

APPENDIX L
FATE AND TRANSPORT MODELING RESULTS

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Table L-1. Physical and Chemical Properties of Metal SRCs at Load Line 4

Chemicals of Interest	K _d (L/kg)	Reference	H' (atm-m ³ /mol)	Reference	C _w (mg/L)	C _w Reference	GSSL (DF = 1)	Reference
Aluminum	1.50E+03	b	NA		3.65E+01	PRG9	5.48E+04	
Antimony	4.50E+01	a	NA		6.00E-03	MCL	3.00E-01	a
Arsenic	2.90E+01	a	NA		1.00E-02	MCL	2.90E-01	a
Barium	4.10E+01	a	NA		2.00E+00	MCL	8.20E+01	a
Beryllium	7.90E+02	a	NA		4.00E-03	MCL	3.00E+00	a
Cadmium	7.50E+01	a	NA		5.00E-03	MCL	4.00E-01	a
Chromium (total)	1.90E+01	a	NA		1.00E-01	MCL	2.00E+00	a
Cobalt	1.30E+03	c	NA		7.30E-01	PRG9	9.49E+02	
Copper	3.50E+01	b	NA		1.30E+00	MCL	4.58E+01	
Cyanide (amenable)	9.90E+00	a	NA		7.30E-01	PRG9	2.00E+00	a
Lead	1.60E+04	c	NA		1.50E-02	MCL	2.40E+02	a
Manganese	7.50E+02	c	NA		8.76E-01	PRG9	6.57E+02	
Mercury	5.20E+01	a	1.14E-02	a	2.00E-03	MCL	1.00E-01	
Nickel	6.50E+01	a	NA		7.30E-01	PRG9	7.00E+00	a
Selenium	5.00E+00	a	NA		5.00E-02	MCL	3.00E-01	a
Thallium	7.10E+01	a	NA		2.00E-03	MCL	4.00E-02	a
Vanadium	1.00E+03	a	NA		2.56E-01	PRG9	3.00E+02	
Zinc	6.20E+01	a	NA		1.10E+01	PRG9	6.20E+02	a

References:

- a. EPA Soil Screening Guidance: Technical Background Document, May 1996.
 - b. Baes and Sharp 1983.
 - c. Sheppard and Thibault 1990.
- C_w = Target groundwater concentration (either MCL or PRG9).
 DF = Dilution factor.
 GSSL = Generic soil screening level.
 H' = Henry's Law constant.
 K_d = Distribution coefficient.
 MCL = Clean Water Act drinking water maximum contaminant level.
 NA = Not applicable.
 PRG9 = EPA Region 9 preliminary remedial goals.
 SRC = Site-related contaminant.

Table L-2. Physical and Chemical Properties of Organic SRCs at Load Line 4

Chemicals of Interest	K _{oc} (L/kg)		H' (atm-m ³ /mol)		C _w (mg/L)	C _w Reference
<i>Volatile Organic Compounds</i>						
2-Butanone (MEK)	1.15E+00	d	6.61E-07	d	1.90E+00	PRG9
Acetone	5.75E-01	a	3.88E-05	a	6.08E-01	PRG9
Benzene	6.17E+01	a	5.55E-03	a	5.00E-03	MCL
Chloroform	5.25E+01	a	3.67E-03	a	8.00E-02	MCL
Toluene	1.40E+02	a	6.64E-03	a	1.00E+00	MCL
Xylenes (total)	2.41E+02	a	5.19E-03	a	2.10E-01	PRG9
<i>Semivolatile Organic Compounds</i>						
2-Methylnaphthalene	7.50E+03	e	5.18E-04	e	NF	
Acenaphthylene	7.40E+03	d	1.14E-04	d	3.70E-01	PRG9
Anthracene	2.35E+04	a	6.50E-05	a	1.80E+00	PRG9
Benzo(a)anthracene	3.58E+05	a	3.35E-06	a	9.20E-05	PRG9
Benzo(a)pyrene	9.69E+05	a	1.13E-06	a	2.00E-04	MCL
Benzo(b)fluoranthene	1.23E+06	a	1.11E-04	a	9.20E-05	PRG9
Benzo(g,h,i)perylene	1.07E+07	d	1.40E-07	d	NF	
Benzo(k)fluoranthene	1.23E+06	a	8.29E-07	a	9.20E-04	PRG9
Bis(2-ethylhexyl) phthalate	1.11E+05	a	1.02E-07	a	6.00E-03	MCL
Carbazole	3.39E+03	a	1.53E-08	a	3.36E-03	PRG9
Chrysene	3.98E+05	a	9.46E-05		9.20E-03	PRG9
Dibenz(a,h)anthracene	1.79E+06	a	1.47E-08		9.20E-06	PRG9
Dibenzofuran	8.31E+03	d	1.26E-05	e	2.43E-02	PRG9
Di-n-butyl phthalate	1.57E+03	a	9.38E-10	a	3.60E+00	PRG9
Fluoranthene	4.91E+04	a	1.61E-05	a	1.50E+00	PRG9
Fluorene	7.71E+03	a	6.36E-05	a	2.40E-01	PRG9
Indeno(1,2,3-cd)pyrene	3.47E+06	a	1.60E-06	a	9.20E-05	PRG9
Naphthalene	1.19E+03	a	4.83E-04	a	6.20E-03	PRG9
Phenanthrene	1.82E+04	d	3.93E-05	d	1.10E+00	f
Pyrene	6.80E+04	a	1.10E-05	a	1.80E-01	PRG9
<i>Pesticides and PCBs</i>						
Aldrin	4.87E+04	a	1.70E-04	a	3.95E-06	PRG9
PCB-1260	3.09E+05	a	3.36E-04	d	4.30E-05	PRG9
alpha-Chlordane	5.13E+04	a	4.86E-05	a	1.92E-04	PRG9
gamma-Chlordane	5.13E+04	a	4.86E-05	a	1.92E-04	PRG9
DDD	4.58E+04	a	4.00E-06	a	2.80E-04	PRG9
DDE	8.64E+04	a	2.10E-05	a	1.98E-04	PRG9
DDT	6.78E+05	a	8.10E-06	a	1.98E-04	PRG9
Dieldrin	2.55E+04	a	1.51E-05	a	4.20E-06	PRG9
Endosulfan II	2.04E-03	a	1.12E-05	a	2.19E-01	PRG9
Endrin	1.08E+04	a	7.52E-06	a	1.09E-02	PRG9
Endrin Aldehyde	1.08E+04	a	7.52E-06	a	1.09E-02	PRG9
Endrin Ketone	1.08E+04	f	4.00E-07	f	1.09E-02	PRG9
Heptachlor	9.53E+03	a	1.48E+00	a	1.49E-05	PRG9
Heptachlor Epoxide	8.32E+04	a	9.50E-06	a	7.39E-06	PRG9
Methoxychlor	8.00E+04	a	1.58E-05	a	1.83E-01	PRG9
PCB-1254	3.09E+05	a	8.37E-03	d	4.30E-05	PRG9

Table L-2. Physical and Chemical Properties of Organic SRCs at Load Line 4

Chemicals of Interest	K_{oc} (L/kg)		H' (atm-m ³ /mol)		C_w (mg/L)	C_w Reference
<i>Explosives</i>						
HMX	NF		NF		1.80E+00	PRG9
Nitrocellulose	NF		NF		NF	
RDX	4.67E+00	f	NF		6.10E-04	PRG9
2,4,6-Trinitrotoluene	2.13E+05	d	NF		2.24E-03	PRG9

References:

- a. EPA Soil Screening Guidance: Technical Background Document, May 1996.
 - b. Baes and Sharp 1983.
 - c. Sheppard and Thibault 1990.
 - d. RREL = Risk Reduction Engineering Laboratory (EPA 1994).
 - e. RBCA = Risk-based corrective action manual and protocol (SAIC 1999).
 - f. Calculated from EPA Superfund Office of Emergency and Remedial Response Soil Screening Guidance <http://risk.lsd.ornl.gov>.
- C_w = Target groundwater concentration (either MCL or PRG9).
 DDD = Dichlorodiphenyldichloroethane.
 DDE = Dichlorodiphenyldichloroethylene.
 DDT = Dichlorodiphenyltrichloroethane.
 H' = Henry's Law constant.
 HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine.
 K_d = Distribution coefficient.
 K_{oc} = Octanol-water coefficient.
 MCL = Clean Water Act drinking water maximum contaminant level.
 NA = Not available.
 NF = Not found.
 PCB = Polychlorinated biphenyl.
 PRG9 = EPA Region 9 preliminary remedial goals.
 RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.
 SRC = Site-related contaminant.

