1.12E+04	1.96E-03	8.38E-03	2.43E-08	NA
Lead	2.10E+01	3.68E-06	1.58E-05	4.57E-11	NA
Manganese	4.17E+02	7.29E-05	3.13E-04	9.07E-10	NA
Mercury	6.00E-01	1.05E-07	4.50E-07	1.31E-12	NA
Molybdenum	8.30E+00	1.45E-06	6.23E-06	1.81E-11	NA
Nickel	9.40E+01	1.65E-05	7.05E-05	2.05E-10	NA
Selenium	2.00E+01	3.50E-06	1.50E-05	4.36E-11	NA
Silver	3.40E+00	5.95E-07	2.55E-06	7.40E-12	NA
Uranium	3.28E+02	5.74E-05	2.46E-04	7.14E-10	NA
Vanadium	2.01E+01	3.51E-06	1.51E-05	4.37E-11	NA
Zinc	1.02E+02	1.79E-05	7.67E-05	2.23E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	1.19E-07	1.33E-06	1.48E-12	NA
Pyrene	5.60E-01	9.80E-08	8.40E-07	1.22E-12	NA
Total PCB (1)	2.70E+00	4.73E-07	5.67E-06	5.88E-12	NA
Total PAH (2)	1.00E+00	1.75E-07	1.95E-06	2.18E-12	NA
<u>Radionuclides</u>					
Americium-241	4.39E+00	1.37E+03	NA	1.71E-02	2.01E+01
Cesium-137	4.16E+00	1.30E+03	NA	1.62E-02	1.90E+01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.30E+00	1.66E+03	NA	2.06E-02	2.42E+01
Plutonium-239/240	2.06E+01	6.45E+03	NA	8.02E-02	9.41E+01
Technetium-99	5.96E+02	1.87E+05	NA	2.32E+00	2.72E+03
Thorium-228	2.00E+00	6.26E+02	NA	7.79E-03	9.14E+00
Thorium-230	4.97E+02	1.56E+05	NA	1.94E+00	2.27E+03
Thorium-232	2.43E+00	7.61E+02	NA	9.47E-03	1.11E+01
Uranium-234	2.90E+01	9.08E+03	NA	1.13E-01	1.33E+02
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	8.14E+03	NA	1.01E-01	1.19E+02

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.116. Chronic Daily Intakes (Carcinogenic- Future Industrial Worker) for Surface Water at the NDSS Hot Spot

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.117. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Soil at the NDSS Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	3.96E-03	1.70E-02	4.94E-08	NA
Antimony	1.40E+01	6.85E-06	2.95E-05	8.55E-11	NA
Arsenic	5.80E+00	2.84E-06	7.33E-06	3.54E-11	NA
Barium	7.85E+01	3.84E-05	1.65E-04	4.79E-10	NA
Beryllium	6.50E-01	3.18E-07	1.37E-06	3.97E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	4.14E-05	1.78E-04	5.17E-10	NA
Copper	1.23E+02	6.01E-05	2.59E-04	7.51E-10	NA
Iron	1.12E+04	5.47E-03	2.35E-02	6.82E-08	NA
Lead	2.10E+01	1.03E-05	4.42E-05	1.28E-10	NA
Manganese	4.17E+02	2.04E-04	8.77E-04	2.54E-09	NA
Mercury	6.00E-01	2.93E-07	1.26E-06	3.66E-12	NA
Molybdenum	8.30E+00	4.06E-06	1.75E-05	5.07E-11	NA
Nickel	9.40E+01	4.60E-05	1.98E-04	5.74E-10	NA
Selenium	2.00E+01	9.78E-06	4.21E-05	1.22E-10	NA
Silver	3.40E+00	1.66E-06	7.16E-06	2.08E-11	NA
Uranium	3.28E+02	1.60E-04	6.90E-04	2.00E-09	NA
Vanadium	2.01E+01	9.82E-06	4.23E-05	1.23E-10	NA
Zinc	1.02E+02	5.00E-05	2.15E-04	6.24E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	3.33E-07	3.72E-06	4.15E-12	NA
Pyrene	5.60E-01	2.74E-07	2.36E-06	3.42E-12	NA
Total PCB (1)	2.70E+00	1.32E-06	1.59E-05	1.65E-11	NA
Total PAH (2)	1.00E+00	4.89E-07	5.47E-06	6.11E-12	NA
<u>Radionuclides</u>					
Americium-241	4.39E+00	NA	NA	NA	NA
Cesium-137	4.16E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA	NA
Plutonium-239/240	2.06E+01	NA	NA	NA	NA
Technetium-99	5.96E+02	NA	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA	NA
Uranium-234	2.90E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.118. Chronic Daily Intakes (Noncarcinogenic- Future Industrial Worker) for Surface Water at the NDSS Hot Spot

COPC	Exposure Route - Chronic Daily Intake	
	Exposure Point Concentration	Dermal Intake Hazard
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for metals and organic compounds are mg/L. Units for radionuclides are pCi/L.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.119. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker)
for Soil at the NSDD Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
Inorganic Chemicals (Metals)					
Aluminum	8.40E+03	1.04E-02	4.66E-03	1.35E-08	NA
Antimony	1.70E+01	2.11E-05	9.44E-06	2.74E-11	NA
Arsenic	5.40E+00	6.70E-06	1.80E-06	8.70E-12	NA
Barium	7.40E+01	9.18E-05	4.11E-05	1.19E-10	NA
Beryllium	5.20E-01	6.45E-07	2.89E-07	8.38E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	5.90E+01	7.32E-05	3.27E-05	9.50E-11	NA
Copper	5.20E+01	6.45E-05	2.89E-05	8.38E-11	NA
Iron	1.19E+04	1.48E-02	6.63E-03	1.92E-08	NA
Lead	2.10E+01	2.60E-05	1.17E-05	3.38E-11	NA
Manganese	3.58E+02	4.44E-04	1.99E-04	5.77E-10	NA
Mercury	4.20E-01	5.21E-07	2.33E-07	6.76E-13	NA
Molybdenum	8.30E+00	1.03E-05	4.61E-06	1.34E-11	NA
Nickel	6.50E+01	8.06E-05	3.61E-05	1.05E-10	NA
Selenium	2.00E+01	2.48E-05	1.11E-05	3.22E-11	NA
Silver	3.40E+00	4.22E-06	1.89E-06	5.48E-12	NA
Uranium	3.28E+02	4.07E-04	1.82E-04	5.28E-10	NA
Vanadium	2.40E+01	2.98E-05	1.33E-05	3.87E-11	NA
Zinc	7.50E+01	9.30E-05	4.16E-05	1.21E-10	NA
Organic Compounds					
Fluoranthene	6.80E-01	8.43E-07	9.81E-07	1.10E-12	NA
Pyrene	5.30E-01	6.57E-07	5.88E-07	8.54E-13	NA
Total PCB (1)	2.70E+00	3.35E-06	4.20E-06	4.35E-12	NA
Total PAH (2)	6.60E-01	8.18E-07	9.52E-07	1.06E-12	NA
Radionuclides					
Americium-241	3.70E+00	8.21E+03	NA	1.07E-02	1.25E+01
Cesium-137	3.70E+00	8.21E+03	NA	1.07E-02	1.25E+01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.30E+00	1.18E+04	NA	1.53E-02	1.79E+01
Plutonium-239/240	2.10E+01	4.66E+04	NA	6.05E-02	7.10E+01
Technetium-99	2.40E+02	5.33E+05	NA	6.92E-01	8.11E+02
Thorium-228	1.10E+00	2.44E+03	NA	3.17E-03	3.72E+00
Thorium-230	4.97E+02	1.10E+06	NA	1.43E+00	1.68E+03
Thorium-232	1.40E+00	3.11E+03	NA	4.03E-03	4.73E+00
Uranium-234	1.40E+01	3.11E+04	NA	4.03E-02	4.73E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.10E+01	2.44E+04	NA	3.17E-02	3.72E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.120. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
Inorganic Chemicals (Metals)					
Aluminum	8.40E+03	2.92E-02	1.31E-02	3.79E-08	NA
Antimony	1.70E+01	5.92E-05	2.64E-05	7.68E-11	NA
Arsenic	5.40E+00	1.88E-05	5.04E-06	2.44E-11	NA
Barium	7.40E+01	2.58E-04	1.15E-04	3.34E-10	NA
Beryllium	5.20E-01	1.81E-06	8.09E-07	2.35E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	5.90E+01	2.05E-04	9.17E-05	2.67E-10	NA
Copper	5.20E+01	1.81E-04	8.09E-05	2.35E-10	NA
Iron	1.19E+04	4.15E-02	1.86E-02	5.39E-08	NA
Lead	2.10E+01	7.31E-05	3.27E-05	9.49E-11	NA
Manganese	3.58E+02	1.25E-03	5.57E-04	1.62E-09	NA
Mercury	4.20E-01	1.46E-06	6.53E-07	1.90E-12	NA
Molybdenum	8.30E+00	2.89E-05	1.29E-05	3.75E-11	NA
Nickel	6.50E+01	2.26E-04	1.01E-04	2.94E-10	NA
Selenium	2.00E+01	6.96E-05	3.11E-05	9.03E-11	NA
Silver	3.40E+00	1.18E-05	5.29E-06	1.54E-11	NA
Uranium	3.28E+02	1.14E-03	5.10E-04	1.48E-09	NA
Vanadium	2.40E+01	8.35E-05	3.73E-05	1.08E-10	NA
Zinc	7.50E+01	2.61E-04	1.17E-04	3.39E-10	NA
Organic Compounds					
Fluoranthene	6.80E-01	2.37E-06	2.75E-06	3.07E-12	NA
Pyrene	5.30E-01	1.84E-06	1.65E-06	2.39E-12	NA
Total PCB (1)	2.70E+00	9.40E-06	1.18E-05	1.22E-11	NA
Total PAH (2)	6.60E-01	2.30E-06	2.67E-06	2.98E-12	NA
Radionuclides					
Americium-241	3.70E+00	NA	NA	NA	NA
Cesium-137	3.70E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA	NA
Plutonium-239/240	2.10E+01	NA	NA	NA	NA
Technetium-99	2.40E+02	NA	NA	NA	NA
Thorium-228	1.10E+00	NA	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA	NA
Thorium-232	1.40E+00	NA	NA	NA	NA
Uranium-234	1.40E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	1.10E+01	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.121. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User-Adult) for Sediment at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	2.16E-04	1.81E-03	4.03E-09	NA
Antimony	1.40E+01	3.74E-07	3.14E-06	6.98E-12	NA
Arsenic	5.80E+00	1.55E-07	7.80E-07	2.89E-12	NA
Barium	7.85E+01	2.09E-06	1.76E-05	3.91E-11	NA
Beryllium	6.50E-01	1.74E-08	1.46E-07	3.24E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	2.26E-06	1.90E-05	4.22E-11	NA
Copper	1.23E+02	3.28E-06	2.76E-05	6.13E-11	NA
Iron	1.12E+04	2.98E-04	2.50E-03	5.57E-09	NA
Lead	2.10E+01	5.61E-07	4.70E-06	1.05E-11	NA
Manganese	4.17E+02	1.11E-05	9.33E-05	2.08E-10	NA
Mercury	6.00E-01	ND	ND	2.99E-13	NA
Molybdenum	8.30E+00	2.22E-07	1.86E-06	4.14E-12	NA
Nickel	9.40E+01	2.51E-06	2.11E-05	4.69E-11	NA
Selenium	2.00E+01	ND	ND	9.97E-12	NA
Silver	3.40E+00	9.08E-08	7.62E-07	1.69E-12	NA
Uranium	3.28E+02	8.76E-06	7.35E-05	1.63E-10	NA
Vanadium	2.01E+01	5.36E-07	4.50E-06	1.00E-11	NA
Zinc	1.02E+02	2.73E-06	2.29E-05	5.10E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	1.82E-08	3.96E-07	3.39E-13	NA
Pyrene	5.60E-01	1.50E-08	2.51E-07	2.79E-13	NA
Total PCB (1)	2.70E+00	7.21E-08	1.69E-06	1.35E-12	NA
Total PAH (2)	1.00E+00	2.67E-08	5.82E-07	4.98E-13	NA
<u>Radionuclides</u>					
Americium-241	4.39E+00	ND	NA	ND	ND
Cesium-137	4.16E+00	1.98E+02	NA	3.71E-03	4.33E+00
Cobalt-60	ND	ND	NA	NA	ND
Neptunium-237	5.30E+00	2.53E+02	NA	4.72E-03	5.51E+00
Plutonium-239/240	2.06E+01	9.83E+02	NA	1.84E-02	2.14E+01
Technetium-99	5.96E+02	2.84E+04	NA	5.31E-01	6.20E+02
Thorium-228	2.00E+00	9.54E+01	NA	1.78E-03	2.08E+00
Thorium-230	4.97E+02	2.37E+04	NA	4.43E-01	5.17E+02
Thorium-232	2.43E+00	1.16E+02	NA	2.17E-03	2.53E+00
Uranium-234	2.90E+01	1.38E+03	NA	2.58E-02	3.02E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	1.24E+03	NA	2.32E-02	2.70E+01

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.122. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User-Teen) for Sediment at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake	Dermal Intake	Inhalation Intake	External Exposure
		Hazard	Hazard	Hazard	Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	2.58E-04	4.57E-03	4.82E-09	NA
Antimony	1.40E+01	4.47E-07	7.91E-06	8.33E-12	NA
Arsenic	5.80E+00	1.85E-07	1.97E-06	3.45E-12	NA
Barium	7.85E+01	2.50E-06	4.43E-05	4.67E-11	NA
Beryllium	6.50E-01	2.07E-08	3.67E-07	3.87E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	2.70E-06	4.79E-05	5.04E-11	NA
Copper	1.23E+02	3.92E-06	6.95E-05	7.32E-11	NA
Iron	1.12E+04	3.57E-04	6.31E-03	6.65E-09	NA
Lead	2.10E+01	6.70E-07	1.19E-05	1.25E-11	NA
Manganese	4.17E+02	1.33E-05	2.35E-04	2.48E-10	NA
Mercury	6.00E-01	ND	ND	ND	NA
Molybdenum	8.30E+00	2.65E-07	4.69E-06	4.94E-12	NA
Nickel	9.40E+01	3.00E-06	5.31E-05	5.59E-11	NA
Selenium	2.00E+01	ND	ND	ND	NA
Silver	3.40E+00	1.08E-07	1.92E-06	2.02E-12	NA
Uranium	3.28E+02	1.05E-05	1.85E-04	1.95E-10	NA
Vanadium	2.01E+01	6.40E-07	1.13E-05	1.19E-11	NA
Zinc	1.02E+02	3.26E-06	5.78E-05	6.08E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	2.17E-08	9.99E-07	4.05E-13	NA
Pyrene	5.60E-01	1.79E-08	6.33E-07	3.33E-13	NA
Total PCB (1)	2.70E+00	8.61E-08	4.27E-06	1.61E-12	NA
Total PAH (2)	1.00E+00	3.19E-08	1.47E-06	5.95E-13	NA
<u>Radionuclides</u>					
Americium-241	4.39E+00	ND	NA	ND	ND
Cesium-137	4.16E+00	1.46E+02	NA	2.72E-03	3.19E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.30E+00	1.86E+02	NA	3.47E-03	4.07E+00
Plutonium-239/240	2.06E+01	7.21E+02	NA	1.35E-02	1.58E+01
Technetium-99	5.96E+02	2.09E+04	NA	3.90E-01	4.57E+02
Thorium-228	2.00E+00	7.00E+01	NA	1.31E-03	1.53E+00
Thorium-230	4.97E+02	1.74E+04	NA	3.25E-01	3.81E+02
Thorium-232	2.43E+00	8.51E+01	NA	1.59E-03	1.86E+00
Uranium-234	2.90E+01	1.02E+03	NA	1.90E-02	2.22E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	9.10E+02	NA	1.70E-02	1.99E+01

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.123. Chronic Daily Intakes (Carcinogenic- Current Recreational User- Child) for Sediment at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	7.29E-05	4.09E-05	6.81E-11	NA
Antimony	1.40E+01	1.26E-07	7.07E-08	1.18E-13	NA
Arsenic	5.80E+00	5.22E-08	1.76E-08	4.88E-14	NA
Barium	7.85E+01	7.06E-07	3.96E-07	6.60E-13	NA
Beryllium	6.50E-01	5.85E-09	3.28E-09	5.47E-15	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	7.62E-07	4.28E-07	7.12E-13	NA
Copper	1.23E+02	1.11E-06	6.21E-07	1.03E-12	NA
Iron	1.12E+04	1.01E-04	5.64E-05	9.40E-11	NA
Lead	2.10E+01	1.89E-07	1.06E-07	1.77E-13	NA
Manganese	4.17E+02	3.75E-06	2.10E-06	3.50E-12	NA
Mercury	6.00E-01	ND	ND	ND	NA
Molybdenum	8.30E+00	7.47E-08	4.19E-08	6.98E-14	NA
Nickel	9.40E+01	8.46E-07	4.75E-07	7.91E-13	NA
Selenium	2.00E+01	ND	ND	ND	NA
Silver	3.40E+00	3.06E-08	1.72E-08	2.86E-14	NA
Uranium	3.28E+02	2.95E-06	1.66E-06	2.76E-12	NA
Vanadium	2.01E+01	1.81E-07	1.01E-07	1.69E-13	NA
Zinc	1.02E+02	9.20E-07	5.16E-07	8.60E-13	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	6.12E-09	8.93E-09	5.72E-15	NA
Pyrene	5.60E-01	5.04E-09	5.66E-09	4.71E-15	NA
Total PCB (1)	2.70E+00	2.43E-08	3.82E-08	2.27E-14	NA
Total PAH (2)	1.00E+00	9.00E-11	1.31E-08	8.41E-15	NA
<u>Radionuclides</u>					
Americium-241	4.39E+00	ND	NA	ND	ND
Cesium-137	4.16E+00	1.39E+01	NA	1.30E-05	1.90E-02
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.30E+00	1.76E+01	NA	1.65E-05	2.42E-02
Plutonium-239/240	2.06E+01	6.86E+01	NA	6.42E-05	9.41E-02
Technetium-99	5.96E+02	1.98E+03	NA	1.86E-03	2.72E+00
Thorium-228	2.00E+00	6.66E+00	NA	6.23E-06	9.14E-03
Thorium-230	4.97E+02	1.66E+03	NA	1.55E-03	2.27E+00
Thorium-232	2.43E+00	8.10E+00	NA	7.57E-06	1.11E-02
Uranium-234	2.90E+01	9.66E+01	NA	9.03E-05	1.33E-01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	8.66E+01	NA	8.10E-05	1.19E-01

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC. Therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.124. Chronic Daily Intakes (Carcinogenic-Future Recreational User-Child) for Sediment at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	7.65E-04	3.42E-03	7.14E-09	NA
Antimony	1.40E+01	1.32E-06	5.92E-06	1.23E-11	NA
Arsenic	5.80E+00	5.48E-07	1.47E-06	5.11E-12	NA
Barium	7.85E+01	7.41E-06	3.32E-05	6.92E-11	NA
Beryllium	6.50E-01	6.14E-08	2.75E-07	5.73E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	8.00E-06	3.58E-05	7.47E-11	NA
Copper	1.23E+02	1.16E-05	5.20E-05	1.08E-10	NA
Iron	1.12E+04	1.06E-03	4.73E-03	9.85E-09	NA
Lead	2.10E+01	1.98E-06	8.88E-06	1.85E-11	NA
Manganese	4.17E+02	3.94E-05	1.76E-04	3.67E-10	NA
Mercury	6.00E-01	ND	ND	ND	NA
Molybdenum	8.30E+00	7.84E-07	3.51E-06	7.32E-12	NA
Nickel	9.40E+01	8.88E-06	3.98E-05	8.29E-11	NA
Selenium	2.00E+01	ND	ND	ND	NA
Silver	3.40E+00	3.21E-07	1.44E-06	3.00E-12	NA
Uranium	3.28E+02	3.10E-05	1.39E-04	2.89E-10	NA
Vanadium	2.01E+01	1.90E-06	8.49E-06	1.77E-11	NA
Zinc	1.02E+02	9.66E-06	4.33E-05	9.02E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	6.43E-08	7.48E-07	6.00E-13	NA
Pyrene	5.60E-01	5.29E-08	4.74E-07	4.94E-13	NA
Total PCB (1)	2.70E+00	2.55E-07	3.20E-06	2.38E-12	NA
Total PAH (2)	1.00E+00	9.45E-08	1.10E-06	8.82E-13	NA
<u>Radionuclides</u>					
Americium-241	4.39E+00	ND	NA	ND	ND
Cesium-137	4.16E+00	1.46E+02	NA	1.36E-03	1.60E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	5.30E+00	1.86E+02	NA	1.73E-03	2.04E+00
Plutonium-239/240	2.06E+01	7.21E+02	NA	6.74E-03	7.91E+00
Technetium-99	5.96E+02	2.09E+04	NA	1.95E-01	2.29E+02
Thorium-228	2.00E+00	7.00E+01	NA	6.54E-04	7.68E-01
Thorium-230	4.97E+02	1.74E+04	NA	1.63E-01	1.91E+02
Thorium-232	2.43E+00	8.51E+01	NA	7.95E-04	9.34E-01
Uranium-234	2.90E+01	1.02E+03	NA	9.49E-03	1.11E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	9.10E+02	NA	8.50E-03	9.98E+00

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.125. Chronic Daily Intakes (Carcinogenic- Current Recreational User - Child) for Wading in Surface Water at the NSDD Hot Spot

COPC	Exposure Point Concentration	Dermal Intake Hazard
		Current Child
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for radionuclides at pCi/L. All others are mg/L.

NA: Indicate that the exposure route is not appropriate to the COPC. Therefore, the CDI was not calculated.

ND: Not detected.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.126. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User) for Wading in Surface Water at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Dermal Intake	Dermal Intake	Dermal Intake
		Hazard	Hazard	Hazard
		Adult	Teen	Future Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	NS	NA	NA	NA
Antimony	NS	NA	NA	NA
Arsenic	NS	NA	NA	NA
Barium	NS	NA	NA	NA
Beryllium	NS	NA	NA	NA
Cadmium	NS	NA	NA	NA
Chromium	NS	NA	NA	NA
Copper	NS	NA	NA	NA
Iron	NS	NA	NA	NA
Lead	NS	NA	NA	NA
Manganese	NS	NA	NA	NA
Mercury	NS	NA	NA	NA
Molybdenum	NS	NA	NA	NA
Nickel	NS	NA	NA	NA
Selenium	NS	NA	NA	NA
Silver	NS	NA	NA	NA
Uranium	NS	NA	NA	NA
Vanadium	NS	NA	NA	NA
Zinc	NS	NA	NA	NA
<u>Organic Compounds</u>				
Fluoranthene	NS	NA	NA	NA
Pyrene	NS	NA	NA	NA
Total PCB (1)	NA	NA	NA	NA
Total PAH (2)	NS	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	NS	NA	NA	NA
Cesium-137	NS	NA	NA	NA
Cobalt-60	NS	NA	NA	NA
Neptunium-237	NS	NA	NA	NA
Plutonium-239/240	NS	NA	NA	NA
Technetium-99	NS	NA	NA	NA
Thorium-228	NS	NA	NA	NA
Thorium-230	NS	NA	NA	NA
Thorium-232	NS	NA	NA	NA
Uranium-234	NS	NA	NA	NA
Uranium-235	NS	NA	NA	NA
Uranium-238	NA	NA	NA	NA
<u>VOCs</u>				
Trichloroethene	NA	NA	NA	NA

Units for radionuclides at pCi/L. All others are mg/L.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.127. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User) for
Ingestion of Deer at the NSDD Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	8.09E+03	NA	NA	NA
Antimony	1.40E+01	1.21E-10	1.07E-10	3.48E-11
Arsenic	5.80E+00	NA	NA	NA
Barium	7.85E+01	3.92E-09	3.46E-09	1.13E-09
Beryllium	6.50E-01	NA	NA	NA
Cadmium	ND	ND	ND	NA
Chromium	8.47E+01	1.59E-07	1.41E-07	4.59E-08
Copper	1.23E+02	8.00E-07	7.07E-07	2.30E-07
Iron	1.12E+04	4.22E-05	3.73E-05	1.21E-05
Lead	2.10E+01	2.04E-09	1.80E-09	5.87E-10
Manganese	4.17E+02	1.34E-07	1.18E-07	3.85E-08
Mercury	6.00E-01	NA	NA	NA
Molybdenum	8.30E+00	3.75E-09	3.32E-09	1.08E-09
Nickel	9.40E+01	1.43E-07	1.26E-07	4.11E-08
Selenium	2.00E+01	NA	NA	NA
Silver	3.40E+00	8.75E-09	7.73E-09	2.52E-09
Uranium	3.28E+02	NA	NA	NA
Vanadium	2.01E+01	NA	NA	NA
Zinc	1.02E+02	8.70E-06	7.69E-06	2.50E-06
<u>Organic Compounds</u>				
Fluoranthene	6.80E-01	NA	NA	NA
Pyrene	5.60E-01	NA	NA	NA
Total PCB (1)	2.70E+00	NA	NA	NA
Total PAH (2)	1.00E+00	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	4.39E+00	5.73E-02	3.12E-02	3.42E-03
Cesium-137	4.16E+00	9.51E+01	5.18E+01	5.68E+00
Cobalt-60	ND	ND	ND	ND
Neptunium-237	5.30E+00	NA	NA	NA
Plutonium-239/240	2.06E+01	6.70E-02	3.65E-02	4.00E-03
Technetium-99	5.96E+02	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA
Uranium-234	2.90E+01	3.07E+00	1.67E+00	1.83E-01
Uranium-235	NA	NA	NA	NA
Uranium-238	2.60E+01	2.75E+00	1.50E+00	1.64E-01

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.128. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User) for
Ingestion of Quail at the NSDD Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	8.09E+03	1.22E-07	5.52E-08	3.21E-08
Antimony	1.40E+01	8.25E-12	3.75E-12	2.18E-12
Arsenic	5.80E+00	1.32E-10	5.98E-11	3.48E-11
Barium	7.85E+01	8.94E-09	4.06E-09	2.36E-09
Beryllium	6.50E-01	7.99E-12	3.63E-12	2.11E-12
Cadmium	ND	ND	ND	NA
Chromium	8.47E+01	8.46E-09	3.84E-09	2.23E-09
Copper	1.23E+02	1.94E-06	8.82E-07	5.12E-07
Iron	1.12E+04	1.14E-04	5.18E-05	3.01E-05
Lead	2.10E+01	1.04E-10	4.74E-11	2.76E-11
Manganese	4.17E+02	5.94E-07	2.70E-07	1.57E-07
Mercury	6.00E-01	6.67E-10	3.03E-10	1.76E-10
Molybdenum	8.30E+00	1.71E-07	7.78E-08	4.52E-08
Nickel	9.40E+01	NA	NA	NA
Selenium	2.00E+01	4.21E-06	1.91E-06	1.11E-06
Silver	3.40E+00	2.52E-07	1.14E-07	6.65E-08
Uranium	3.28E+02	NA	NA	NA
Vanadium	2.01E+01	NA	NA	NA
Zinc	1.02E+02	2.63E-05	1.19E-05	6.95E-06
<u>Organic Compounds</u>				
Fluoranthene	6.80E-01	NA	NA	NA
Pyrene	5.60E-01	NA	NA	NA
Total PCB (1)	2.70E+00	NA	NA	NA
Total PAH (2)	1.00E+00	1.74E-08	7.88E-09	4.58E-09
<u>Radionuclides</u>				
Americium-241	4.39E+00	1.36E-01	3.79E-02	7.40E-03
Cesium-137	4.16E+00	9.48E+02	2.65E+02	5.16E+01
Cobalt-60	ND	ND	ND	ND
Neptunium-237	5.30E+00	NA	NA	NA
Plutonium-239/240	2.06E+01	2.09E+00	5.83E-01	1.14E-01
Technetium-99	5.96E+02	NA	NA	NA
Thorium-228	2.00E+00	4.90E-03	1.37E-03	2.67E-04
Thorium-230	4.97E+02	1.22E+00	3.40E-01	6.63E-02
Thorium-232	2.43E+00	5.96E-03	1.66E-03	3.24E-04
Uranium-234	2.90E+01	5.55E+02	1.55E+02	3.02E+01
Uranium-235	NA	NA	NA	NA
Uranium-238	2.60E+01	4.98E+02	1.39E+02	2.71E+01