Table L-3. Physical and Chemical Properties of Initial CMCOPCs at Load Line 4 Required for SESOIL Modeling

Site-Related Chemicals	Molecular Weight	Solubility (mg/L)	Kd or Koc (L/kg)	Diffusion Coefficient in Air (cm ² /s)	Biodegradation Rate (1/d)
<i>Metals</i>					
Chromium	52.0	1.20E+04	1.90E+01	NA	NA
Selenium	79.0	1.00E+03	5.00E+00	NA	NA
<i>Explosives</i>					
RDX	222.3	6.00E+01	4.67E+00	1.00E-02	NF

CMCOPC = Contaminant migration contaminant of potential concern.

NA = Not applicable.

NF = Not found.

Kd = Distribution coefficient.

Koc = Organic-carbon partition coefficient.

RDX = Hexahydro-1,3,5,7-trinitro-1,3,5-triazine.

SESOIL = Seasonal Soil Compartment (model).

**Table L-4. Climatic Data Used in HELP Model for the Load Line 4, Ravenna
(Station: Youngstown WSO AP, Ohio)^a**

Month	Air Temp (°C)	Cloud Cover	Humidity	ALBEDO	Evapotranspiration^b (cm/d)	Precipitation (cm)	Duration (days)	Storms per Month	Model Days in Month
October	12	0.60	0.70	0.17	0	6.46	0.42	5.33	30.4
November	5.22	0.70	0.75	0.24	0	7.4	0.53	6.67	30.4
December	-1.06	0.80	0.75	0.31	0	7.06	0.57	6.14	30.4
January	-2.94	0.80	0.80	0.3	0	7.06	0.61	5.69	30.4
February	-2.33	0.70	0.75	0.32	0	5.76	0.53	5.09	30.4
March	2.33	0.70	0.70	0.29	0	8.26	0.55	7.14	30.4
April	9.11	0.70	0.70	0.19	0	8.83	0.48	7.4	30.4
May	14.61	0.60	0.70	0.16	0	8.46	0.45	7.15	30.4
June	19.89	0.60	0.70	0.16	0	9.07	0.36	6.57	30.4
July	21.89	0.50	0.70	0.16	0	9.8	0.3	6.06	30.4
August	21.11	0.55	0.70	0.16	0	8.14	0.3	6.06	30.4
September	17.67	0.55	0.70	0.16	0	7.85	0.4	5.44	30.4

^a 1996 data from Youngstown, Ohio, Weather Service Office - Airport Station.

^b Data calculated in SESOIL model. 0.00 indicates evapotranspiration is calculated from other climatic data.

Table L-5. Development of Preliminary CMCOPCs Based on Comparison of the SRCs Exposure Concentration with its GSSL with DAF = 1

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	Change Houses Aggregate	Metals	BARIUM	mg/kg	9.54E+01	8.20E+01	Yes
Soil	Change Houses Aggregate	Metals	CADMIUM	mg/kg	1.10E+00	4.00E-01	Yes
Soil	Change Houses Aggregate	Metals	CHROMIUM	mg/kg	2.39E+01	2.00E+00	Yes
Soil	Change Houses Aggregate	Metals	COPPER	mg/kg	3.08E+01	4.58E+01	
Soil	Change Houses Aggregate	Metals	LEAD	mg/kg	3.97E+02	2.40E+02	Yes
Soil	Change Houses Aggregate	Metals	MERCURY	mg/kg	4.23E-02	1.00E-01	
Soil	Change Houses Aggregate	Metals	THALLIUM	mg/kg	7.54E-01	4.00E-02	Yes
Soil	Change Houses Aggregate	Metals	ZINC	mg/kg	1.94E+02	6.20E+02	
Soil	Change Houses Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	5.10E-02	2.66E-02	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	2-METHYLNAPHTHALENE	mg/kg	2.70E-01		
Soil	Change Houses Aggregate	Organics-Semivolatile	ANTHRACENE	mg/kg	7.50E-02	5.90E+02	
Soil	Change Houses Aggregate	Organics-Semivolatile	BENZ(A)ANTHRACENE	mg/kg	5.30E-01	8.00E-02	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	BENZO(A)PYRENE	mg/kg	5.00E-01	4.10E-01	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	BENZO(B)FLUORANTHENE	mg/kg	6.70E-01	2.00E-01	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	BENZO(G,H,I)PERYLENE	mg/kg	3.10E-01		
Soil	Change Houses Aggregate	Organics-Semivolatile	BENZO(K)FLUORANTHENE	mg/kg	2.90E-01	2.00E+00	
Soil	Change Houses Aggregate	Organics-Semivolatile	CARBAZOLE	mg/kg	6.50E-02	3.00E-02	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	CHRYSENE	mg/kg	6.20E-01	8.00E+00	
Soil	Change Houses Aggregate	Organics-Semivolatile	DIBENZ(A,H)ANTHRACENE	mg/kg	8.50E-02	8.00E-02	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	DIBENZOFURAN	mg/kg	6.90E-02	4.09E-01	
Soil	Change Houses Aggregate	Organics-Semivolatile	FLUORANTHENE	mg/kg	9.30E-01	2.10E+02	
Soil	Change Houses Aggregate	Organics-Semivolatile	INDENO(1,2,3-CD)PYRENE	mg/kg	3.00E-01	7.00E-01	
Soil	Change Houses Aggregate	Organics-Semivolatile	NAPHTHALENE	mg/kg	1.80E-01	4.00E+00	
Soil	Change Houses Aggregate	Organics-Semivolatile	PHENANTHRENE	mg/kg	4.70E-01	4.03E+01	
Soil	Change Houses Aggregate	Organics-Semivolatile	PYRENE	mg/kg	8.70E-01	2.30E+02	
Soil	Change Houses Aggregate	Organics-Volatile	BENZENE	mg/kg	2.60E-03	2.00E-03	Yes
Soil	Change Houses Aggregate	Organics-Volatile	DIMETHYLBENZENE	mg/kg	3.00E-03	9.00E+00	
Soil	Change Houses Aggregate	Organics-Volatile	TOLUENE	mg/kg	5.60E-03	6.00E-01	
Soil	Explosives Handling Areas Aggregate	General	CHROMIUM, HEXAVALENT	mg/kg	1.90E+00	2.00E+00	
Soil	Explosives Handling Areas Aggregate	Metals	ALUMINUM	mg/kg	1.11E+04	5.48E+04	
Soil	Explosives Handling Areas Aggregate	Metals	ARSENIC	mg/kg	9.56E+00	2.90E-01	Yes
Soil	Explosives Handling Areas Aggregate	Metals	BARIUM	mg/kg	1.09E+02	8.20E+01	Yes
Soil	Explosives Handling Areas Aggregate	Metals	BERYLLIUM	mg/kg	1.23E+00	3.00E+00	
Soil	Explosives Handling Areas Aggregate	Metals	CADMIUM	mg/kg	1.20E+00	4.00E-01	Yes
Soil	Explosives Handling Areas Aggregate	Metals	CHROMIUM	mg/kg	1.51E+01	2.00E+00	Yes
Soil	Explosives Handling Areas Aggregate	Metals	COBALT	mg/kg	1.13E+01	9.49E+02	
Soil	Explosives Handling Areas Aggregate	Metals	COPPER	mg/kg	2.52E+01	4.58E+01	
Soil	Explosives Handling Areas Aggregate	Metals	CYANIDE	mg/kg	3.38E-01	2.00E+00	

Table L-5. Development of Preliminary CMCOPCs Based on Comparison of the SRCs Exposure Concentration with its GSSL with DAF = 1