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.129. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User) for
Ingestion of Rabbit at the NSDD Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	8.09E+03	NA	NA	NA
Antimony	1.40E+01	1.32E-09	5.82E-10	3.48E-10
Arsenic	5.80E+00	NA	NA	NA
Barium	7.85E+01	4.21E-08	1.86E-08	1.11E-08
Beryllium	6.50E-01	NA	NA	NA
Cadmium	ND	ND	ND	NA
Chromium	8.47E+01	1.75E-06	7.70E-07	4.60E-07
Copper	1.23E+02	8.00E-06	3.53E-06	2.11E-06
Iron	1.12E+04	4.69E-04	2.07E-04	1.24E-04
Lead	2.10E+01	2.20E-08	9.69E-09	5.79E-09
Manganese	4.17E+02	1.34E-06	5.92E-07	3.54E-07
Mercury	6.00E-01	NA	NA	NA
Molybdenum	8.30E+00	3.84E-08	1.69E-08	1.01E-08
Nickel	9.40E+01	1.51E-06	6.63E-07	3.96E-07
Selenium	2.00E+01	NA	NA	NA
Silver	3.40E+00	8.70E-08	3.84E-08	2.29E-08
Uranium	3.28E+02	NA	NA	NA
Vanadium	2.01E+01	NA	NA	NA
Zinc	1.02E+02	8.66E-05	3.82E-05	2.28E-05
<u>Organic Compounds</u>				
Fluoranthene	6.80E-01	NA	NA	NA
Pyrene	5.60E-01	NA	NA	NA
Total PCB (1)	2.70E+00	NA	NA	NA
Total PAH (2)	1.00E+00	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	4.39E+00	ND	ND	ND
Cesium-137	4.16E+00	1.02E+03	2.77E+02	5.58E+01
Cobalt-60	ND	ND	ND	ND
Neptunium-237	5.30E+00	NA	NA	NA
Plutonium-239/240	2.06E+01	7.50E-01	2.03E-01	4.09E-02
Technetium-99	5.96E+02	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA
Uranium-234	2.90E+01	3.40E+01	9.20E+00	1.85E+00
Uranium-235	NA	NA	NA	NA
Uranium-238	2.60E+01	3.04E+01	8.25E+00	1.66E+00

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.130. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User-Adult) for Sediment at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	6.86E-04	5.75E-03	1.28E-08	NA
Antimony	1.40E+01	1.19E-06	9.94E-06	2.22E-11	NA
Arsenic	5.80E+00	4.92E-07	2.47E-06	9.20E-12	NA
Barium	7.85E+01	6.65E-06	5.57E-05	1.24E-10	NA
Beryllium	6.50E-01	5.51E-08	4.62E-07	1.03E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	7.18E-06	6.01E-05	1.34E-10	NA
Copper	1.23E+02	1.04E-05	8.73E-05	1.95E-10	NA
Iron	1.12E+04	9.48E-04	7.94E-03	1.77E-08	NA
Lead	2.10E+01	1.78E-06	1.49E-05	3.33E-11	NA
Manganese	4.17E+02	3.53E-05	2.96E-04	6.61E-10	NA
Mercury	6.00E-01	ND	ND	ND	NA
Molybdenum	8.30E+00	7.04E-07	5.89E-06	1.32E-11	NA
Nickel	9.40E+01	7.97E-06	6.67E-05	1.49E-10	NA
Selenium	2.00E+01	ND	ND	ND	NA
Silver	3.40E+00	2.88E-07	2.41E-06	5.39E-12	NA
Uranium	3.28E+02	2.78E-05	2.33E-04	5.20E-10	NA
Vanadium	2.01E+01	1.70E-06	1.43E-05	3.18E-11	NA
Zinc	1.02E+02	8.67E-06	7.26E-05	1.62E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	5.77E-08	1.26E-06	1.08E-12	NA
Pyrene	5.60E-01	4.75E-08	7.95E-07	8.88E-13	NA
Total PCB (1)	2.70E+00	2.29E-07	5.37E-06	4.28E-12	NA
Total PAH (2)	1.00E+00	8.48E-08	1.85E-06	1.59E-12	NA
<u>Radionuclides</u>					
Americium-241	4.39E+00	NA	NA	NA	NA
Cesium-137	4.16E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA	NA
Plutonium-239/240	2.06E+01	NA	NA	NA	NA
Technetium-99	5.96E+02	NA	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA	NA
Uranium-234	2.90E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	NA	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.131. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User-Teen) for Sediment at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	1.51E-03	2.67E-02	2.82E-08	NA
Antimony	1.40E+01	2.60E-06	4.62E-05	4.88E-11	NA
Arsenic	5.80E+00	1.08E-06	1.15E-05	2.02E-11	NA
Barium	7.85E+01	1.46E-05	2.59E-04	2.74E-10	NA
Beryllium	6.50E-01	1.21E-07	2.15E-06	2.27E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	1.58E-05	2.80E-04	2.96E-10	NA
Copper	1.23E+02	2.29E-05	4.06E-04	4.29E-10	NA
Iron	1.12E+04	2.08E-03	3.69E-02	3.90E-08	NA
Lead	2.10E+01	3.91E-06	6.93E-05	7.33E-11	NA
Manganese	4.17E+02	7.75E-05	1.38E-03	1.45E-09	NA
Mercury	6.00E-01	ND	ND	ND	NA
Molybdenum	8.30E+00	1.54E-06	2.74E-05	2.90E-11	NA
Nickel	9.40E+01	1.75E-05	3.10E-04	3.28E-10	NA
Selenium	2.00E+01	ND	ND	ND	NA
Silver	3.40E+00	6.32E-07	1.12E-05	1.19E-11	NA
Uranium	3.28E+02	6.10E-05	1.08E-03	1.14E-09	NA
Vanadium	2.01E+01	3.73E-06	6.62E-05	7.00E-11	NA
Zinc	1.02E+02	1.90E-05	3.37E-04	3.57E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	1.26E-07	5.83E-06	2.37E-12	NA
Pyrene	5.60E-01	1.04E-07	3.70E-06	1.95E-12	NA
Total PCB (1)	2.70E+00	5.02E-07	2.49E-05	9.42E-12	NA
Total PAH (2)	1.00E+00	1.86E-07	8.58E-06	3.49E-12	NA
<u>Radionuclides</u>					
Americium-241	4.39E+00	NA	NA	NA	NA
Cesium-137	4.16E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA	NA
Plutonium-239/240	2.06E+01	NA	NA	NA	NA
Technetium-99	5.96E+02	NA	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA	NA
Uranium-234	2.90E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	NA	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.132. Chronic Daily Intakes (Noncarcinogenic- Current Recreational User- Child) for Sediment at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	5.10E-03	2.85E-03	4.77E-09	NA
Antimony	1.40E+01	8.82E-06	4.94E-06	8.24E-12	NA
Arsenic	5.80E+00	3.65E-06	1.23E-06	3.41E-12	NA
Barium	7.85E+01	4.94E-05	2.77E-05	4.62E-11	NA
Beryllium	6.50E-01	4.10E-07	2.29E-07	3.83E-13	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	5.34E-05	2.99E-05	4.99E-11	NA
Copper	1.23E+02	7.75E-05	4.34E-05	7.24E-11	NA
Iron	1.12E+04	7.04E-03	3.94E-03	6.58E-09	NA
Lead	2.10E+01	1.32E-05	7.40E-06	1.24E-11	NA
Manganese	4.17E+02	2.63E-04	1.47E-04	2.45E-10	NA
Mercury	6.00E-01	ND	ND	ND	NA
Molybdenum	8.30E+00	5.23E-06	2.93E-06	4.89E-12	NA
Nickel	9.40E+01	5.92E-05	3.31E-05	5.53E-11	NA
Selenium	2.00E+01	ND	ND	ND	NA
Silver	3.40E+00	2.14E-06	1.20E-06	2.00E-12	NA
Uranium	3.28E+02	2.07E-04	1.16E-04	1.93E-10	NA
Vanadium	2.01E+01	1.26E-05	7.08E-06	1.18E-11	NA
Zinc	1.02E+02	6.44E-05	3.60E-05	6.02E-11	NA
	0.00E+00				
<u>Organic Compounds</u>					
	0.00E+00				
Fluoranthene	6.80E-01	4.28E-07	6.23E-07	4.00E-13	NA
Pyrene	5.60E-01	3.53E-07	3.95E-07	3.30E-13	NA
Total PCB (1)	2.70E+00	1.70E-06	2.66E-06	1.59E-12	NA
Total PAH (2)	1.00E+00	6.30E-07	9.17E-07	5.89E-13	NA
	0.00E+00				
<u>Radionuclides</u>					
	0.00E+00				
Americium-241	4.39E+00	NA	NA	NA	NA
Cesium-137	4.16E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA	NA
Plutonium-239/240	2.06E+01	NA	NA	NA	NA
Technetium-99	5.96E+02	NA	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA	NA
Uranium-234	2.90E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	NA	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC. Therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.133. Chronic Daily Intakes (Noncarcinogenic-Future Recreational User-Child) for Sediment at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	8.09E+03	8.90E-03	3.99E-02	8.35E-08	NA
Antimony	1.40E+01	1.54E-05	6.91E-05	1.44E-10	NA
Arsenic	5.80E+00	6.38E-06	1.72E-05	5.98E-11	NA
Barium	7.85E+01	8.63E-05	3.87E-04	8.09E-10	NA
Beryllium	6.50E-01	7.15E-07	3.21E-06	6.70E-12	NA
Cadmium	ND	ND	ND	ND	NA
Chromium	8.47E+01	9.32E-05	4.18E-04	8.73E-10	NA
Copper	1.23E+02	1.35E-04	6.07E-04	1.27E-09	NA
Iron	1.12E+04	1.23E-02	5.52E-02	1.15E-07	NA
Lead	2.10E+01	2.31E-05	1.04E-04	2.17E-10	NA
Manganese	4.17E+02	4.58E-04	2.06E-03	4.30E-09	NA
Mercury	6.00E-01	ND	ND	ND	NA
Molybdenum	8.30E+00	9.13E-06	4.10E-05	8.56E-11	NA
Nickel	9.40E+01	1.03E-04	4.64E-04	9.69E-10	NA
Selenium	2.00E+01	ND	ND	ND	NA
Silver	3.40E+00	3.74E-06	1.68E-05	3.51E-11	NA
Uranium	3.28E+02	3.61E-04	1.62E-03	3.38E-09	NA
Vanadium	2.01E+01	2.21E-05	9.91E-05	2.07E-10	NA
Zinc	1.02E+02	1.12E-04	5.05E-04	1.05E-09	NA
<u>Organic Compounds</u>					
Fluoranthene	6.80E-01	7.48E-07	8.73E-06	7.01E-12	NA
Pyrene	5.60E-01	6.16E-07	5.53E-06	5.77E-12	NA
Total PCB (1)	2.70E+00	2.97E-06	3.73E-05	2.78E-11	NA
Total PAH (2)	1.00E+00	1.10E-06	1.28E-05	1.03E-11	NA
<u>Radionuclides</u>					
Americium-241	4.39E+00	NA	NA	NA	NA
Cesium-137	4.16E+00	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA	NA
Plutonium-239/240	2.06E+01	NA	NA	NA	NA
Technetium-99	5.96E+02	NA	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA	NA
Uranium-234	2.90E+01	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	2.60E+01	NA	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.134. Chronic Daily Intakes (Noncarcinogenic- Current Recreational User- Child) for
Wading in Surface Water at the NSDD Hot Spot**

COPC	Exposure Point Concentration	Dermal Intake Hazard
		Current Child
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	NA	NA
<u>VOCs</u>		
Trichloroethene	NA	NA

Units for radionuclides at pCi/L. All others are mg/L.

NA: Indicate that the exposure route is not appropriate to the COPC. Therefore, the CDI was not calculated.