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	Explosives Handling Areas Aggregate	Metals	LEAD	mg/kg	2.63E+02	2.40E+02	Yes
Soil	Explosives Handling Areas Aggregate	Metals	MANGANESE	mg/kg	9.54E+02	6.57E+02	Yes
Soil	Explosives Handling Areas Aggregate	Metals	MERCURY	mg/kg	5.04E-02	1.00E-01	
Soil	Explosives Handling Areas Aggregate	Metals	NICKEL	mg/kg	1.76E+01	7.00E+00	Yes
Soil	Explosives Handling Areas Aggregate	Metals	SELENIUM	mg/kg	1.21E+00	3.00E-01	Yes
Soil	Explosives Handling Areas Aggregate	Metals	THALLIUM	mg/kg	1.35E+00	4.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Metals	ZINC	mg/kg	2.51E+02	6.20E+02	
Soil	Explosives Handling Areas Aggregate	Organics-Explosives	2,4,6-TRINITROTOLUENE	mg/kg	3.32E-01	5.70E-04	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Explosives	HMX	mg/kg	9.83E-01	3.60E-01	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Explosives	RDX	mg/kg	1.36E+00	1.28E-04	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDD	mg/kg	1.89E-02	8.00E-01	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDE	mg/kg	1.23E-02	3.00E+00	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDT	mg/kg	7.37E-02	2.00E+00	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ALDRIN	mg/kg	1.14E-02	2.00E-02	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ALPHA-CHLORDANE	mg/kg	1.11E-02	5.00E-01	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	1.52E-02	2.00E-04	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDOSULFAN II	mg/kg	1.18E-02	9.00E-01	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN	mg/kg	7.41E-03	5.00E-02	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN ALDEHYDE	mg/kg	1.40E-01	5.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN KETONE	mg/kg	8.46E-03	5.00E-02	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	GAMMA-CHLORDANE	mg/kg	1.81E-02	5.00E-01	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	HEPTACHLOR	mg/kg	1.09E-01	1.00E+00	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	HEPTACHLOR EPOXIDE	mg/kg	1.10E-02	3.00E-02	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	METHOXYCHLOR	mg/kg	4.11E-02	8.00E+00	
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	5.01E-01	2.66E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	2.77E+00	2.66E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	ACENAPHTHYLENE	mg/kg	3.36E-01	5.55E+00	
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	ANTHRACENE	mg/kg	4.13E-01	5.90E+02	
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZ(A)ANTHRACENE	mg/kg	6.26E-01	8.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(A)PYRENE	mg/kg	8.31E-01	4.10E-01	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(B)FLUORANTHENE	mg/kg	5.30E+00	2.00E-01	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(G,H,I)PERYLENE	mg/kg	9.74E-01		
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(K)FLUORANTHENE	mg/kg	1.15E+00	2.00E+00	
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	BIS(2-ETHYLHEXYL)PHTHALAT	mg/kg	2.00E-01	1.80E+02	
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	CARBAZOLE	mg/kg	4.51E-01	3.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	CHRYSENE	mg/kg	2.34E+00	8.00E+00	
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	DI-N-BUTYL PHTHALATE	mg/kg	3.91E-01	2.70E+02	
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	DIBENZ(A,H)ANTHRACENE	mg/kg	4.45E-01	8.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatiles	FLUORANTHENE	mg/kg	1.80E+00	2.10E+02	

Table L-5. Development of Preliminary CMCOPCs Based on Comparison of the SRCs Exposure Concentration with its GSSL with DAF = 1

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	FLUORENE	mg/kg	1.20E-01	2.80E+01	
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	INDENO(1,2,3-CD)PYRENE	mg/kg	9.57E-01	7.00E-01	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	NAPHTHALENE	mg/kg	5.80E-02	4.00E+00	
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	PHENANTHRENE	mg/kg	5.47E-01	4.03E+01	
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	PYRENE	mg/kg	1.75E+00	2.30E+02	
Soil	Explosives Handling Areas Aggregate	Organics-Volatile	ACETONE	mg/kg	1.93E-02	8.00E-01	
Soil	Explosives Handling Areas Aggregate	Organics-Volatile	CHLOROFORM	mg/kg	2.00E-03	3.00E-02	
Soil	Explosives Handling Areas Aggregate	Organics-Volatile	TOLUENE	mg/kg	3.87E-03	6.00E-01	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ANTIMONY	mg/kg	1.46E+00	3.00E-01	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ARSENIC	mg/kg	1.08E+01	2.90E-01	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	CADMIUM	mg/kg	2.00E-01	4.00E-01	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	COPPER	mg/kg	1.69E+01	4.58E+01	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	CYANIDE	mg/kg	1.60E-01	2.00E+00	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	LEAD	mg/kg	1.73E+01	2.40E+02	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	THALLIUM	mg/kg	7.30E-01	4.00E-02	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ZINC	mg/kg	8.01E+01	6.20E+02	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Organics-Semivolatile	FLUORANTHENE	mg/kg	1.20E-01	2.10E+02	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Organics-Semivolatile	PHENANTHRENE	mg/kg	1.60E-01	4.03E+01	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Organics-Semivolatile	PYRENE	mg/kg	1.20E-01	2.30E+02	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Organics-Volatile	ACETONE	mg/kg	6.30E-03	8.00E-01	
Soil	Packaging and Shipping Areas Aggregate	Metals	ANTIMONY	mg/kg	1.15E+00	3.00E-01	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	BARIUM	mg/kg	2.00E+02	8.20E+01	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	BERYLLIUM	mg/kg	1.28E+00	3.00E+00	
Soil	Packaging and Shipping Areas Aggregate	Metals	CADMIUM	mg/kg	9.10E+00	4.00E-01	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	CHROMIUM	mg/kg	1.73E+01	2.00E+00	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	COPPER	mg/kg	3.60E+01	4.58E+01	
Soil	Packaging and Shipping Areas Aggregate	Metals	LEAD	mg/kg	1.70E+02	2.40E+02	
Soil	Packaging and Shipping Areas Aggregate	Metals	MANGANESE	mg/kg	1.27E+03	6.57E+02	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	MERCURY	mg/kg	4.94E-02	1.00E-01	
Soil	Packaging and Shipping Areas Aggregate	Metals	NICKEL	mg/kg	1.85E+01	7.00E+00	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	THALLIUM	mg/kg	4.54E-01	4.00E-02	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	ZINC	mg/kg	4.80E+02	6.20E+02	
Soil	Packaging and Shipping Areas Aggregate	Organics-Explosives	NITROCELLULOSE	mg/kg	9.00E+00		
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDE	mg/kg	3.80E-02	3.00E+00	
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	ALPHA-CHLORDANE	mg/kg	1.40E-02	5.00E-01	
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	1.40E-02	2.00E-04	Yes
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	ENDRIN ALDEHYDE	mg/kg	5.70E-02	5.00E-02	Yes

Table L-5. Development of Preliminary CMCOPCs Based on Comparison of the SRCs Exposure Concentration with its GSSL with DAF = 1

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	GAMMA-CHLORDANE	mg/kg	1.10E-02	5.00E-01	
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	METHOXYCHLOR	mg/kg	2.50E-02	8.00E+00	
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	3.61E-01	2.66E-02	Yes
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	3.96E-01	2.66E-02	Yes
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	BENZ(A)ANTHRACENE	mg/kg	9.30E-02	8.00E-02	Yes
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	BENZO(A)PYRENE	mg/kg	1.00E-01	4.10E-01	
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	BENZO(B)FLUORANTHENE	mg/kg	1.30E-01	2.00E-01	
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	BENZO(G,H,I)PERYLENE	mg/kg	1.00E-01		
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	BENZO(K)FLUORANTHENE	mg/kg	8.00E-02	2.00E+00	
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	BIS(2-ETHYLHEXYL)PHTHALAT	mg/kg	7.80E-02	1.80E+02	
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	CHRYSENE	mg/kg	1.40E-01	8.00E+00	
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	FLUORANTHENE	mg/kg	2.90E-01	2.10E+02	
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	PHENANTHRENE	mg/kg	1.70E-01	4.03E+01	
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	PYRENE	mg/kg	1.80E-01	2.30E+02	
Soil	Packaging and Shipping Areas Aggregate	Organics-Volatile	TOLUENE	mg/kg	1.60E-03	6.00E-01	
Soil	Perimeter Area Aggregate	Metals	BARIUM	mg/kg	6.48E+01	8.20E+01	
Soil	Perimeter Area Aggregate	Metals	BERYLLIUM	mg/kg	5.02E-01	3.00E+00	
Soil	Perimeter Area Aggregate	Metals	CADMIUM	mg/kg	2.57E-01	4.00E-01	
Soil	Perimeter Area Aggregate	Metals	CHROMIUM	mg/kg	2.60E+01	2.00E+00	Yes
Soil	Perimeter Area Aggregate	Metals	COBALT	mg/kg	8.06E+00	9.49E+02	
Soil	Perimeter Area Aggregate	Metals	LEAD	mg/kg	2.06E+02	2.40E+02	
Soil	Perimeter Area Aggregate	Metals	MANGANESE	mg/kg	5.80E+02	6.57E+02	
Soil	Perimeter Area Aggregate	Metals	MERCURY	mg/kg	5.67E-02	1.00E-01	
Soil	Perimeter Area Aggregate	Metals	THALLIUM	mg/kg	4.95E-01	4.00E-02	Yes
Soil	Perimeter Area Aggregate	Metals	ZINC	mg/kg	6.65E+01	6.20E+02	
Soil	Perimeter Area Aggregate	Organics-Semivolatile	BENZ(A)ANTHRACENE	mg/kg	1.10E-01	8.00E-02	Yes
Soil	Perimeter Area Aggregate	Organics-Semivolatile	BENZO(A)PYRENE	mg/kg	1.40E-01	4.10E-01	
Soil	Perimeter Area Aggregate	Organics-Semivolatile	BENZO(B)FLUORANTHENE	mg/kg	1.60E-01	2.00E-01	
Soil	Perimeter Area Aggregate	Organics-Semivolatile	BENZO(G,H,I)PERYLENE	mg/kg	1.20E-01		
Soil	Perimeter Area Aggregate	Organics-Semivolatile	BENZO(K)FLUORANTHENE	mg/kg	7.80E-02	2.00E+00	
Soil	Perimeter Area Aggregate	Organics-Semivolatile	BIS(2-ETHYLHEXYL)PHTHALAT	mg/kg	3.10E-01	1.80E+02	
Soil	Perimeter Area Aggregate	Organics-Semivolatile	CHRYSENE	mg/kg	1.40E-01	8.00E+00	
Soil	Perimeter Area Aggregate	Organics-Semivolatile	FLUORANTHENE	mg/kg	1.80E-01	2.10E+02	
Soil	Perimeter Area Aggregate	Organics-Semivolatile	INDENO(1,2,3-CD)PYRENE	mg/kg	9.90E-02	7.00E-01	
Soil	Perimeter Area Aggregate	Organics-Semivolatile	PYRENE	mg/kg	1.60E-01	2.30E+02	
Soil	Perimeter Area Aggregate	Organics-Volatile	TOLUENE	mg/kg	6.20E-04	6.00E-01	
Soil	Preparation and Receiving Areas Aggregate	Metals	ALUMINUM	mg/kg	1.44E+04	5.48E+04	