ND: Not detected.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.135. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User) for
Wading in Surface Water at the NSDD Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Dermal Intake Hazard		Dermal Intake Hazard	
		Adult	Teen	Future Child	
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	NS	NA	NA	NA	NA
Antimony	NS	NA	NA	NA	NA
Arsenic	NS	NA	NA	NA	NA
Barium	NS	NA	NA	NA	NA
Beryllium	NS	NA	NA	NA	NA
Cadmium	NS	NA	NA	NA	NA
Chromium	NS	NA	NA	NA	NA
Copper	NS	NA	NA	NA	NA
Iron	NS	NA	NA	NA	NA
Lead	NS	NA	NA	NA	NA
Manganese	NS	NA	NA	NA	NA
Mercury	NS	NA	NA	NA	NA
Molybdenum	NS	NA	NA	NA	NA
Nickel	NS	NA	NA	NA	NA
Selenium	NS	NA	NA	NA	NA
Silver	NS	NA	NA	NA	NA
Uranium	NS	NA	NA	NA	NA
Vanadium	NS	NA	NA	NA	NA
Zinc	NS	NA	NA	NA	NA
<u>Organic Compounds</u>					
Fluoranthene	NS	NA	NA	NA	NA
Pyrene	NS	NA	NA	NA	NA
Total PCB (1)	NA	NA	NA	NA	NA
Total PAH (2)	NS	NA	NA	NA	NA
<u>Radionuclides</u>					
Americium-241	NS	NA	NA	NA	NA
Cesium-137	NS	NA	NA	NA	NA
Cobalt-60	NS	NA	NA	NA	NA
Neptunium-237	NS	NA	NA	NA	NA
Plutonium-239/240	NS	NA	NA	NA	NA
Technetium-99	NS	NA	NA	NA	NA
Thorium-228	NS	NA	NA	NA	NA
Thorium-230	NS	NA	NA	NA	NA
Thorium-232	NS	NA	NA	NA	NA
Uranium-234	NS	NA	NA	NA	NA
Uranium-235	NS	NA	NA	NA	NA
Uranium-238	NA	NA	NA	NA	NA
<u>VOCs</u>					
Trichloroethene	NA	NA	NA	NA	NA

Units for radionuclides at pCi/L. All others are mg/L.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.136. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User) for Ingestion of Deer at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	8.09E+03	NA	NA	NA
Antimony	1.40E+01	3.84E-10	6.26E-10	4.06E-10
Arsenic	5.80E+00	NA	NA	NA
Barium	7.85E+01	1.24E-08	2.03E-08	1.31E-08
Beryllium	6.50E-01	NA	NA	NA
Cadmium	ND	ND	ND	NA
Chromium	8.47E+01	5.06E-07	8.25E-07	5.35E-07
Copper	1.23E+02	2.54E-06	4.14E-06	2.68E-06
Iron	1.12E+04	1.34E-04	2.18E-04	1.42E-04
Lead	2.10E+01	6.48E-09	1.06E-08	6.85E-09
Manganese	4.17E+02	4.24E-07	6.92E-07	4.48E-07
Mercury	6.00E-01	NA	NA	NA
Molybdenum	8.30E+00	1.19E-08	1.94E-08	1.26E-08
Nickel	9.40E+01	4.53E-07	7.39E-07	4.79E-07
Selenium	2.00E+01	NA	NA	NA
Silver	3.40E+00	2.78E-08	4.53E-08	2.94E-08
Uranium	3.28E+02	NA	NA	NA
Vanadium	2.01E+01	NA	NA	NA
Zinc	1.02E+02	2.76E-05	4.50E-05	2.92E-05
<u>Organic Compounds</u>				
Fluoranthene	6.80E-01	NA	NA	NA
Pyrene	5.60E-01	NA	NA	NA
Total PCB (1)	2.70E+00	NA	NA	NA
Total PAH (2)	1.00E+00	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	4.39E+00	NA	NA	NA
Cesium-137	4.16E+00	NA	NA	NA
Cobalt-60	ND	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA
Plutonium-239/240	2.06E+01	NA	NA	NA
Technetium-99	5.96E+02	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA
Uranium-234	2.90E+01	NA	NA	NA
Uranium-235	NA	NA	NA	NA
Uranium-238	2.60E+01	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.137. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User) for Ingestion of Quail at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	8.09E+03	3.88E-07	3.22E-07	3.75E-07
Antimony	1.40E+01	2.63E-11	2.19E-11	2.54E-11
Arsenic	5.80E+00	4.20E-10	3.49E-10	4.06E-10
Barium	7.85E+01	2.85E-08	2.37E-08	2.75E-08
Beryllium	6.50E-01	2.55E-11	2.12E-11	2.46E-11
Cadmium	ND	ND	ND	NA
Chromium	8.47E+01	2.70E-08	2.24E-08	2.60E-08
Copper	1.23E+02	6.19E-06	5.14E-06	5.98E-06
Iron	1.12E+04	3.64E-04	3.02E-04	3.51E-04
Lead	2.10E+01	3.33E-10	2.77E-10	3.22E-10
Manganese	4.17E+02	1.90E-06	1.57E-06	1.83E-06
Mercury	6.00E-01	2.13E-09	1.77E-09	2.05E-09
Molybdenum	8.30E+00	5.46E-07	4.54E-07	5.28E-07
Nickel	9.40E+01	NA	NA	NA
Selenium	2.00E+01	1.34E-05	1.11E-05	1.30E-05
Silver	3.40E+00	8.03E-07	6.67E-07	7.76E-07
Uranium	3.28E+02	NA	NA	NA
Vanadium	2.01E+01	NA	NA	NA
Zinc	1.02E+02	8.39E-05	6.97E-05	8.11E-05
<u>Organic Compounds</u>				
Fluoranthene	6.80E-01	NA	NA	NA
Pyrene	5.60E-01	NA	NA	NA
Total PCB (1)	2.70E+00	NA	NA	NA
Total PAH (2)	1.00E+00	5.53E-08	4.60E-08	5.35E-08
<u>Radionuclides</u>				
Americium-241	4.39E+00	NA	NA	NA
Cesium-137	4.16E+00	NA	NA	NA
Cobalt-60	ND	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA
Plutonium-239/240	2.06E+01	NA	NA	NA
Technetium-99	5.96E+02	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA
Uranium-234	2.90E+01	NA	NA	NA
Uranium-235	NA	NA	NA	NA
Uranium-238	2.60E+01	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.138. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User) for Ingestion of Rabbit at the NSDD Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	8.09E+03	NA	NA	NA
Antimony	1.40E+01	4.20E-09	3.40E-09	4.05E-09
Arsenic	5.80E+00	NA	NA	NA
Barium	7.85E+01	1.34E-07	1.08E-07	1.29E-07
Beryllium	6.50E-01	NA	NA	NA
Cadmium	ND	ND	ND	NA
Chromium	8.47E+01	5.56E-06	4.50E-06	5.37E-06
Copper	1.23E+02	2.55E-05	2.06E-05	2.46E-05
Iron	1.12E+04	1.49E-03	1.21E-03	1.44E-03
Lead	2.10E+01	7.00E-08	5.67E-08	6.75E-08
Manganese	4.17E+02	4.28E-06	3.46E-06	4.13E-06
Mercury	6.00E-01	NA	NA	NA
Molybdenum	8.30E+00	1.22E-07	9.91E-08	1.18E-07
Nickel	9.40E+01	4.79E-06	3.88E-06	4.62E-06
Selenium	2.00E+01	NA	NA	NA
Silver	3.40E+00	2.77E-07	2.24E-07	2.67E-07
Uranium	3.28E+02	NA	NA	NA
Vanadium	2.01E+01	NA	NA	NA
Zinc	1.02E+02	2.76E-04	2.23E-04	2.66E-04
<u>Organic Compounds</u>				
Fluoranthene	6.80E-01	NA	NA	NA
Pyrene	5.60E-01	NA	NA	NA
Total PCB (1)	2.70E+00	NA	NA	NA
Total PAH (2)	1.00E+00	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	4.39E+00	NA	NA	NA
Cesium-137	4.16E+00	NA	NA	NA
Cobalt-60	ND	NA	NA	NA
Neptunium-237	5.30E+00	NA	NA	NA
Plutonium-239/240	2.06E+01	NA	NA	NA
Technetium-99	5.96E+02	NA	NA	NA
Thorium-228	2.00E+00	NA	NA	NA
Thorium-230	4.97E+02	NA	NA	NA
Thorium-232	2.43E+00	NA	NA	NA
Uranium-234	2.90E+01	NA	NA	NA
Uranium-235	NA	NA	NA	NA
Uranium-238	2.60E+01	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.139. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Soil at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	6.28E-05	2.70E-04	7.83E-10	NA
Antimony	1.00E+01	9.78E-08	4.21E-07	1.22E-12	NA
Arsenic	6.00E+00	5.87E-08	1.51E-07	7.31E-13	NA
Barium	6.60E+01	6.45E-07	2.78E-06	8.04E-12	NA
Beryllium	5.80E-01	5.67E-09	2.44E-08	7.06E-14	NA
Cadmium	2.10E+00	2.05E-08	1.77E-09	2.56E-13	NA
Chromium	3.90E+01	3.81E-07	1.64E-06	4.75E-12	NA
Copper	3.50E+01	3.42E-07	1.47E-06	4.26E-12	NA
Iron	9.33E+03	9.13E-05	3.92E-04	1.14E-09	NA
Lead	2.10E+01	2.05E-07	8.83E-07	2.56E-12	NA
Manganese	4.56E+02	4.46E-06	1.92E-05	5.55E-11	NA
Mercury	1.10E-01	1.08E-09	4.63E-09	1.34E-14	NA
Molybdenum	4.60E+00	4.50E-08	1.93E-07	5.60E-13	NA
Nickel	1.60E+01	1.56E-07	6.73E-07	1.95E-12	NA
Selenium	2.20E+01	2.15E-07	9.25E-07	2.68E-12	NA
Silver	2.90E+00	2.84E-08	1.22E-07	3.53E-13	NA
Uranium	1.64E+02	1.60E-06	6.90E-06	2.00E-11	NA
Vanadium	1.70E+01	1.66E-07	7.15E-07	2.07E-12	NA
Zinc	3.80E+01	3.72E-07	1.60E-06	4.63E-12	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	2.15E-08	2.41E-07	2.68E-13	NA
Pyrene	1.40E+00	1.37E-08	1.18E-07	1.71E-13	NA
Total PCB (1)	1.10E+00	1.08E-08	1.30E-07	1.34E-13	NA
Total PAH (2)	1.20E+00	1.17E-08	1.31E-07	1.46E-13	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	8.40E+00	NA	1.05E-04	1.23E-01
Cesium-137	7.60E-01	1.33E+01	NA	1.66E-04	1.95E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	2.80E-01	4.90E+00	NA	6.11E-05	7.17E-02
Plutonium-239/240	4.80E+00	8.40E+01	NA	1.05E-03	1.23E+00
Technetium-99	3.20E+01	5.60E+02	NA	6.98E-03	8.19E+00
Thorium-228	4.70E-01	8.23E+00	NA	1.02E-04	1.20E-01
Thorium-230	6.70E+01	1.17E+03	NA	1.46E-02	1.72E+01
Thorium-232	5.60E-01	9.80E+00	NA	1.22E-04	1.43E-01
Uranium-234	3.00E+00	5.25E+01	NA	6.54E-04	7.68E-01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	7.53E+01	NA	9.38E-04	1.10E+00

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.140. Chronic Daily Intakes (Carcinogenic-Current Industrial Worker) for Surface Water
at the NSDD, Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
		Dermal Intake Hazard	
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	1.59E+03		NA
<u>VOCs</u>			
Trichloroethene	1.40E-03		4.81E-08

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.141. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for Soil at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	1.76E-04	7.58E-04	2.20E-09	NA
Antimony	1.00E+01	2.74E-07	1.18E-06	3.43E-12	NA
Arsenic	6.00E+00	1.64E-07	4.25E-07	2.06E-12	NA
Barium	6.60E+01	1.81E-06	7.79E-06	2.26E-11	NA
Beryllium	5.80E-01	1.59E-08	6.84E-08	1.99E-13	NA
Cadmium	2.10E+00	5.75E-08	4.96E-09	7.20E-13	NA
Chromium	3.90E+01	1.07E-06	4.60E-06	1.34E-11	NA
Copper	3.50E+01	9.59E-07	4.13E-06	1.20E-11	NA
Iron	9.33E+03	2.56E-04	1.10E-03	3.20E-09	NA
Lead	2.10E+01	5.75E-07	2.48E-06	7.20E-12	NA
Manganese	4.56E+02	1.25E-05	5.38E-05	1.56E-10	NA
Mercury	1.10E-01	3.01E-09	1.30E-08	3.77E-14	NA
Molybdenum	4.60E+00	1.26E-07	5.43E-07	1.58E-12	NA
Nickel	1.60E+01	4.38E-07	1.89E-06	5.48E-12	NA
Selenium	2.20E+01	6.03E-07	2.60E-06	7.54E-12	NA
Silver	2.90E+00	7.95E-08	3.42E-07	9.94E-13	NA
Uranium	1.64E+02	4.49E-06	1.94E-05	5.62E-11	NA
Vanadium	1.70E+01	4.66E-07	2.01E-06	5.83E-12	NA
Zinc	3.80E+01	1.04E-06	4.48E-06	1.30E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	6.03E-08	6.75E-07	7.54E-13	NA
Pyrene	1.40E+00	3.84E-08	3.30E-07	4.80E-13	NA
Total PCB (1)	1.10E+00	3.01E-08	3.63E-07	3.77E-13	NA
Total PAH (2)	1.20E+00	3.29E-08	3.68E-07	4.11E-13	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	NA	NA	NA	NA
Cesium-137	7.60E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA	NA
Plutonium-239/240	4.80E+00	NA	NA	NA	NA
Technetium-99	3.20E+01	NA	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA	NA
Uranium-234	3.00E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.142. Chronic Daily Intakes (Noncarcinogenic-Current Industrial Worker) for
Surface Water at the NSDD, Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
		Dermal Intake Hazard	
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	1.59E+03		NA
<u>VOCs</u>			
Trichloroethene	1.40E-03		1.35E-07

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.143. Chronic Daily Intakes (Carcinogenic- Current/future Industrial Worker) for Soil at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	1.12E-03	4.82E-03	1.40E-08	NA
Antimony	1.00E+01	1.75E-06	7.50E-06	2.18E-11	NA
Arsenic	6.00E+00	1.05E-06	4.50E-06	1.31E-11	NA
Barium	6.60E+01	1.16E-05	4.95E-05	1.44E-10	NA
Beryllium	5.80E-01	1.02E-07	4.35E-07	1.26E-12	NA
Cadmium	2.10E+00	3.68E-07	3.15E-07	4.57E-12	NA
Chromium	3.90E+01	6.83E-06	2.93E-05	8.49E-11	NA
Copper	3.50E+01	6.13E-06	2.63E-05	7.62E-11	NA
Iron	9.33E+03	1.63E-03	7.00E-03	2.03E-08	NA
Lead	2.10E+01	3.68E-06	1.58E-05	4.57E-11	NA
Manganese	4.56E+02	7.98E-05	3.42E-04	9.93E-10	NA
Mercury	1.10E-01	1.93E-08	8.25E-08	2.40E-13	NA
Molybdenum	4.60E+00	8.05E-07	3.45E-06	1.00E-11	NA
Nickel	1.60E+01	2.80E-06	1.20E-05	3.48E-11	NA
Selenium	2.20E+01	3.85E-06	1.65E-05	4.79E-11	NA
Silver	2.90E+00	5.08E-07	2.18E-06	6.31E-12	NA
Uranium	1.64E+02	2.87E-05	1.23E-04	3.57E-10	NA
Vanadium	1.70E+01	2.98E-06	1.28E-05	3.70E-11	NA
Zinc	3.80E+01	6.65E-06	2.85E-05	8.27E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	3.85E-07	3.30E-06	4.79E-12	NA
Pyrene	1.40E+00	2.45E-07	2.10E-06	3.05E-12	NA
Total PCB (1)	1.10E+00	1.93E-07	9.90E-07	2.40E-12	NA
Total PAH (2)	1.20E+00	2.10E-07	1.80E-06	2.61E-12	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	1.50E+02	NA	1.87E-03	2.19E+00
Cesium-137	7.60E-01	2.38E+02	NA	2.96E-03	3.47E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	2.80E-01	8.76E+01	NA	1.09E-03	1.28E+00
Plutonium-239/240	4.80E+00	1.50E+03	NA	1.87E-02	2.19E+01
Technetium-99	3.20E+01	1.00E+04	NA	1.25E-01	1.46E+02
Thorium-228	4.70E-01	1.47E+02	NA	1.83E-03	2.15E+00
Thorium-230	6.70E+01	2.10E+04	NA	2.61E-01	3.06E+02
Thorium-232	5.60E-01	1.75E+02	NA	2.18E-03	2.56E+00
Uranium-234	3.00E+00	9.39E+02	NA	1.17E-02	1.37E+01
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	1.35E+03	NA	1.67E-02	1.97E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.144. Chronic Daily Intakes (Carcinogenic- Current/future Industrial Worker) for Surface Water at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
		Dermal Intake Hazard	
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	1.59E+03		NA
<u>VOCs</u>			
Trichloroethene	1.40E-03		8.59E-07

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.145. Chronic Daily Intakes (Noncarcinogenic- Current/future Industrial Worker) for Soil at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	3.14E-03	1.35E-02	3.92E-08	NA
Antimony	1.00E+01	4.89E-06	2.11E-05	6.11E-11	NA
Arsenic	6.00E+00	2.93E-06	1.26E-05	3.66E-11	NA
Barium	6.60E+01	3.23E-05	1.39E-04	4.03E-10	NA
Beryllium	5.80E-01	2.84E-07	1.22E-06	3.54E-12	NA
Cadmium	2.10E+00	1.03E-06	8.84E-07	1.28E-11	NA
Chromium	3.90E+01	1.91E-05	8.21E-05	2.38E-10	NA
Copper	3.50E+01	1.71E-05	7.37E-05	2.14E-10	NA
Iron	9.33E+03	4.56E-03	1.96E-02	5.70E-08	NA
Lead	2.10E+01	1.03E-05	4.42E-05	1.28E-10	NA
Manganese	4.56E+02	2.23E-04	9.60E-04	2.78E-09	NA
Mercury	1.10E-01	5.38E-08	2.32E-07	6.72E-13	NA
Molybdenum	4.60E+00	2.25E-06	9.68E-06	2.81E-11	NA
Nickel	1.60E+01	7.82E-06	3.37E-05	9.77E-11	NA
Selenium	2.20E+01	1.08E-05	4.63E-05	1.34E-10	NA
Silver	2.90E+00	1.42E-06	6.10E-06	1.77E-11	NA
Uranium	1.64E+02	8.02E-05	3.45E-04	1.00E-09	NA
Vanadium	1.70E+01	8.31E-06	3.58E-05	1.04E-10	NA
Zinc	3.80E+01	1.86E-05	8.00E-05	2.32E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	1.08E-06	9.26E-06	1.34E-11	NA
Pyrene	1.40E+00	6.85E-07	5.89E-06	8.55E-12	NA
Total PCB (1)	1.10E+00	5.38E-07	2.78E-06	6.72E-12	NA
Total PAH (2)	1.20E+00	5.87E-07	5.05E-06	7.33E-12	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	NA	NA	NA	NA
Cesium-137	7.60E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA	NA
Plutonium-239/240	4.80E+00	NA	NA	NA	NA
Technetium-99	3.20E+01	NA	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA	NA
Uranium-234	3.00E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.146. Chronic Daily Intakes (Noncarcinogenic- Current/future Industrial Worker)
for Surface Water at the NSDD, Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake	
		Dermal Intake Hazard	
<u>Inorganic Chemicals (Metals)</u>			
Aluminum	NS		NA
Antimony	NS		NA
Arsenic	NS		NA
Barium	NS		NA
Beryllium	NS		NA
Cadmium	NS		NA
Chromium	NS		NA
Copper	NS		NA
Iron	NS		NA
Lead	NS		NA
Manganese	NS		NA
Mercury	NS		NA
Molybdenum	NS		NA
Nickel	NS		NA
Selenium	NS		NA
Silver	NS		NA
Uranium	NS		NA
Vanadium	NS		NA
Zinc	NS		NA
<u>Organic Compounds</u>			
Fluoranthene	NS		NA
Pyrene	NS		NA
Total PCB (1)	NA		NA
Total PAH (2)	NS		NA
<u>Radionuclides</u>			
Americium-241	NS		NA
Cesium-137	NS		NA
Cobalt-60	NS		NA
Neptunium-237	NS		NA
Plutonium-239/240	NS		NA
Technetium-99	NS		NA
Thorium-228	NS		NA
Thorium-230	NS		NA
Thorium-232	NS		NA
Uranium-234	NS		NA
Uranium-235	NS		NA
Uranium-238	1.59E+03		NA
<u>VOCs</u>			
Trichloroethene	1.40E-03		2.40E-06

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.147. Chronic Daily Intakes (Carcinogenic-Current/Future Excavation Worker) for Soil at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.64E+03	8.23E-03	3.68E-03	1.07E-08	NA
Antimony	1.10E+01	1.36E-05	6.11E-06	1.77E-11	NA
Arsenic	6.00E+00	7.44E-06	2.00E-06	9.66E-12	NA
Barium	6.90E+01	8.56E-05	3.83E-05	1.11E-10	NA
Beryllium	5.90E-01	7.32E-07	3.27E-07	9.50E-13	NA
Cadmium	2.00E+00	2.48E-06	2.22E-08	3.22E-12	NA
Chromium	4.00E+01	4.96E-05	2.22E-05	6.44E-11	NA
Copper	3.50E+01	4.34E-05	1.94E-05	5.64E-11	NA
Iron	9.30E+03	1.15E-02	5.16E-03	1.50E-08	NA
Lead	2.10E+01	2.60E-05	1.17E-05	3.38E-11	NA
Manganese	4.47E+02	5.54E-04	2.48E-04	7.20E-10	NA
Mercury	1.30E-01	1.61E-07	7.22E-08	2.09E-13	NA
Molybdenum	4.60E+00	5.70E-06	2.55E-06	7.41E-12	NA
Nickel	1.80E+01	2.23E-05	9.99E-06	2.90E-11	NA
Selenium	2.70E+01	3.35E-05	1.50E-05	4.35E-11	NA
Silver	3.10E+00	3.84E-06	1.72E-06	4.99E-12	NA
Uranium	2.34E+02	2.90E-04	1.30E-04	3.77E-10	NA
Vanadium	1.80E+01	2.23E-05	9.99E-06	2.90E-11	NA
Zinc	3.90E+01	4.84E-05	2.16E-05	6.28E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	2.73E-06	3.17E-06	3.54E-12	NA
Pyrene	1.30E+00	1.61E-06	1.44E-06	2.09E-12	NA
Total PCB (1)	1.10E+00	1.36E-06	1.71E-06	1.77E-12	NA
Total PAH (2)	1.20E+00	1.49E-06	1.73E-06	1.93E-12	NA
<u>Radionuclides</u>					
Americium-241	4.50E-01	9.99E+02	NA	1.30E-03	1.52E+00
Cesium-137	7.30E-01	1.62E+03	NA	2.10E-03	2.47E+00
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	3.30E-01	7.33E+02	NA	9.51E-04	1.12E+00
Plutonium-239/240	4.60E+00	1.02E+04	NA	1.33E-02	1.55E+01
Technetium-99	3.40E+01	7.55E+04	NA	9.80E-02	1.15E+02
Thorium-228	4.90E-01	1.09E+03	NA	1.41E-03	1.66E+00
Thorium-230	7.00E+01	1.55E+05	NA	2.02E-01	2.37E+02
Thorium-232	5.80E-01	1.29E+03	NA	1.67E-03	1.96E+00
Uranium-234	2.80E+00	6.22E+03	NA	8.07E-03	9.46E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.10E+00	9.10E+03	NA	1.18E-02	1.39E+01

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.148. Chronic Daily Intakes (Noncarcinogenic-Current/Future Excavation Worker) for Soil at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.64E+03	2.31E-02	2.06E-04	3.00E-08	NA
Antimony	1.10E+01	3.83E-05	3.42E-07	4.97E-11	NA
Arsenic	6.00E+00	2.09E-05	1.12E-07	2.71E-11	NA
Barium	6.90E+01	2.40E-04	2.15E-06	3.12E-10	NA
Beryllium	5.90E-01	2.05E-06	1.83E-08	2.67E-12	NA
Cadmium	2.00E+00	6.96E-06	1.24E-09	9.03E-12	NA
Chromium	4.00E+01	1.39E-04	1.24E-06	1.81E-10	NA
Copper	3.50E+01	1.22E-04	1.09E-06	1.58E-10	NA
Iron	9.30E+03	3.24E-02	2.89E-04	4.20E-08	NA
Lead	2.10E+01	7.31E-05	6.53E-07	9.49E-11	NA
Manganese	4.47E+02	1.56E-03	1.39E-05	2.02E-09	NA
Mercury	1.30E-01	4.52E-07	4.04E-09	5.87E-13	NA
Molybdenum	4.60E+00	1.60E-05	1.43E-07	2.08E-11	NA
Nickel	1.80E+01	6.26E-05	5.60E-07	8.13E-11	NA
Selenium	2.70E+01	9.40E-05	8.40E-07	1.22E-10	NA
Silver	3.10E+00	1.08E-05	9.64E-08	1.40E-11	NA
Uranium	2.34E+02	8.14E-04	7.28E-06	1.06E-09	NA
Vanadium	1.80E+01	6.26E-05	5.60E-07	8.13E-11	NA
Zinc	3.90E+01	1.36E-04	1.21E-06	1.76E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	7.66E-06	8.89E-06	9.94E-12	NA
Pyrene	1.30E+00	4.52E-06	4.04E-06	5.87E-12	NA
Total PCB (1)	1.10E+00	3.83E-06	4.79E-07	4.97E-12	NA
Total PAH (2)	1.20E+00	4.18E-06	4.85E-06	5.42E-12	NA
<u>Radionuclides</u>					
Americium-241	4.50E-01	NA	NA	NA	NA
Cesium-137	7.30E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	3.30E-01	NA	NA	NA	NA
Plutonium-239/240	4.60E+00	NA	NA	NA	NA
Technetium-99	3.40E+01	NA	NA	NA	NA
Thorium-228	4.90E-01	NA	NA	NA	NA
Thorium-230	7.00E+01	NA	NA	NA	NA
Thorium-232	5.80E-01	NA	NA	NA	NA
Uranium-234	2.80E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.10E+00	NA	NA	NA	NA

Units for metals and organic compounds are mg/kg. Units for radionuclides are pCi/g.