Table L-5. Development of Preliminary CMCOPCs Based on Comparison of the SRCs Exposure Concentration with its GSSL with DAF = 1

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	Preparation and Receiving Areas Aggregate	Metals	ARSENIC	mg/kg	1.30E+01	2.90E-01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	BARIUM	mg/kg	1.55E+02	8.20E+01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	BERYLLIUM	mg/kg	1.18E+00	3.00E+00	
Soil	Preparation and Receiving Areas Aggregate	Metals	CADMIUM	mg/kg	1.94E+00	4.00E-01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	CHROMIUM	mg/kg	3.15E+01	2.00E+00	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	COBALT	mg/kg	7.42E+00	9.49E+02	
Soil	Preparation and Receiving Areas Aggregate	Metals	COPPER	mg/kg	8.63E+01	4.58E+01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	CYANIDE	mg/kg	1.10E-01	2.00E+00	
Soil	Preparation and Receiving Areas Aggregate	Metals	LEAD	mg/kg	2.53E+02	2.40E+02	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	MANGANESE	mg/kg	1.61E+03	6.57E+02	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	MERCURY	mg/kg	1.10E+00	1.00E-01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	NICKEL	mg/kg	2.00E+01	7.00E+00	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	SELENIUM	mg/kg	1.35E+00	3.00E-01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	THALLIUM	mg/kg	5.95E-01	4.00E-02	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	VANADIUM	mg/kg	1.81E+01	3.00E+02	
Soil	Preparation and Receiving Areas Aggregate	Metals	ZINC	mg/kg	2.84E+02	6.20E+02	
Soil	Preparation and Receiving Areas Aggregate	Organics-Explosives	NITROCELLULOSE	mg/kg	1.88E+01		
Soil	Preparation and Receiving Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	7.85E+00	2.66E-02	Yes
Soil	Preparation and Receiving Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	1.17E+00	2.66E-02	Yes
Soil	Preparation and Receiving Areas Aggregate	Organics-Semivolatile	BIS(2-ETHYLHEXYL)PHTHALAT	mg/kg	6.10E-02	1.80E+02	
Soil	Preparation and Receiving Areas Aggregate	Organics-Semivolatile	FLUORANTHENE	mg/kg	7.00E-02	2.10E+02	
Soil	Preparation and Receiving Areas Aggregate	Organics-Semivolatile	PHENANTHRENE	mg/kg	6.00E-02	4.03E+01	
Soil	Preparation and Receiving Areas Aggregate	Organics-Semivolatile	PYRENE	mg/kg	6.90E-02	2.30E+02	
Soil	Preparation and Receiving Areas Aggregate	Organics-Volatile	2-BUTANONE	mg/kg	1.30E-02	4.40E+00	
Soil	Preparation and Receiving Areas Aggregate	Organics-Volatile	ACETONE	mg/kg	4.20E-02	8.00E-01	
Soil	Preparation and Receiving Areas Aggregate	Organics-Volatile	TOLUENE	mg/kg	5.10E-03	6.00E-01	

CMCOPC = Contaminant migration contaminant of potential concern.

DDD = Dichlorodiphenyldichloroethane.

DDE = Dichlorodiphenyldichloroethylene.

DDT = Dichlorodiphenyltrichloroethane.

GSSL * DAF = Generic soil screening level multiplied by a dilution attenuation factor of 1.

HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine.

PCB = Polychlorinated biphenyl.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

SRC = Site-related contaminant.

Table L-6. List of Preliminary CMCOPCs (Extracted from Table L-5)

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAI	Preliminary CMCOPC ?
Soil	Change Houses Aggregate	Metals	BARIUM	mg/kg	9.54E+01	8.20E+01	Yes
Soil	Change Houses Aggregate	Metals	CADMIUM	mg/kg	1.10E+00	4.00E-01	Yes
Soil	Change Houses Aggregate	Metals	CHROMIUM	mg/kg	2.39E+01	2.00E+00	Yes
Soil	Change Houses Aggregate	Metals	LEAD	mg/kg	3.97E+02	2.40E+02	Yes
Soil	Change Houses Aggregate	Metals	THALLIUM	mg/kg	7.54E-01	4.00E-02	Yes
Soil	Change Houses Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	5.10E-02	2.66E-02	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	BENZ(A)ANTHRACENE	mg/kg	5.30E-01	8.00E-02	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	BENZO(A)PYRENE	mg/kg	5.00E-01	4.10E-01	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	BENZO(B)FLUORANTHENE	mg/kg	6.70E-01	2.00E-01	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	CARBAZOLE	mg/kg	6.50E-02	3.00E-02	Yes
Soil	Change Houses Aggregate	Organics-Semivolatile	DIBENZ(A,H)ANTHRACENE	mg/kg	8.50E-02	8.00E-02	Yes
Soil	Change Houses Aggregate	Organics-Volatile	BENZENE	mg/kg	2.60E-03	2.00E-03	Yes
Soil	Explosives Handling Areas Aggregate	Metals	ARSENIC	mg/kg	9.56E+00	2.90E-01	Yes
Soil	Explosives Handling Areas Aggregate	Metals	BARIUM	mg/kg	1.09E+02	8.20E+01	Yes
Soil	Explosives Handling Areas Aggregate	Metals	CADMIUM	mg/kg	1.20E+00	4.00E-01	Yes
Soil	Explosives Handling Areas Aggregate	Metals	CHROMIUM	mg/kg	1.51E+01	2.00E+00	Yes
Soil	Explosives Handling Areas Aggregate	Metals	LEAD	mg/kg	2.63E+02	2.40E+02	Yes
Soil	Explosives Handling Areas Aggregate	Metals	MANGANESE	mg/kg	9.54E+02	6.57E+02	Yes
Soil	Explosives Handling Areas Aggregate	Metals	NICKEL	mg/kg	1.76E+01	7.00E+00	Yes
Soil	Explosives Handling Areas Aggregate	Metals	SELENIUM	mg/kg	1.21E+00	3.00E-01	Yes
Soil	Explosives Handling Areas Aggregate	Metals	THALLIUM	mg/kg	1.35E+00	4.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Explosives	2,4,6-TRINITROTOLUENE	mg/kg	3.32E-01	5.70E-04	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Explosives	HMX	mg/kg	9.83E-01	3.60E-01	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Explosives	RDX	mg/kg	1.36E+00	1.28E-04	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	1.52E-02	2.00E-04	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN ALDEHYDE	mg/kg	1.40E-01	5.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	5.01E-01	2.66E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	2.77E+00	2.66E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZ(A)ANTHRACENE	mg/kg	6.26E-01	8.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZO(A)PYRENE	mg/kg	8.31E-01	4.10E-01	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZO(B)FLUORANTHENE	mg/kg	5.30E+00	2.00E-01	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	CARBAZOLE	mg/kg	4.51E-01	3.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	DIBENZ(A,H)ANTHRACENE	mg/kg	4.45E-01	8.00E-02	Yes
Soil	Explosives Handling Areas Aggregate	Organics-Semivolatile	INDENO(1,2,3-CD)PYRENE	mg/kg	9.57E-01	7.00E-01	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ANTIMONY	mg/kg	1.46E+00	3.00E-01	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ARSENIC	mg/kg	1.08E+01	2.90E-01	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	THALLIUM	mg/kg	7.30E-01	4.00E-02	Yes

Table L-6. List of Preliminary CMCOPCs (Extracted from Table L-5)

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	Packaging and Shipping Areas Aggregate	Metals	ANTIMONY	mg/kg	1.15E+00	3.00E-01	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	BARIUM	mg/kg	2.00E+02	8.20E+01	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	CADMIUM	mg/kg	9.10E+00	4.00E-01	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	CHROMIUM	mg/kg	1.73E+01	2.00E+00	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	MANGANESE	mg/kg	1.27E+03	6.57E+02	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	NICKEL	mg/kg	1.85E+01	7.00E+00	Yes
Soil	Packaging and Shipping Areas Aggregate	Metals	THALLIUM	mg/kg	4.54E-01	4.00E-02	Yes
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	1.40E-02	2.00E-04	Yes
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	ENDRIN ALDEHYDE	mg/kg	5.70E-02	5.00E-02	Yes
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	3.61E-01	2.66E-02	Yes
Soil	Packaging and Shipping Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	3.96E-01	2.66E-02	Yes
Soil	Packaging and Shipping Areas Aggregate	Organics-Semivolatile	BENZ(A)ANTHRACENE	mg/kg	9.30E-02	8.00E-02	Yes
Soil	Perimeter Area Aggregate	Metals	CHROMIUM	mg/kg	2.60E+01	2.00E+00	Yes
Soil	Perimeter Area Aggregate	Metals	THALLIUM	mg/kg	4.95E-01	4.00E-02	Yes
Soil	Perimeter Area Aggregate	Organics-Semivolatile	BENZ(A)ANTHRACENE	mg/kg	1.10E-01	8.00E-02	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	ARSENIC	mg/kg	1.30E+01	2.90E-01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	BARIUM	mg/kg	1.55E+02	8.20E+01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	CADMIUM	mg/kg	1.94E+00	4.00E-01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	CHROMIUM	mg/kg	3.15E+01	2.00E+00	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	COPPER	mg/kg	8.63E+01	4.58E+01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	LEAD	mg/kg	2.53E+02	2.40E+02	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	MANGANESE	mg/kg	1.61E+03	6.57E+02	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	MERCURY	mg/kg	1.10E+00	1.00E-01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	NICKEL	mg/kg	2.00E+01	7.00E+00	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	SELENIUM	mg/kg	1.35E+00	3.00E-01	Yes
Soil	Preparation and Receiving Areas Aggregate	Metals	THALLIUM	mg/kg	5.95E-01	4.00E-02	Yes
Soil	Preparation and Receiving Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	7.85E+00	2.66E-02	Yes
Soil	Preparation and Receiving Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	1.17E+00	2.66E-02	Yes

CMCOPC = Contaminant migration contaminant of potential concern.

GSSL * DAF = Generic soil screening level multiplied by a dilution attenuation factor of 1.

HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine.

PCB = Polychlorinated biphenyl.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

Table L-7. Development of Preliminary CMCOPCs Based on Comparison of the SRC Exposure Concentration with its GSSL with DAF = 4 Exclusively for Explosive Handling Area Aggregate

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	G-13: Explosives Handling Areas Aggregate	Metals	ALUMINUM	mg/kg	1.01E+04	6.36E+04	
Soil	G-13: Explosives Handling Areas Aggregate	Metals	ARSENIC	mg/kg	9.27E+00	3.36E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	BARIUM	mg/kg	5.69E+01	9.51E+01	
Soil	G-13: Explosives Handling Areas Aggregate	Metals	BERYLLIUM	mg/kg	6.46E-01	3.48E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Metals	CADMIUM	mg/kg	2.75E+00	4.64E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	CHROMIUM	mg/kg	1.41E+01	2.32E+00	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	COBALT	mg/kg	1.02E+01	1.10E+03	
Soil	G-13: Explosives Handling Areas Aggregate	Metals	COPPER	mg/kg	2.36E+01	5.31E+01	
Soil	G-13: Explosives Handling Areas Aggregate	Metals	CYANIDE	mg/kg	9.13E-01	2.32E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Metals	LEAD	mg/kg	3.46E+01	2.78E+02	
Soil	G-13: Explosives Handling Areas Aggregate	Metals	MANGANESE	mg/kg	3.94E+02	7.62E+02	
Soil	G-13: Explosives Handling Areas Aggregate	Metals	MERCURY	mg/kg	3.31E-02	1.16E-01	
Soil	G-13: Explosives Handling Areas Aggregate	Metals	NICKEL	mg/kg	2.27E+01	8.12E+00	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	SELENIUM	mg/kg	1.00E+00	3.48E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	THALLIUM	mg/kg	6.43E-01	4.64E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	ZINC	mg/kg	6.84E+02	7.19E+02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Explosives	2,4,6-TRINITROTOLUENE	mg/kg	1.60E-01	6.61E-04	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Explosives	HMX	mg/kg	1.26E+00	4.18E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Explosives	RDX	mg/kg	6.15E-01	1.48E-04	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDD	mg/kg	3.39E-03	9.28E-01	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDE	mg/kg	2.93E-03	3.48E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDT	mg/kg	5.37E-03	2.32E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ALDRIN	mg/kg	6.39E-03	2.32E-02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ALPHA-CHLORDANE	mg/kg	4.29E-03	5.80E-01	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	5.18E-03	2.32E-04	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDOSULFAN II	mg/kg	4.49E-03	1.04E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN	mg/kg	2.65E-03	5.80E-02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN ALDEHYDE	mg/kg	6.40E-03	5.80E-02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN KETONE	mg/kg	5.32E-03	5.80E-02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	GAMMA-CHLORDANE	mg/kg	3.60E-03	5.80E-01	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	HEPTACHLOR	mg/kg	6.14E-03	1.16E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	HEPTACHLOR EPOXIDE	mg/kg	2.82E-03	3.48E-02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	METHOXYCHLOR	mg/kg	1.85E-02	9.28E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	1.33E-01	3.09E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	9.60E-01	3.09E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	ACENAPHTHYLENE	mg/kg	4.79E-01	6.44E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	ANTHRACENE	mg/kg	2.92E-01	6.84E+02	

Table L-7. Development of Preliminary CMCOPCs Based on Comparison of the SRC Exposure Concentration with its GSSL with DAF = 4 Exclusively for Explosive Handling Area Aggregate

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZ(A)ANTHRACENE	mg/kg	5.54E-01	9.28E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZO(A)PYRENE	mg/kg	6.01E-01	4.76E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZO(B)FLUORANTHENE	mg/kg	5.78E-01	2.32E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZO(G,H,I)PERYLENE	mg/kg	5.10E-01		
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZO(K)FLUORANTHENE	mg/kg	6.17E-01	2.32E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	BIS(2-ETHYLHEXYL)PHTHALAT	mg/kg	1.40E-01	2.09E+02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	CARBAZOLE	mg/kg	7.60E-01	3.48E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	CHRYSENE	mg/kg	5.79E-01	9.28E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	DI-N-BUTYL PHTHALATE	mg/kg	9.21E-01	3.13E+02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	DIBENZ(A,H)ANTHRACENE	mg/kg	6.63E-01	9.28E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	FLUORANTHENE	mg/kg	7.50E-02	2.44E+02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	FLUORENE	mg/kg	4.74E-01	3.25E+01	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	INDENO(1,2,3-CD)PYRENE	mg/kg	3.64E-01	8.12E-01	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	NAPHTHALENE	mg/kg	5.68E-01	4.64E+00	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	PHENANTHRENE	mg/kg	7.53E-01	4.67E+01	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatile	PYRENE	mg/kg	7.78E-01	2.67E+02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Volatile	ACETONE	mg/kg	0.00E+00	9.28E-01	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Volatile	CHLOROFORM	mg/kg	9.06E-03	3.48E-02	
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Volatile	TOLUENE	mg/kg	5.78E-03	6.96E-01	
Soil	G-12: Explosives Handling Areas Aggregate	Metals	ALUMINUM	mg/kg	8.90E+03	6.36E+04	
Soil	G-12: Explosives Handling Areas Aggregate	Metals	ARSENIC	mg/kg	1.01E+01	3.36E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	BARIUM	mg/kg	7.22E+01	9.51E+01	
Soil	G-12: Explosives Handling Areas Aggregate	Metals	BERYLLIUM	mg/kg	5.38E-01	3.48E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Metals	CADMIUM	mg/kg	8.23E-01	4.64E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	CHROMIUM	mg/kg	1.89E+01	2.32E+00	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	COBALT	mg/kg	7.68E+00	1.10E+03	
Soil	G-12: Explosives Handling Areas Aggregate	Metals	COPPER	mg/kg	1.72E+01	5.31E+01	
Soil	G-12: Explosives Handling Areas Aggregate	Metals	CYANIDE	mg/kg	3.40E-01	2.32E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Metals	LEAD	mg/kg	8.70E+01	2.78E+02	
Soil	G-12: Explosives Handling Areas Aggregate	Metals	MANGANESE	mg/kg	9.05E+02	7.62E+02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	MERCURY	mg/kg	2.28E-02	1.16E-01	
Soil	G-12: Explosives Handling Areas Aggregate	Metals	NICKEL	mg/kg	1.53E+01	8.12E+00	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	SELENIUM	mg/kg	8.52E-01	3.48E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	THALLIUM	mg/kg	1.26E+00	4.64E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	ZINC	mg/kg	1.02E+02	7.19E+02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Explosives	2,4,6-TRINITROTOLUENE	mg/kg	2.09E-01	6.61E-04	Yes