NA: Not analyzed or applicable.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.149. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User-Adult) for Sediment at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	1.72E-04	1.44E-03	3.20E-09	NA
Antimony	1.00E+01	2.67E-07	2.24E-06	4.98E-12	NA
Arsenic	6.00E+00	1.60E-07	8.06E-07	2.99E-12	NA
Barium	6.60E+01	1.76E-06	1.48E-05	3.29E-11	NA
Beryllium	5.80E-01	1.55E-08	1.30E-07	2.89E-13	NA
Cadmium	2.10E+00	5.61E-08	9.41E-09	1.05E-12	NA
Chromium	3.90E+01	1.04E-06	8.74E-06	1.94E-11	NA
Copper	3.50E+01	9.35E-07	7.84E-06	1.74E-11	NA
Iron	9.33E+03	2.49E-04	2.09E-03	4.65E-09	NA
Lead	2.10E+01	5.61E-07	4.70E-06	1.05E-11	NA
Manganese	4.56E+02	1.22E-05	1.02E-04	2.27E-10	NA
Mercury	1.10E-01	2.94E-09	2.46E-08	5.48E-14	NA
Molybdenum	4.60E+00	1.23E-07	1.03E-06	2.29E-12	NA
Nickel	1.60E+01	4.27E-07	3.58E-06	7.98E-12	NA
Selenium	2.20E+01	5.87E-07	4.93E-06	1.10E-11	NA
Silver	2.90E+00	7.74E-08	6.50E-07	1.45E-12	NA
Uranium	1.64E+02	4.38E-06	3.67E-05	8.17E-11	NA
Vanadium	1.70E+01	4.54E-07	3.81E-06	8.47E-12	NA
Zinc	3.80E+01	1.01E-06	8.51E-06	1.89E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	5.87E-08	1.28E-06	1.10E-12	NA
Pyrene	1.40E+00	3.74E-08	6.27E-07	6.98E-13	NA
Total PCB (1)	1.10E+00	2.94E-08	6.90E-07	5.48E-13	NA
Total PAH (2)	1.20E+00	3.20E-08	6.99E-07	5.98E-13	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	2.29E+01	NA	4.28E-04	4.99E-01
Cesium-137	7.60E-01	3.63E+01	NA	6.77E-04	7.90E-01
Cobalt-60	ND	ND	NA	NA	ND
Neptunium-237	2.80E-01	1.34E+01	NA	2.49E-04	2.91E-01
Plutonium-239/240	4.80E+00	2.29E+02	NA	4.28E-03	4.99E+00
Technetium-99	3.20E+01	1.53E+03	NA	2.85E-02	3.33E+01
Thorium-228	4.70E-01	2.24E+01	NA	4.19E-04	4.89E-01
Thorium-230	6.70E+01	3.20E+03	NA	5.97E-02	6.97E+01
Thorium-232	5.60E-01	2.67E+01	NA	4.99E-04	5.82E-01
Uranium-234	3.00E+00	1.43E+02	NA	2.67E-03	3.12E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	2.05E+02	NA	3.83E-03	4.47E+00

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.150. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User-Teen) for Sediment at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	2.05E-04	3.63E-03	3.82E-09	NA
Antimony	1.00E+01	3.19E-07	5.65E-06	5.95E-12	NA
Arsenic	6.00E+00	1.91E-07	2.03E-06	3.57E-12	NA
Barium	6.60E+01	2.11E-06	3.73E-05	3.93E-11	NA
Beryllium	5.80E-01	1.85E-08	3.28E-07	3.45E-13	NA
Cadmium	2.10E+00	6.70E-08	2.37E-08	1.25E-12	NA
Chromium	3.90E+01	1.24E-06	2.20E-05	2.32E-11	NA
Copper	3.50E+01	1.12E-06	1.98E-05	2.08E-11	NA
Iron	9.33E+03	2.98E-04	5.27E-03	5.55E-09	NA
Lead	2.10E+01	6.70E-07	1.19E-05	1.25E-11	NA
Manganese	4.56E+02	1.45E-05	2.58E-04	2.71E-10	NA
Mercury	1.10E-01	3.51E-09	6.22E-08	6.55E-14	NA
Molybdenum	4.60E+00	1.47E-07	2.60E-06	2.74E-12	NA
Nickel	1.60E+01	5.10E-07	9.04E-06	9.52E-12	NA
Selenium	2.20E+01	7.02E-07	1.24E-05	1.31E-11	NA
Silver	2.90E+00	9.25E-08	1.64E-06	1.73E-12	NA
Uranium	1.64E+02	5.23E-06	9.27E-05	9.76E-11	NA
Vanadium	1.70E+01	5.42E-07	9.61E-06	1.01E-11	NA
Zinc	3.80E+01	1.21E-06	2.15E-05	2.26E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	7.02E-08	3.23E-06	1.31E-12	NA
Pyrene	1.40E+00	4.47E-08	1.58E-06	8.33E-13	NA
Total PCB (1)	1.10E+00	3.51E-08	1.74E-06	6.55E-13	NA
Total PAH (2)	1.20E+00	3.83E-08	1.76E-06	7.14E-13	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	1.68E+01	NA	3.14E-04	3.68E-01
Cesium-137	7.60E-01	2.66E+01	NA	4.97E-04	5.83E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	2.80E-01	9.80E+00	NA	1.83E-04	2.15E-01
Plutonium-239/240	4.80E+00	1.68E+02	NA	3.14E-03	3.68E+00
Technetium-99	3.20E+01	1.12E+03	NA	2.09E-02	2.45E+01
Thorium-228	4.70E-01	1.65E+01	NA	3.07E-04	3.60E-01
Thorium-230	6.70E+01	2.35E+03	NA	4.38E-02	5.14E+01
Thorium-232	5.60E-01	1.96E+01	NA	3.66E-04	4.30E-01
Uranium-234	3.00E+00	1.05E+02	NA	1.96E-03	2.30E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	1.51E+02	NA	2.81E-03	3.30E+00

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.151. Chronic Daily Intakes (Carcinogenic- Current Recreational User- Child) for Sediment at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	5.78E-05	3.24E-05	5.40E-11	NA
Antimony	1.00E+01	9.00E-08	5.05E-08	8.41E-14	NA
Arsenic	6.00E+00	5.40E-08	1.82E-08	5.05E-14	NA
Barium	6.60E+01	5.94E-07	3.33E-07	5.55E-13	NA
Beryllium	5.80E-01	5.22E-09	2.93E-09	4.88E-15	NA
Cadmium	2.10E+00	1.89E-08	2.12E-10	1.77E-14	NA
Chromium	3.90E+01	3.51E-07	1.97E-07	3.28E-13	NA
Copper	3.50E+01	3.15E-07	1.77E-07	2.94E-13	NA
Iron	9.33E+03	8.40E-05	4.71E-05	7.85E-11	NA
Lead	2.10E+01	1.89E-07	1.06E-07	1.77E-13	NA
Manganese	4.56E+02	4.10E-06	2.30E-06	3.84E-12	NA
Mercury	1.10E-01	9.90E-10	5.56E-10	9.25E-16	NA
Molybdenum	4.60E+00	4.14E-08	2.32E-08	3.87E-14	NA
Nickel	1.60E+01	1.44E-07	8.08E-08	1.35E-13	NA
Selenium	2.20E+01	1.98E-07	1.11E-07	1.85E-13	NA
Silver	2.90E+00	2.61E-08	1.46E-08	2.44E-14	NA
Uranium	1.64E+02	1.48E-06	8.28E-07	1.38E-12	NA
Vanadium	1.70E+01	1.53E-07	8.59E-08	1.43E-13	NA
Zinc	3.80E+01	3.42E-07	1.92E-07	3.20E-13	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	1.98E-08	2.89E-08	1.85E-14	NA
Pyrene	1.40E+00	1.26E-08	1.41E-08	1.18E-14	NA
Total PCB (1)	1.10E+00	9.90E-09	1.56E-08	9.25E-15	NA
Total PAH (2)	1.20E+00	1.08E-08	1.58E-08	1.01E-14	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	1.60E+00	NA	1.50E-06	2.19E-03
Cesium-137	7.60E-01	2.53E+00	NA	2.37E-06	3.47E-03
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	2.80E-01	9.32E-01	NA	8.72E-07	1.28E-03
Plutonium-239/240	4.80E+00	1.60E+01	NA	1.50E-05	2.19E-02
Technetium-99	3.20E+01	1.07E+02	NA	9.97E-05	1.46E-01
Thorium-228	4.70E-01	1.57E+00	NA	1.46E-06	2.15E-03
Thorium-230	6.70E+01	2.23E+02	NA	2.09E-04	3.06E-01
Thorium-232	5.60E-01	1.86E+00	NA	1.74E-06	2.56E-03
Uranium-234	3.00E+00	9.99E+00	NA	9.35E-06	1.37E-02
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	1.43E+01	NA	1.34E-05	1.97E-02

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC. Therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.152. Chronic Daily Intakes (Carcinogenic-Future Recreational User-Child) for Sediment at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	6.07E-04	2.72E-03	5.66E-09	NA
Antimony	1.00E+01	9.45E-07	4.23E-06	8.82E-12	NA
Arsenic	6.00E+00	5.67E-07	1.52E-06	5.29E-12	NA
Barium	6.60E+01	6.24E-06	2.79E-05	5.82E-11	NA
Beryllium	5.80E-01	5.48E-08	2.45E-07	5.11E-13	NA
Cadmium	2.10E+00	1.98E-07	1.78E-08	1.85E-12	NA
Chromium	3.90E+01	3.69E-06	1.65E-05	3.44E-11	NA
Copper	3.50E+01	3.31E-06	1.48E-05	3.09E-11	NA
Iron	9.33E+03	8.82E-04	3.95E-03	8.23E-09	NA
Lead	2.10E+01	1.98E-06	8.88E-06	1.85E-11	NA
Manganese	4.56E+02	4.31E-05	1.93E-04	4.02E-10	NA
Mercury	1.10E-01	1.04E-08	4.65E-08	9.70E-14	NA
Molybdenum	4.60E+00	4.35E-07	1.95E-06	4.06E-12	NA
Nickel	1.60E+01	1.51E-06	6.77E-06	1.41E-11	NA
Selenium	2.20E+01	2.08E-06	9.31E-06	1.94E-11	NA
Silver	2.90E+00	2.74E-07	1.23E-06	2.56E-12	NA
Uranium	1.64E+02	1.55E-05	6.94E-05	1.45E-10	NA
Vanadium	1.70E+01	1.61E-06	7.19E-06	1.50E-11	NA
Zinc	3.80E+01	3.59E-06	1.61E-05	3.35E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	2.08E-07	2.42E-06	1.94E-12	NA
Pyrene	1.40E+00	1.32E-07	1.18E-06	1.23E-12	NA
Total PCB (1)	1.10E+00	1.04E-07	1.30E-06	9.70E-13	NA
Total PAH (2)	1.20E+00	1.13E-07	1.32E-06	1.06E-12	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	1.68E+01	NA	1.57E-04	1.84E-01
Cesium-137	7.60E-01	2.66E+01	NA	2.49E-04	2.92E-01
Cobalt-60	ND	ND	NA	ND	ND
Neptunium-237	2.80E-01	9.80E+00	NA	9.16E-05	1.08E-01
Plutonium-239/240	4.80E+00	1.68E+02	NA	1.57E-03	1.84E+00
Technetium-99	3.20E+01	1.12E+03	NA	1.05E-02	1.23E+01
Thorium-228	4.70E-01	1.65E+01	NA	1.54E-04	1.80E-01
Thorium-230	6.70E+01	2.35E+03	NA	2.19E-02	2.57E+01
Thorium-232	5.60E-01	1.96E+01	NA	1.83E-04	2.15E-01
Uranium-234	3.00E+00	1.05E+02	NA	9.81E-04	1.15E+00
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	1.51E+02	NA	1.41E-03	1.65E+00

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.153. Chronic Daily Intakes (Carcinogenic- Current Recreational User- Child) for Wading
in Surface Water at the NSDD, Excluding the Hot Spot**

COPC	Exposure Point Concentration	Dermal Intake Hazard
		Current Child
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	1.59E+03	NA
<u>VOCs</u>		
Trichloroethene	1.40E-03	8.86E-09

Units for radionuclides at pCi/L. All others are mg/L.

NA: Indicate that the exposure route is not appropriate to the COPC. Therefore, the CDI was not calculated.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.154. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User) for Wading
in Surface Water at the NSDD, Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Dermal Intake	Dermal Intake	Dermal Intake
		Hazard	Hazard	Hazard
		Adult	Teen	Future Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	NS	NA	NA	NA
Antimony	NS	NA	NA	NA
Arsenic	NS	NA	NA	NA
Barium	NS	NA	NA	NA
Beryllium	NS	NA	NA	NA
Cadmium	NS	NA	NA	NA
Chromium	NS	NA	NA	NA
Copper	NS	NA	NA	NA
Iron	NS	NA	NA	NA
Lead	NS	NA	NA	NA
Manganese	NS	NA	NA	NA
Mercury	NS	NA	NA	NA
Molybdenum	NS	NA	NA	NA
Nickel	NS	NA	NA	NA
Selenium	NS	NA	NA	NA
Silver	NS	NA	NA	NA
Uranium	NS	NA	NA	NA
Vanadium	NS	NA	NA	NA
Zinc	NS	NA	NA	NA
<u>Organic Compounds</u>				
Fluoranthene	NS	NA	NA	NA
Pyrene	NS	NA	NA	NA
Total PCB (1)	NA	NA	NA	NA
Total PAH (2)	NS	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	NS	NA	NA	NA
Cesium-137	NS	NA	NA	NA
Cobalt-60	NS	NA	NA	NA
Neptunium-237	NS	NA	NA	NA
Plutonium-239/240	NS	NA	NA	NA
Technetium-99	NS	NA	NA	NA
Thorium-228	NS	NA	NA	NA
Thorium-230	NS	NA	NA	NA
Thorium-232	NS	NA	NA	NA
Uranium-234	NS	NA	NA	NA
Uranium-235	NS	NA	NA	NA
Uranium-238	1.59E+03	NA	NA	NA
<u>VOCs</u>				
Trichloroethene	1.40E-03	3.41E-07	6.46E-07	4.84E-07