Table L-7. Development of Preliminary CMCOPCs Based on Comparison of the SRC Exposure Concentration with its GSSL with DAF = 4 Exclusively for Explosive Handling Area Aggregate

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Explosives	HMX	mg/kg	1.00E+00	4.18E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Explosives	RDX	mg/kg	6.60E-01	1.48E-04	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDD	mg/kg	8.53E-03	9.28E-01	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDE	mg/kg	1.63E-02	3.48E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDT	mg/kg	8.25E-03	2.32E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ALDRIN	mg/kg	2.59E-03	2.32E-02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ALPHA-CHLORDANE	mg/kg	5.60E-03	5.80E-01	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	3.75E-03	2.32E-04	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDOSULFAN II	mg/kg	7.91E-03	1.04E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN	mg/kg	8.40E-03	5.80E-02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN ALDEHYDE	mg/kg	4.50E-03	5.80E-02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN KETONE	mg/kg	9.54E-03	5.80E-02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	GAMMA-CHLORDANE	mg/kg	6.45E-03	5.80E-01	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	HEPTACHLOR	mg/kg	4.89E-03	1.16E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	HEPTACHLOR EPOXIDE	mg/kg	1.81E-03	3.48E-02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	METHOXYCHLOR	mg/kg	1.08E-02	9.28E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	7.65E-02	3.09E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	4.99E-02	3.09E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	ACENAPHTHYLENE	mg/kg	2.70E-01	6.44E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	ANTHRACENE	mg/kg	1.90E-01	6.84E+02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZ(A)ANTHRACENE	mg/kg	9.34E-01	9.28E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(A)PYRENE	mg/kg	4.50E-01	4.76E-01	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(B)FLUORANTHENE	mg/kg	5.40E+00	2.32E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(G,I)PERYLENE	mg/kg	2.40E-01		
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(K)FLUORANTHENE	mg/kg	3.30E-01	2.32E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BIS(2-ETHYLHEXYL)PHTHALATE	mg/kg	3.46E-01	2.09E+02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	CARBAZOLE	mg/kg	1.30E-01	3.48E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	CHRYSENE	mg/kg	3.00E+00	9.28E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	DI-N-BUTYL PHTHALATE	mg/kg	3.55E-01	3.13E+02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	DIBENZ(A,H)ANTHRACENE	mg/kg	1.40E-01	9.28E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	FLUORANTHENE	mg/kg	1.10E+00	2.44E+02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	FLUORENE	mg/kg	6.40E-02	3.25E+01	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	INDENO(1,2,3-CD)PYRENE	mg/kg	2.30E-01	8.12E-01	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	NAPHTHALENE	mg/kg	2.74E-01	4.64E+00	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	PHENANTHRENE	mg/kg	6.15E-01	4.67E+01	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	PYRENE	mg/kg	1.30E+00	2.67E+02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Volatile	ACETONE	mg/kg	9.33E-03	9.28E-01	

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Table L-7. Development of Preliminary CMCOPCs Based on Comparison of the SRC Exposure Concentration with its GSSL with DAF = 4 Exclusively for Explosive Handling Area Aggregate

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Volatile	CHLOROFORM	mg/kg	5.77E-03	3.48E-02	
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Volatile	TOLUENE	mg/kg	1.06E-02	6.96E-01	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ANTIMONY	mg/kg	1.86E+00	3.48E-01	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ARSENIC	mg/kg	1.22E+01	3.36E-01	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	CADMIUM	mg/kg	1.88E-01	4.64E-01	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	COPPER	mg/kg	1.88E+01	5.31E+01	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	CYANIDE	mg/kg	0.00E+00	2.32E+00	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	LEAD	mg/kg	1.92E+01	2.78E+02	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	THALLIUM	mg/kg	7.30E-01	4.64E-02	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ZINC	mg/kg	8.48E+01	7.19E+02	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Organics-Semivolatile	FLUORANTHENE	mg/kg	1.20E-01	2.44E+02	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Organics-Semivolatile	PHENANTHRENE	mg/kg	1.60E-01	4.67E+01	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Organics-Semivolatile	PYRENE	mg/kg	1.20E-01	2.67E+02	
Soil	Melt-Pour Area Drainage Ditches Aggregate	Organics-Volatile	ACETONE	mg/kg	6.30E-03	9.28E-01	
Soil	G-8: Explosives Handling Areas Aggregate	General	CHROMIUM, HEXAVALENT	mg/kg	1.90E+00	2.32E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Metals	ALUMINUM	mg/kg	1.05E+04	6.36E+04	
Soil	G-8: Explosives Handling Areas Aggregate	Metals	ARSENIC	mg/kg	1.18E+01	3.36E-01	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	BARIUM	mg/kg	8.65E+01	9.51E+01	
Soil	G-8: Explosives Handling Areas Aggregate	Metals	BERYLLIUM	mg/kg	1.78E+00	3.48E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Metals	CADMIUM	mg/kg	1.08E+00	4.64E-01	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	CHROMIUM	mg/kg	1.36E+01	2.32E+00	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	COBALT	mg/kg	9.41E+00	1.10E+03	
Soil	G-8: Explosives Handling Areas Aggregate	Metals	COPPER	mg/kg	6.08E+01	5.31E+01	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	CYANIDE	mg/kg	3.80E-01	2.32E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Metals	LEAD	mg/kg	8.30E+02	2.78E+02	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	MANGANESE	mg/kg	4.66E+02	7.62E+02	
Soil	G-8: Explosives Handling Areas Aggregate	Metals	MERCURY	mg/kg	3.70E-02	1.16E-01	
Soil	G-8: Explosives Handling Areas Aggregate	Metals	NICKEL	mg/kg	2.19E+01	8.12E+00	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	SELENIUM	mg/kg	1.21E+00	3.48E-01	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	THALLIUM	mg/kg	4.07E+00	4.64E-02	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	ZINC	mg/kg	1.19E+02	7.19E+02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Explosives	2,4,6-TRINITROTOLUENE	mg/kg	3.08E-01	6.61E-04	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Explosives	HMX	mg/kg	1.62E+00	4.18E-01	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Explosives	RDX	mg/kg	3.94E+00	1.48E-04	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDD	mg/kg	2.32E-03	9.28E-01	

Table L-7. Development of Preliminary CMCOPCs Based on Comparison of the SRC Exposure Concentration with its GSSL with DAF = 4 Exclusively for Explosive Handling Area Aggregate

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDE	mg/kg	2.80E-02	3.48E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	4,4'-DDT	mg/kg	1.26E-01	2.32E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ALDRIN	mg/kg	2.49E-02	2.32E-02	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ALPHA-CHLORDANE	mg/kg	2.28E-02	5.80E-01	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	1.37E-02	2.32E-04	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDOSULFAN II	mg/kg	1.98E-02	1.04E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN	mg/kg	9.67E-03	5.80E-02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN ALDEHYDE	mg/kg	2.74E-02	5.80E-02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ENDRIN KETONE	mg/kg	2.46E-03	5.80E-02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	GAMMA-CHLORDANE	mg/kg	1.53E-02	5.80E-01	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	HEPTACHLOR	mg/kg	3.78E-03	1.16E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	HEPTACHLOR EPOXIDE	mg/kg	2.06E-03	3.48E-02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	METHOXYCHLOR	mg/kg	1.28E-02	9.28E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	1.42E+00	3.09E-02	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	2.03E+00	3.09E-02	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	ACENAPHTHYLENE	mg/kg	4.43E-01	6.44E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	ANTHRACENE	mg/kg	8.58E-01	6.84E+02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(A)ANTHRACENE	mg/kg	1.48E+00	9.28E-02	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(A)PYRENE	mg/kg	2.70E+00	4.76E-01	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(B)FLUORANTHENE	mg/kg	7.20E+00	2.32E-01	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(G,H,I)PERYLENE	mg/kg	2.19E+00		
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(K)FLUORANTHENE	mg/kg	3.18E+00	2.32E+00	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BIS(2-ETHYLHEXYL)PHTHALATE	mg/kg	1.70E-01	2.09E+02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	CARBAZOLE	mg/kg	8.30E-01	3.48E-02	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	CHRYSENE	mg/kg	6.40E+00	9.28E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	DI-N-BUTYL PHTHALATE	mg/kg	6.17E-01	3.13E+02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	DIBENZO(A,H)ANTHRACENE	mg/kg	7.58E-01	9.28E-02	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	FLUORANTHENE	mg/kg	8.10E+00	2.44E+02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	FLUORENE	mg/kg	1.20E-01	3.25E+01	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	INDENO(1,2,3-CD)PYRENE	mg/kg	2.20E+00	8.12E-01	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	NAPHTHALENE	mg/kg	4.62E-01	4.64E+00	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	PHENANTHRENE	mg/kg	1.26E+00	4.67E+01	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatiles	PYRENE	mg/kg	5.40E+00	2.67E+02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Volatile	ACETONE	mg/kg	3.55E-02	9.28E-01	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Volatile	CHLOROFORM	mg/kg	2.00E-03	3.48E-02	
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Volatile	TOLUENE	mg/kg	4.34E-03	6.96E-01	

Table L-7. Development of Preliminary CMCOPCs Based on Comparison of the SRC Exposure Concentration with its GSSL with DAF = 4 Exclusively for Explosive Handling Area Aggregate

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	Perimeter Area Aggregate	Metals	BARIUM	mg/kg	5.88E+01	9.51E+01	
Soil	Perimeter Area Aggregate	Metals	BERYLLIUM	mg/kg	5.30E-01	3.48E+00	
Soil	Perimeter Area Aggregate	Metals	CADMIUM	mg/kg	5.40E-01	4.64E-01	Yes
Soil	Perimeter Area Aggregate	Metals	CHROMIUM	mg/kg	1.32E+01	2.32E+00	Yes
Soil	Perimeter Area Aggregate	Metals	COBALT	mg/kg	1.22E+01	1.10E+03	
Soil	Perimeter Area Aggregate	Metals	LEAD	mg/kg	2.69E+01	2.78E+02	
Soil	Perimeter Area Aggregate	Metals	MANGANESE	mg/kg	9.30E+02	7.62E+02	Yes
Soil	Perimeter Area Aggregate	Metals	MERCURY	mg/kg	2.05E-02	1.16E-01	
Soil	Perimeter Area Aggregate	Metals	THALLIUM	mg/kg	0.00E+00	4.64E-02	
Soil	Perimeter Area Aggregate	Metals	ZINC	mg/kg	8.84E+01	7.19E+02	

CMCOPC = Contaminant migration contaminant of potential concern.

DDD = Dichlorodiphenyldichloroethane.

DDE = Dichlorodiphenyldichloroethylene.

DDT = Dichlorodiphenyltrichloroethane.

GSSL * DAF = Generic soil screening level multiplied by a dilution attenuation factor of 4.

HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

SRC = Site-related contaminant.

Table L-8. List of Preliminary CMCOPCs (Extracted from Table L-7)

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	G-13: Explosives Handling Areas Aggregate	Metals	ARSENIC	mg/kg	9.27E+00	3.36E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	CADMIUM	mg/kg	2.75E+00	4.64E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	CHROMIUM	mg/kg	1.41E+01	2.32E+00	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	NICKEL	mg/kg	2.27E+01	8.12E+00	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	SELENIUM	mg/kg	1.00E+00	3.48E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Metals	THALLIUM	mg/kg	6.43E-01	4.64E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Explosives	2,4,6-TRINITROTOLUENE	mg/kg	1.60E-01	6.61E-04	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Explosives	HMX	mg/kg	1.26E+00	4.18E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Explosives	RDX	mg/kg	6.15E-01	1.48E-04	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	5.18E-03	2.32E-04	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	1.33E-01	3.09E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	9.60E-01	3.09E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZ(A)ANTHRACENE	mg/kg	5.54E-01	9.28E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(A)PYRENE	mg/kg	6.01E-01	4.76E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(B)FLUORANTHENE	mg/kg	5.78E-01	2.32E-01	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatiles	CARBAZOLE	mg/kg	7.60E-01	3.48E-02	Yes
Soil	G-13: Explosives Handling Areas Aggregate	Organics-Semivolatiles	DIBENZ(A,H)ANTHRACENE	mg/kg	6.63E-01	9.28E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	ARSENIC	mg/kg	1.01E+01	3.36E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	CADMIUM	mg/kg	8.23E-01	4.64E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	CHROMIUM	mg/kg	1.89E+01	2.32E+00	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	MANGANESE	mg/kg	9.05E+02	7.62E+02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	NICKEL	mg/kg	1.53E+01	8.12E+00	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	SELENIUM	mg/kg	8.52E-01	3.48E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Metals	THALLIUM	mg/kg	1.26E+00	4.64E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Explosives	2,4,6-TRINITROTOLUENE	mg/kg	2.09E-01	6.61E-04	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Explosives	HMX	mg/kg	1.00E+00	4.18E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Explosives	RDX	mg/kg	6.60E-01	1.48E-04	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	3.75E-03	2.32E-04	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	7.65E-02	3.09E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	4.99E-02	3.09E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZ(A)ANTHRACENE	mg/kg	9.34E-01	9.28E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	BENZO(B)FLUORANTHENE	mg/kg	5.40E+00	2.32E-01	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	CARBAZOLE	mg/kg	1.30E-01	3.48E-02	Yes
Soil	G-12: Explosives Handling Areas Aggregate	Organics-Semivolatiles	DIBENZ(A,H)ANTHRACENE	mg/kg	1.40E-01	9.28E-02	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ANTIMONY	mg/kg	1.86	0.348	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	ARSENIC	mg/kg	12.23	0.3364	Yes
Soil	Melt-Pour Area Drainage Ditches Aggregate	Metals	THALLIUM	mg/kg	0.73	0.0464	Yes

Table L-8. List of Preliminary CMCOPCs (Extracted from Table L-7)

Media	Group	Analysis Type	Analyte	Units	Exposure Concentration	GSSL*DAF	Preliminary CMCOPC ?
Soil	G-8: Explosives Handling Areas Aggregate	Metals	ARSENIC	mg/kg	11.78	0.3364	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	CADMIUM	mg/kg	1.08	0.464	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	CHROMIUM	mg/kg	13.57	2.32	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	COPPER	mg/kg	60.76	53.128	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	LEAD	mg/kg	830.40	278.4	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	NICKEL	mg/kg	21.92	8.12	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	SELENIUM	mg/kg	1.21	0.348	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Metals	THALLIUM	mg/kg	4.07	0.0464	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Explosives	2,4,6-TRINITROTOLUENE	mg/kg	0.31	0.0006612	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Explosives	HMX	mg/kg	1.62	0.4176	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Explosives	RDX	mg/kg	3.94	0.0001485	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	ALDRIN	mg/kg	0.02	0.0232	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	DIELDRIN	mg/kg	0.01	0.000232	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1254	mg/kg	1.42	0.030856	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Pesticide/PCB	PCB-1260	mg/kg	2.03	0.030856	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZ(A)ANTHRACENE	mg/kg	1.48	0.0928	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZO(A)PYRENE	mg/kg	2.70	0.4756	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZO(B)FLUORANTHENE	mg/kg	7.20	0.232	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatile	BENZO(K)FLUORANTHENE	mg/kg	3.18	2.32	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatile	CARBAZOLE	mg/kg	0.83	0.0348	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatile	DIBENZ(A,H)ANTHRACENE	mg/kg	0.76	0.0928	Yes
Soil	G-8: Explosives Handling Areas Aggregate	Organics-Semivolatile	INDENO(1,2,3-CD)PYRENE	mg/kg	2.20	0.812	Yes
Soil	Perimeter Area Aggregate	Metals	CADMIUM	mg/kg	0.54	0.464	Yes
Soil	Perimeter Area Aggregate	Metals	CHROMIUM	mg/kg	13.20	2.32	Yes
Soil	Perimeter Area Aggregate	Metals	MANGANESE	mg/kg	930.00	762.12	Yes

CMCOPC = Contaminant migration contaminant of potential concern.

GSSL * DAF = Generic soil screening level multiplied by a dilution attenuation factor of 4.

HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine.