Units for radionuclides at pCi/L. All others are mg/L.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.155. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User) for Ingestion of Deer at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	6.43E+03	NA	NA	NA
Antimony	1.00E+01	8.64E-11	7.63E-11	2.48E-11
Arsenic	6.00E+00	NA	NA	NA
Barium	6.60E+01	3.30E-09	2.91E-09	9.48E-10
Beryllium	5.80E-01	NA	NA	NA
Cadmium	2.10E+00	4.65E-10	4.11E-10	1.34E-10
Chromium	3.90E+01	7.34E-08	6.49E-08	2.11E-08
Copper	3.50E+01	2.28E-07	2.01E-07	6.55E-08
Iron	9.33E+03	3.52E-05	3.12E-05	1.01E-05
Lead	2.10E+01	2.04E-09	1.80E-09	5.87E-10
Manganese	4.56E+02	1.46E-07	1.29E-07	4.21E-08
Mercury	1.10E-01	NA	NA	NA
Molybdenum	4.60E+00	2.08E-09	1.84E-09	5.99E-10
Nickel	1.60E+01	2.43E-08	2.15E-08	6.99E-09
Selenium	2.20E+01	NA	NA	NA
Silver	2.90E+00	7.46E-09	6.60E-09	2.15E-09
Uranium	1.64E+02	NA	NA	NA
Vanadium	1.70E+01	NA	NA	NA
Zinc	3.80E+01	3.23E-06	2.86E-06	9.30E-07
<u>Organic Compounds</u>				
Fluoranthene	2.20E+00	NA	NA	NA
Pyrene	1.40E+00	NA	NA	NA
Total PCB (1)	1.10E+00	NA	NA	NA
Total PAH (2)	1.20E+00	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	4.80E-01	6.26E-03	3.41E-03	3.74E-04
Cesium-137	7.60E-01	1.74E+01	9.46E+00	1.04E+00
Cobalt-60	ND	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA
Plutonium-239/240	4.80E+00	1.56E-02	8.50E-03	9.32E-04
Technetium-99	3.20E+01	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA
Uranium-234	3.00E+00	3.17E-01	1.73E-01	1.89E-02
Uranium-235	NA	NA	NA	NA
Uranium-238	4.30E+00	4.55E-01	2.48E-01	2.72E-02

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.156. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User) for Ingestion of Quail at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	6.43E+03	9.66E-08	4.38E-08	2.55E-08
Antimony	1.00E+01	5.89E-12	2.68E-12	1.56E-12
Arsenic	6.00E+00	1.36E-10	6.19E-11	3.60E-11
Barium	6.60E+01	7.52E-09	3.41E-09	1.98E-09
Beryllium	5.80E-01	7.13E-12	3.24E-12	1.88E-12
Cadmium	2.10E+00	4.61E-08	2.09E-08	1.22E-08
Chromium	3.90E+01	3.89E-09	1.77E-09	1.03E-09
Copper	3.50E+01	5.53E-07	2.51E-07	1.46E-07
Iron	9.33E+03	9.53E-05	4.32E-05	2.51E-05
Lead	2.10E+01	1.04E-10	4.74E-11	2.76E-11
Manganese	4.56E+02	6.51E-07	2.95E-07	1.72E-07
Mercury	1.10E-01	1.22E-10	5.55E-11	3.23E-11
Molybdenum	4.60E+00	9.50E-08	4.31E-08	2.51E-08
Nickel	1.60E+01	NA	NA	NA
Selenium	2.20E+01	4.63E-06	2.10E-06	1.22E-06
Silver	2.90E+00	2.15E-07	9.75E-08	5.67E-08
Uranium	1.64E+02	NA	NA	NA
Vanadium	1.70E+01	NA	NA	NA
Zinc	3.80E+01	9.78E-06	4.44E-06	2.58E-06
<u>Organic Compounds</u>				
Fluoranthene	2.20E+00	NA	NA	NA
Pyrene	1.40E+00	NA	NA	NA
Total PCB (1)	1.10E+00	NA	NA	NA
Total PAH (2)	1.20E+00	2.08E-08	9.46E-09	5.50E-09
<u>Radionuclides</u>				
Americium-241	4.80E-01	5.03E-02	1.40E-02	2.74E-03
Cesium-137	7.60E-01	1.73E+02	4.83E+01	9.43E+00
Cobalt-60	ND	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA
Plutonium-239/240	4.80E+00	4.87E-01	1.36E-01	2.65E-02
Technetium-99	3.20E+01	NA	NA	NA
Thorium-228	4.70E-01	1.15E-03	3.21E-04	6.27E-05
Thorium-230	6.70E+01	1.64E-01	4.58E-02	8.93E-03
Thorium-232	5.60E-01	1.37E-03	3.83E-04	7.47E-05
Uranium-234	3.00E+00	5.74E+01	1.60E+01	3.12E+00
Uranium-235	NA	NA	NA	NA
Uranium-238	4.30E+00	8.23E+01	2.30E+01	4.48E+00

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.157. Chronic Daily Intakes (Carcinogenic-Current/Future Recreational User) for Ingestion of Rabbit at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	6.43E+03	NA	NA	NA
Antimony	1.00E+01	9.43E-10	4.16E-10	2.48E-10
Arsenic	6.00E+00	NA	NA	NA
Barium	6.60E+01	3.54E-08	1.56E-08	9.33E-09
Beryllium	5.80E-01	NA	NA	NA
Cadmium	2.10E+00	4.71E-09	2.08E-09	1.24E-09
Chromium	3.90E+01	8.05E-07	3.55E-07	2.12E-07
Copper	3.50E+01	2.28E-06	1.00E-06	6.00E-07
Iron	9.33E+03	3.91E-04	1.73E-04	1.03E-04
Lead	2.10E+01	2.20E-08	9.69E-09	5.79E-09
Manganese	4.56E+02	1.47E-06	6.48E-07	3.87E-07
Mercury	1.10E-01	NA	NA	NA
Molybdenum	4.60E+00	2.13E-08	9.39E-09	5.61E-09
Nickel	1.60E+01	2.56E-07	1.13E-07	6.75E-08
Selenium	2.20E+01	NA	NA	NA
Silver	2.90E+00	7.42E-08	3.27E-08	1.95E-08
Uranium	1.64E+02	NA	NA	NA
Vanadium	1.70E+01	NA	NA	NA
Zinc	3.80E+01	3.22E-05	1.42E-05	8.47E-06
<u>Organic Compounds</u>				
Fluoranthene	2.20E+00	NA	NA	NA
Pyrene	1.40E+00	NA	NA	NA
Total PCB (1)	1.10E+00	NA	NA	NA
Total PAH (2)	1.20E+00	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	4.80E-01	7.01E-02	1.90E-02	3.82E-03
Cesium-137	7.60E-01	1.87E+02	5.06E+01	1.02E+01
Cobalt-60	ND	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA
Plutonium-239/240	4.80E+00	1.75E-01	4.73E-02	9.53E-03
Technetium-99	3.20E+01	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA
Uranium-234	3.00E+00	3.51E+00	9.52E-01	1.92E-01
Uranium-235	NA	NA	NA	NA
Uranium-238	4.30E+00	5.04E+00	1.36E+00	2.75E-01

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.158. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User-Adult) for Sediment at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	5.45E-04	4.56E-03	1.02E-08	NA
Antimony	1.00E+01	8.48E-07	7.10E-06	1.59E-11	NA
Arsenic	6.00E+00	5.09E-07	2.56E-06	9.51E-12	NA
Barium	6.60E+01	5.60E-06	4.69E-05	1.05E-10	NA
Beryllium	5.80E-01	4.92E-08	4.12E-07	9.20E-13	NA
Cadmium	2.10E+00	1.78E-07	2.98E-08	3.33E-12	NA
Chromium	3.90E+01	3.31E-06	2.77E-05	6.18E-11	NA
Copper	3.50E+01	2.97E-06	2.49E-05	5.55E-11	NA
Iron	9.33E+03	7.91E-04	6.63E-03	1.48E-08	NA
Lead	2.10E+01	1.78E-06	1.49E-05	3.33E-11	NA
Manganese	4.56E+02	3.87E-05	3.24E-04	7.23E-10	NA
Mercury	1.10E-01	9.33E-09	7.81E-08	1.74E-13	NA
Molybdenum	4.60E+00	3.90E-07	3.27E-06	7.29E-12	NA
Nickel	1.60E+01	1.36E-06	1.14E-05	2.54E-11	NA
Selenium	2.20E+01	1.87E-06	1.56E-05	3.49E-11	NA
Silver	2.90E+00	2.46E-07	2.06E-06	4.60E-12	NA
Uranium	1.64E+02	1.39E-05	1.16E-04	2.60E-10	NA
Vanadium	1.70E+01	1.44E-06	1.21E-05	2.70E-11	NA
Zinc	3.80E+01	3.22E-06	2.70E-05	6.03E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	1.87E-07	4.06E-06	3.49E-12	NA
Pyrene	1.40E+00	1.19E-07	1.99E-06	2.22E-12	NA
Total PCB (1)	1.10E+00	9.33E-08	2.19E-06	1.74E-12	NA
Total PAH (2)	1.20E+00	1.02E-07	2.22E-06	1.90E-12	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	NA	NA	NA	NA
Cesium-137	7.60E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA	NA
Plutonium-239/240	4.80E+00	NA	NA	NA	NA
Technetium-99	3.20E+01	NA	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA	NA
Uranium-234	3.00E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	NA	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.159. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User-Teen) for Sediment at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	1.20E-03	2.12E-02	2.24E-08	NA
Antimony	1.00E+01	1.86E-06	3.30E-05	3.49E-11	NA
Arsenic	6.00E+00	1.12E-06	1.19E-05	2.09E-11	NA
Barium	6.60E+01	1.23E-05	2.18E-04	2.30E-10	NA
Beryllium	5.80E-01	1.08E-07	1.91E-06	2.02E-12	NA
Cadmium	2.10E+00	3.91E-07	1.39E-07	7.33E-12	NA
Chromium	3.90E+01	7.25E-06	1.29E-04	1.36E-10	NA
Copper	3.50E+01	6.51E-06	1.16E-04	1.22E-10	NA
Iron	9.33E+03	1.74E-03	3.08E-02	3.26E-08	NA
Lead	2.10E+01	3.91E-06	6.93E-05	7.33E-11	NA
Manganese	4.56E+02	8.48E-05	1.50E-03	1.59E-09	NA
Mercury	1.10E-01	2.05E-08	3.63E-07	3.84E-13	NA
Molybdenum	4.60E+00	8.56E-07	1.52E-05	1.60E-11	NA
Nickel	1.60E+01	2.98E-06	5.28E-05	5.58E-11	NA
Selenium	2.20E+01	4.09E-06	7.26E-05	7.68E-11	NA
Silver	2.90E+00	5.39E-07	9.57E-06	1.01E-11	NA
Uranium	1.64E+02	3.05E-05	5.41E-04	5.72E-10	NA
Vanadium	1.70E+01	3.16E-06	5.61E-05	5.93E-11	NA
Zinc	3.80E+01	7.07E-06	1.25E-04	1.33E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	4.09E-07	1.89E-05	7.68E-12	NA
Pyrene	1.40E+00	2.60E-07	9.24E-06	4.88E-12	NA
Total PCB (1)	1.10E+00	2.05E-07	1.02E-05	3.84E-12	NA
Total PAH (2)	1.20E+00	2.23E-07	1.03E-05	4.19E-12	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	NA	NA	NA	NA
Cesium-137	7.60E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA	NA
Plutonium-239/240	4.80E+00	NA	NA	NA	NA
Technetium-99	3.20E+01	NA	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA	NA
Uranium-234	3.00E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	NA	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.160. Chronic Daily Intakes (Noncarcinogenic- Current Recreational User- Child) for Sediment at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	4.05E-03	2.26E-03	3.78E-09	NA
Antimony	1.00E+01	6.30E-06	3.53E-06	5.89E-12	NA
Arsenic	6.00E+00	3.78E-06	1.27E-06	3.53E-12	NA
Barium	6.60E+01	4.16E-05	2.33E-05	3.89E-11	NA
Beryllium	5.80E-01	3.65E-07	2.04E-07	3.41E-13	NA
Cadmium	2.10E+00	1.32E-06	1.48E-08	1.24E-12	NA
Chromium	3.90E+01	2.46E-05	1.37E-05	2.30E-11	NA
Copper	3.50E+01	2.21E-05	1.23E-05	2.06E-11	NA
Iron	9.33E+03	5.88E-03	3.29E-03	5.49E-09	NA
Lead	2.10E+01	1.32E-05	7.40E-06	1.24E-11	NA
Manganese	4.56E+02	2.87E-04	1.61E-04	2.68E-10	NA
Mercury	1.10E-01	6.93E-08	3.88E-08	6.48E-14	NA
Molybdenum	4.60E+00	2.90E-06	1.62E-06	2.71E-12	NA
Nickel	1.60E+01	1.01E-05	5.64E-06	9.42E-12	NA
Selenium	2.20E+01	1.39E-05	7.76E-06	1.30E-11	NA
Silver	2.90E+00	1.83E-06	1.02E-06	1.71E-12	NA
Uranium	1.64E+02	1.03E-04	5.78E-05	9.66E-11	NA
Vanadium	1.70E+01	1.07E-05	5.99E-06	1.00E-11	NA
Zinc	3.80E+01	2.39E-05	1.34E-05	2.24E-11	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	1.39E-06	2.02E-06	1.30E-12	NA
Pyrene	1.40E+00	8.82E-07	9.87E-07	8.24E-13	NA
Total PCB (1)	1.10E+00	6.93E-07	1.09E-06	6.48E-13	NA
Total PAH (2)	1.20E+00	7.56E-07	1.10E-06	7.07E-13	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	NA	NA	NA	NA
Cesium-137	7.60E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA	NA
Plutonium-239/240	4.80E+00	NA	NA	NA	NA
Technetium-99	3.20E+01	NA	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA	NA
Uranium-234	3.00E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	NA	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC. Therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.161. Chronic Daily Intakes (Noncarcinogenic-Future Recreational User-Child) for Sediment at the NSDD,
Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake			
		Ingestion Intake Hazard	Dermal Intake Hazard	Inhalation Intake Hazard	External Exposure Hazard
<u>Inorganic Chemicals (Metals)</u>					
Aluminum	6.43E+03	7.07E-03	3.17E-02	6.63E-08	NA
Antimony	1.00E+01	1.10E-05	4.94E-05	1.03E-10	NA
Arsenic	6.00E+00	6.60E-06	1.78E-05	6.19E-11	NA
Barium	6.60E+01	7.26E-05	3.26E-04	6.81E-10	NA
Beryllium	5.80E-01	6.38E-07	2.86E-06	5.98E-12	NA
Cadmium	2.10E+00	2.31E-06	2.07E-07	2.17E-11	NA
Chromium	3.90E+01	4.29E-05	1.92E-04	4.02E-10	NA
Copper	3.50E+01	3.85E-05	1.73E-04	3.61E-10	NA
Iron	9.33E+03	1.03E-02	4.60E-02	9.62E-08	NA
Lead	2.10E+01	2.31E-05	1.04E-04	2.17E-10	NA
Manganese	4.56E+02	5.02E-04	2.25E-03	4.70E-09	NA
Mercury	1.10E-01	1.21E-07	5.43E-07	1.13E-12	NA
Molybdenum	4.60E+00	5.06E-06	2.27E-05	4.74E-11	NA
Nickel	1.60E+01	1.76E-05	7.90E-05	1.65E-10	NA
Selenium	2.20E+01	2.42E-05	1.09E-04	2.27E-10	NA
Silver	2.90E+00	3.19E-06	1.43E-05	2.99E-11	NA
Uranium	1.64E+02	1.80E-04	8.09E-04	1.69E-09	NA
Vanadium	1.70E+01	1.87E-05	8.39E-05	1.75E-10	NA
Zinc	3.80E+01	4.18E-05	1.88E-04	3.92E-10	NA
<u>Organic Compounds</u>					
Fluoranthene	2.20E+00	2.42E-06	2.82E-05	2.27E-11	NA
Pyrene	1.40E+00	1.54E-06	1.38E-05	1.44E-11	NA
Total PCB (1)	1.10E+00	1.21E-06	1.52E-05	1.13E-11	NA
Total PAH (2)	1.20E+00	1.32E-06	1.54E-05	1.24E-11	NA
<u>Radionuclides</u>					
Americium-241	4.80E-01	NA	NA	NA	NA
Cesium-137	7.60E-01	NA	NA	NA	NA
Cobalt-60	ND	NA	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA	NA
Plutonium-239/240	4.80E+00	NA	NA	NA	NA
Technetium-99	3.20E+01	NA	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA	NA
Uranium-234	3.00E+00	NA	NA	NA	NA
Uranium-235	NA	NA	NA	NA	NA
Uranium-238	4.30E+00	NA	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.162. Chronic Daily Intakes (Noncarcinogenic- Current Recreational User- Child) for Wading in Surface Water at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Dermal Intake Hazard
		Current Child
<u>Inorganic Chemicals (Metals)</u>		
Aluminum	NS	NA
Antimony	NS	NA
Arsenic	NS	NA
Barium	NS	NA
Beryllium	NS	NA
Cadmium	NS	NA
Chromium	NS	NA
Copper	NS	NA
Iron	NS	NA
Lead	NS	NA
Manganese	NS	NA
Mercury	NS	NA
Molybdenum	NS	NA
Nickel	NS	NA
Selenium	NS	NA
Silver	NS	NA
Uranium	NS	NA
Vanadium	NS	NA
Zinc	NS	NA
<u>Organic Compounds</u>		
Fluoranthene	NS	NA
Pyrene	NS	NA
Total PCB (1)	NA	NA
Total PAH (2)	NS	NA
<u>Radionuclides</u>		
Americium-241	NS	NA
Cesium-137	NS	NA
Cobalt-60	NS	NA
Neptunium-237	NS	NA
Plutonium-239/240	NS	NA
Technetium-99	NS	NA
Thorium-228	NS	NA
Thorium-230	NS	NA
Thorium-232	NS	NA
Uranium-234	NS	NA
Uranium-235	NS	NA
Uranium-238	1.59E+03	NA
<u>VOCs</u>		
Trichloroethene	1.40E-03	6.20E-07