PCB = Polychlorinated biphenyl.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

Table L-9. Development of Final CMCOPCs based on Arrival Time ≤ 1,000 years

$$R_d = 1 + \frac{\rho_b K_d}{\theta_w}$$

$$T = L_z \theta_w R / q$$

Parameter	Symbol	Value	Units	Notes
Percolation rate	q	0.4900	ft/year	HELP Model run
Soil-water distribution coefficient	K _d	Constituent-specific	L/kg	Literature
Organic carbon distribution coefficient	K _{oc}	Constituent-specific	L/kg	Literature
Fraction organic carbon	f _{oc}	0.0179	Unitless	
Water filled soil porosity	q _w	0.3340	Unitless	Site-specific (Moisture Content by Weight=18.5%)
Bulk density (dry)	r _b	1.8000	gm/cm ³	Site-specific
Leaching zone	L _z	9.5000	ft	
Retardation factor	R _d	Constituent-specific	unitless	Calculated
Arrival time	T	Constituent-specific	year	Calculated

Chemicals of Interest		K _{oc} (L/kg)		K _d (L/kg)		R _d	T (year)	T < 1,000?
Metals and Inorganic Compounds								
Arsenic				2.90E+01	a	1.57E+02	1.02E+03	
Cadmium				7.50E+01	d	4.05E+02	2.62E+03	
Chromium (total)				1.90E+01	a	1.03E+02	6.70E+02	Yes
Copper				3.50E+01	b	1.90E+02	1.23E+03	
Lead				1.60E+04	c	8.62E+04	5.58E+05	
Nickel				6.50E+01	a	3.51E+02	2.27E+03	
Selenium				5.00E+00	a	2.79E+01	1.81E+02	Yes
Thallium				7.10E+01	a	3.84E+02	2.48E+03	
Semivolatile Organic Compounds								
Benzo(a)anthracene		3.58E+05	a	6.41E+03		3.45E+04	2.24E+05	
Benzo(a)pyrene		9.69E+05	a	1.73E+04		9.35E+04	6.05E+05	
Benzo(b)fluoranthene		1.23E+06	a	2.20E+04		1.19E+05	7.68E+05	
Benzo(k)fluoranthene		1.23E+06	a	2.20E+04		1.19E+05	7.68E+05	
Dibenz(a,h)anthracene		1.79E+06	a	3.20E+04		1.73E+05	1.12E+06	
Indeno(1,2,3-cd)pyrene		3.47E+06	a	6.21E+04		3.35E+05	2.17E+06	
Carbazole		3.39E+03	a	6.07E+01		3.28E+02	2.12E+03	

Table L-9. Development of Final CMCOPCs based on Arrival Time \leq 1,000 years

Chemicals of Interest		K_{oc} (L/kg)		K_d (L/kg)		R_d	T (year)	T < 1,000?
<i>Pesticides and PCBs</i>								
Aldrin		4.87E+04	a	8.72E+02		4.70E+03	3.04E+04	
Dieldrin		2.55E+04	a	4.56E+02		2.46E+03	1.59E+04	
PCB-1254		3.09E+05	a	5.53E+03		2.98E+04	1.93E+05	
PCB-1260		3.09E+05	a	5.53E+03		2.98E+04	1.93E+05	
<i>Explosives</i>								
HMX								
RDX		4.67E+00	f	8.36E-02		1.45E+00	9.39E+00	Yes
2,4,6-Trinitrotoluene		2.13E+05	d	3.81E+03		2.05E+04	1.33E+05	

References:

- a. EPA Soil Screening Guidance: Technical Background Document, May 1996.
 - b. Baes and Sharp 1983.
 - c. Sheppard and Thibault 1990.
 - d. RREL = Risk Reduction Engineering Laboratory (EPA 1994).
 - f. Calculated from EPA Superfund Office of Emergency and Remedial Response Soil Screening Guidance <http://risk.lsd.ornl.gov>.
- CMCOPC = Contaminant migration contaminant of potential concern.
HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine.
PCB = Polychlorinated biphenyl.
RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

Table L-10. Revised List of CMCOPCs for SESOIL Modeling (Extracted from Table L-9)

Chemicals of Interest		K_{oc} (L/kg)		K_d (L/kg)		R_d	T (yr)	T < 1,000?
<i>Metals and Inorganic Compounds</i>								
Chromium (total)				1.90E+01	a	1.03E+02	6.70E+02	Yes
Selenium				5.00E+00	a	2.79E+01	1.81E+02	Yes
<i>Pesticides and PCBs</i>								
beta-BHC		2.14E+03	a	3.83E+01		2.07E+02	3.53E+02	Yes
<i>Explosives</i>								
RDX		4.67E+00	f	8.36E-02		1.45E+00	9.39E+00	Yes

References:

- a. EPA Soil Screening Guidance: Technical Background Document, May 1996.
- f. Calculated from EPA Superfund Office of Emergency and Remedial Response Soil Screening Guidance <http://risk.lsd.ornl.gov>.
- BHC = Benzene hexachloride.
- CMCOPC = Contaminant migration contaminant of potential concern.
- K_d = Soil-water distribution coefficient.
- K_{oc} = Organic carbon distribution coefficient.
- PCB = Polychlorinated biphenyl.
- R = Retardation factor.
- RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.
- SESOIL = Seasonal Soil Compartment (model).
- T = Arrival time.

Table L-11. Layers Used in SESOIL Model

Transect	Layer Number	Layer Thickness	Number of Sublayers	Purpose
Explosive Handling Area	1	0.6 m (2 ft)	1	Contaminant Loading
	2	0.3 m (1 ft)	1	Contaminant Loading
	3	2.7 m (9 ft)	4	Leaching
	4	0.15 m (0.5 ft)	1	Determine Leachate Concentration

SESOIL = Seasonal Soil Compartment (model).

Table L-13. Identification of CMCOPCs Based on Comparison of Predicted or Observed Maximum Concentration with its Target Groundwater Concentration

Media	Analysis Type	Analyte	Maximum Observed Concentration (mg/L)	Maximum Predicted Concentration (mg/L)	Target Groundwater Concentration (mg/L)	CMCOPC based on Observed Groundwater Concentration ?	CMCOPC based on Leachate Modeling ?
Groundwater	Metals	ARSENIC	1.30E-02		2.90E-01		
Groundwater	Metals	BARIUM	1.10E-01		2.00E+00		
Groundwater	Metals	CALCIUM	2.45E+02				
Groundwater	Metals	CHROMIUM	ND	2.54E-01	1.00E-01		Yes
Groundwater	Metals	IRON	1.21E+01		1.10E+01	Yes	
Groundwater	Metals	MAGNESIUM	6.81E+01				
Groundwater	Metals	MANGANESE	2.70E+00		8.76E-01	Yes	
Groundwater	Metals	NICKEL	1.60E-02		7.30E-01		
Groundwater	Metals	POTASSIUM	2.60E+00				
Groundwater	Metals	SELENIUM	ND	5.97E-02	5.00E-02		Yes
Groundwater	Metals	SODIUM	1.61E+01				
Groundwater	Metals	ZINC	1.60E-02		1.10E+01		
Groundwater	Organics-Semivolatile	2-ETHYLHEXYL)PHTHAL	4.40E-03		6.00E-03		
Groundwater	Organics-Volatile	CARBON DISULFIDE	2.00E-04		1.04E+00		
Groundwater	Organics-Volatile	CHLOROMETHANE	1.30E-04		1.50E-03		
Groundwater	Organics-Explosives	RDX	ND	3.08E+00	7.70E-04		Yes

CMCOPC = Contaminant migration contaminant of potential concern.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

Table L-14. List of CMCOPCs (Extracted from Table L-13) for AT123D modeling

Media	Analysis Type	Analyte	Units	Source Term Concentration ^a	Target Groundwater Concentration	CMCOPC for AT123D Modeling?
Groundwater	Metals	CHROMIUM	mg/L	2.54E-01	1.00E-01	Yes
Groundwater	Metals	IRON	mg/L	1.21E+01	1.10E+01	Yes
Groundwater	Metals	MANGANESE	mg/L	2.70E+00	8.76E-01	Yes
Groundwater	Metals	SELENIUM	mg/L	5.97E-02	5.00E-02	Yes
Groundwater	Organics-Explosives	RDX	mg/L	3.08E+00	7.70E-04	Yes

AT123D = Analytical Transient 1-, 2-, 3-Dimensional (model).

CMCOPC = Contaminant migration contaminant of potential concern.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

Table L-15. Physical and Chemical Properties of Initial CMCOPCs at Load Line 2 Required for AT123D Modeling

CMCOPC	Distribution Coefficient, Kd (L/kg)	Retardation factor, Rd ^a	Diffusion Coefficient in Water (cm ² /s)	Biodegradation Rate ^b (1/d)
<i>Metals</i>				
CHROMIUM	1.90E+01	1.03E+02	1.00E-06	NA
IRON	8.00E+02	7.20E+03	1.00E-06	NA
MANGANESE	7.50E+02	6.75E+03	1.00E-06	NA
SELENIUM	5.00E+00	4.60E+01	1.00E-06	NA
<i>Explosives</i>				
RDX	8.36E-02	1.75E+00	NF ^c	NF

^a Calculated value.

^b Howard et al., 1991.

^c Assumed a molecular diffusion coefficient of 1E-06 cm²/s.

AT123D = Analytical Transient 1-, 2-, 3-Dimensional (model).

CMCOPC = Contaminant migration contaminant of potential concern.

NA = Not applicable.

NF = Not found.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.