Units for radionuclides at pCi/L. All others are mg/L.

NA: Indicate that the exposure route is not appropriate to the COPC. Therefore, the CDI was not calculated.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.163. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User) for Wading in Surface Water at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Dermal Intake	Dermal Intake	Dermal Intake
		Hazard	Hazard	Hazard
		Adult	Teen	Future Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	NS	NA	NA	NA
Antimony	NS	NA	NA	NA
Arsenic	NS	NA	NA	NA
Barium	NS	NA	NA	NA
Beryllium	NS	NA	NA	NA
Cadmium	NS	NA	NA	NA
Chromium	NS	NA	NA	NA
Copper	NS	NA	NA	NA
Iron	NS	NA	NA	NA
Lead	NS	NA	NA	NA
Manganese	NS	NA	NA	NA
Mercury	NS	NA	NA	NA
Molybdenum	NS	NA	NA	NA
Nickel	NS	NA	NA	NA
Selenium	NS	NA	NA	NA
Silver	NS	NA	NA	NA
Uranium	NS	NA	NA	NA
Vanadium	NS	NA	NA	NA
Zinc	NS	NA	NA	NA
<u>Organic Compounds</u>				
Fluoranthene	NS	NA	NA	NA
Pyrene	NS	NA	NA	NA
Total PCB (1)	NA	NA	NA	NA
Total PAH (2)	NS	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	NS	NA	NA	NA
Cesium-137	NS	NA	NA	NA
Cobalt-60	NS	NA	NA	NA
Neptunium-237	NS	NA	NA	NA
Plutonium-239/240	NS	NA	NA	NA
Technetium-99	NS	NA	NA	NA
Thorium-228	NS	NA	NA	NA
Thorium-230	NS	NA	NA	NA
Thorium-232	NS	NA	NA	NA
Uranium-234	NS	NA	NA	NA
Uranium-235	NS	NA	NA	NA
Uranium-238	1.59E+03	NA	NA	NA
<u>VOCs</u>				
Trichloroethene	1.40E-03	1.08E-06	3.78E-06	5.65E-06

Units for radionuclides at pCi/L. All others are mg/L.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

NS: Not selected as a COPC.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.164. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User) for
Ingestion of Deer at the NSDD, Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	6.43E+03	NA	NA	NA
Antimony	1.00E+01	2.74E-10	4.47E-10	2.90E-10
Arsenic	6.00E+00	NA	NA	NA
Barium	6.60E+01	1.05E-08	1.71E-08	1.11E-08
Beryllium	5.80E-01	NA	NA	NA
Cadmium	2.10E+00	1.48E-09	2.41E-09	1.56E-09
Chromium	3.90E+01	2.33E-07	3.80E-07	2.46E-07
Copper	3.50E+01	7.22E-07	1.18E-06	7.64E-07
Iron	9.33E+03	1.12E-04	1.82E-04	1.18E-04
Lead	2.10E+01	6.48E-09	1.06E-08	6.85E-09
Manganese	4.56E+02	4.64E-07	7.57E-07	4.91E-07
Mercury	1.10E-01	NA	NA	NA
Molybdenum	4.60E+00	6.60E-09	1.08E-08	6.98E-09
Nickel	1.60E+01	7.71E-08	1.26E-07	8.15E-08
Selenium	2.20E+01	NA	NA	NA
Silver	2.90E+00	2.37E-08	3.86E-08	2.50E-08
Uranium	1.64E+02	NA	NA	NA
Vanadium	1.70E+01	NA	NA	NA
Zinc	3.80E+01	1.03E-05	1.67E-05	1.08E-05
<u>Organic Compounds</u>				
Fluoranthene	2.20E+00	NA	NA	NA
Pyrene	1.40E+00	NA	NA	NA
Total PCB (1)	1.10E+00	NA	NA	NA
Total PAH (2)	1.20E+00	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	4.80E-01	NA	NA	NA
Cesium-137	7.60E-01	NA	NA	NA
Cobalt-60	ND	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA
Plutonium-239/240	4.80E+00	NA	NA	NA
Technetium-99	3.20E+01	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA
Uranium-234	3.00E+00	NA	NA	NA
Uranium-235	NA	NA	NA	NA
Uranium-238	4.30E+00	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

**Attachment D4.165. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User) for
Ingestion of Quail at the NSDD, Excluding the Hot Spot**

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	6.43E+03	3.08E-07	2.56E-07	2.97E-07
Antimony	1.00E+01	1.88E-11	1.56E-11	1.82E-11
Arsenic	6.00E+00	4.34E-10	3.61E-10	4.20E-10
Barium	6.60E+01	2.40E-08	1.99E-08	2.32E-08
Beryllium	5.80E-01	2.27E-11	1.89E-11	2.20E-11
Cadmium	2.10E+00	1.47E-07	1.22E-07	1.42E-07
Chromium	3.90E+01	1.24E-08	1.03E-08	1.20E-08
Copper	3.50E+01	1.76E-06	1.46E-06	1.70E-06
Iron	9.33E+03	3.04E-04	2.52E-04	2.93E-04
Lead	2.10E+01	3.33E-10	2.77E-10	3.22E-10
Manganese	4.56E+02	2.07E-06	1.72E-06	2.00E-06
Mercury	1.10E-01	3.90E-10	3.24E-10	3.76E-10
Molybdenum	4.60E+00	3.03E-07	2.52E-07	2.92E-07
Nickel	1.60E+01	NA	NA	NA
Selenium	2.20E+01	1.48E-05	1.23E-05	1.43E-05
Silver	2.90E+00	6.85E-07	5.69E-07	6.62E-07
Uranium	1.64E+02	NA	NA	NA
Vanadium	1.70E+01	NA	NA	NA
Zinc	3.80E+01	3.12E-05	2.59E-05	3.01E-05
<u>Organic Compounds</u>				
Fluoranthene	2.20E+00	NA	NA	NA
Pyrene	1.40E+00	NA	NA	NA
Total PCB (1)	1.10E+00	NA	NA	NA
Total PAH (2)	1.20E+00	6.64E-08	5.52E-08	6.41E-08
<u>Radionuclides</u>				
Americium-241	4.80E-01	NA	NA	NA
Cesium-137	7.60E-01	NA	NA	NA
Cobalt-60	ND	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA
Plutonium-239/240	4.80E+00	NA	NA	NA
Technetium-99	3.20E+01	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA
Uranium-234	3.00E+00	NA	NA	NA
Uranium-235	NA	NA	NA	NA
Uranium-238	4.30E+00	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.

Attachment D4.166. Chronic Daily Intakes (Noncarcinogenic-Current/Future Recreational User) for Ingestion of Rabbit at the NSDD, Excluding the Hot Spot

COPC	Exposure Point Concentration	Exposure Route - Chronic Daily Intake		
		Ingestion Intake	Ingestion Intake	Ingestion Intake
		Hazard Adult	Hazard Teen	Hazard Child
<u>Inorganic Chemicals (Metals)</u>				
Aluminum	6.43E+03	NA	NA	NA
Antimony	1.00E+01	3.00E-09	2.43E-09	2.90E-09
Arsenic	6.00E+00	NA	NA	NA
Barium	6.60E+01	1.13E-07	9.13E-08	1.09E-07
Beryllium	5.80E-01	NA	NA	NA
Cadmium	2.10E+00	1.50E-08	1.21E-08	1.45E-08
Chromium	3.90E+01	2.56E-06	2.07E-06	2.47E-06
Copper	3.50E+01	7.25E-06	5.87E-06	6.99E-06
Iron	9.33E+03	1.25E-03	1.01E-03	1.20E-03
Lead	2.10E+01	7.00E-08	5.67E-08	6.75E-08
Manganese	4.56E+02	4.68E-06	3.79E-06	4.52E-06
Mercury	1.10E-01	NA	NA	NA
Molybdenum	4.60E+00	6.78E-08	5.49E-08	6.54E-08
Nickel	1.60E+01	8.15E-07	6.60E-07	7.87E-07
Selenium	2.20E+01	NA	NA	NA
Silver	2.90E+00	2.36E-07	1.91E-07	2.28E-07
Uranium	1.64E+02	NA	NA	NA
Vanadium	1.70E+01	NA	NA	NA
Zinc	3.80E+01	1.02E-04	8.29E-05	9.88E-05
<u>Organic Compounds</u>				
Fluoranthene	2.20E+00	NA	NA	NA
Pyrene	1.40E+00	NA	NA	NA
Total PCB (1)	1.10E+00	NA	NA	NA
Total PAH (2)	1.20E+00	NA	NA	NA
<u>Radionuclides</u>				
Americium-241	4.80E-01	NA	NA	NA
Cesium-137	7.60E-01	NA	NA	NA
Cobalt-60	ND	NA	NA	NA
Neptunium-237	2.80E-01	NA	NA	NA
Plutonium-239/240	4.80E+00	NA	NA	NA
Technetium-99	3.20E+01	NA	NA	NA
Thorium-228	4.70E-01	NA	NA	NA
Thorium-230	6.70E+01	NA	NA	NA
Thorium-232	5.60E-01	NA	NA	NA
Uranium-234	3.00E+00	NA	NA	NA
Uranium-235	NA	NA	NA	NA
Uranium-238	4.30E+00	NA	NA	NA

Units for radionuclides at pCi/g. All others are mg/kg.

NA: Indicate that the exposure route is not appropriate to the COPC; therefore, the CDI was not calculated.

ND: Not detected.

(1) Chemical information for Aroclor 1254 was used to calculate risks and hazards.

(2) Chemical information for benzo(a)pyrene was used to calculate risks and hazards.