Table B-1
Summary of Potential Health Effects
On-Site Construction Worker AOPC 1

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Particulates and Volatiles	3.5E-03
Incidental ingestion of soils	3.1E-02
Dermal contact with soils	1.7E-02
Total Population Hazard Quotient =	5.1E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Particulates and Volatiles	8.1E-10
Incidental ingestion of soils	6.0E-07
Dermal contact with soils	8.2E-07
Total Population Incremental Lifetime Cancer Risk =	1.4E-06

Table B-2
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Incidental Ingestion of Soils

Intake Equation = $\frac{CS \times EF \times ED \times CF \times IR}{BW \times AT}$

IRs	Ingestion rate of soil (RAGS, 1989)	480	mg/day
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	250	d/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	365	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	Concentration
1,1-dichloroethene	2.57E-03
1,2,4-trimethylbenzene	3.82E-03
1,3,5-trimethylbenzene	2.96E-03
aroclor 1248	3.69E-02
aroclor 1254	3.28E-02
aroclor 1260	2.08E-02
arsenic	1.56E+00
benzo(a)anthracene	2.43E-01
benzo(a)pyrene	3.39E-01
benzo(b)fluoranthene	3.91E-01
benzo(k)fluoranthene	3.06E-01
bis(2-ethylhexyl)phthalate	2.58E-01
chrysene	2.86E-01
dibenzo(a,h)anthracene	1.36E-01
fluoranthene	2.66E-01
indeno(1,2,3-cd)pyrene	3.33E-01

Compound	Concentration
naphthalene	2.05E-01
n-butylbenzene	2.81E-03
n-propylbenzene	2.57E-03
p-cymene	2.47E-03
phenanthrene	2.03E-01
pyrene	3.12E-01
tetrachloroethene	2.69E-03
trichloroethene	2.63E-03
xylenes	2.34E-03

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Table B-2 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Incidental Ingestion of Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	1.21E-08	9.00E-03	1.34E-06
1,2,4-trimethylbenzene	1.79E-08	5.00E-01	3.59E-08
1,3,5-trimethylbenzene	1.39E-08	5.00E-01	2.78E-08
aroclor 1248	1.73E-07	7.00E-05	2.48E-03
aroclor 1254	1.54E-07	7.00E-05	2.20E-03
aroclor 1260	9.77E-08	7.00E-05	1.40E-03
arsenic	7.33E-06	3.00E-04	2.44E-02
benzo(a)anthracene	1.14E-06	4.00E-02	2.85E-05
benzo(a)pyrene	1.59E-06	4.00E-02	3.98E-05
benzo(b)fluoranthene	1.84E-06	4.00E-02	4.59E-05
benzo(k)fluoranthene	1.44E-06	4.00E-02	3.59E-05
bis(2-ethylhexyl)phthalate	1.21E-06	2.00E-02	6.06E-05
chrysene	1.34E-06	4.00E-02	3.36E-05
dibenzo(a,h)anthracene	6.39E-07	4.00E-02	1.60E-05
fluoranthene	1.25E-06	4.00E-01	3.12E-06
indeno(1,2,3-cd)pyrene	1.56E-06	4.00E-02	3.91E-05
naphthalene	9.63E-07	4.00E-02	2.41E-05
n-butylbenzene	1.32E-08	1.00E-01	1.32E-07
n-propylbenzene	1.21E-08	1.00E-01	1.21E-07
p-cymene	1.16E-08	1.00E-01	1.16E-07
phenanthrene	9.53E-07	3.00E-01	3.18E-06
pyrene	1.47E-06	3.00E-01	4.88E-06
tetrachloroethene	1.26E-08	1.00E-01	1.26E-07
trichloroethene	1.24E-08	7.35E-03	1.68E-06
xylenes	1.10E-08	2.00E+00	5.50E-09
	HQ Summation =		3.1E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF $(mg/kg\text{-}d)^{-1}$	ILCR (unitless)
1,1-dichloroethene	1.72E-10	NA	NA
1,2,4-trimethylbenzene	2.56E-10	NA	NA
1,3,5-trimethylbenzene	1.99E-10	NA	NA
aroclor 1248	2.48E-09	7.70E+00	1.91E-08
aroclor 1254	2.20E-09	7.70E+00	1.69E-08
aroclor 1260	1.40E-09	7.70E+00	1.07E-08
arsenic	1.05E-07	1.50E+00	1.57E-07
benzo(a)anthracene	1.63E-08	1.15E+00	1.87E-08
benzo(a)pyrene	2.27E-08	1.15E+01	2.62E-07
benzo(b)fluoranthene	2.62E-08	1.15E+00	3.02E-08
benzo(k)fluoranthene	2.05E-08	1.15E+00	2.36E-08
bis(2-ethylhexyl)phthalate	1.73E-08	8.40E-03	1.45E-10
chrysene	1.92E-08	1.15E-01	2.21E-09
dibenzo(a,h)anthracene	9.12E-09	4.10E+00	3.74E-08
fluoranthene	1.78E-08	NA	NA
indeno(1,2,3-cd)pyrene	2.23E-08	1.15E+00	2.57E-08
naphthalene	1.38E-08	NA	NA
n-butylbenzene	1.89E-10	NA	NA
n-propylbenzene	1.72E-10	NA	NA
p-cymene	1.66E-10	NA	NA
phenanthrene	1.36E-08	NA	NA
pyrene	2.09E-08	NA	NA
tetrachloroethene	1.80E-10	5.10E-02	9.20E-12
trichloroethene	1.76E-10	1.50E-02	2.65E-12
xylenes	1.57E-10	NA	NA
	ILCR Summation =		6.0E-07

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Table B-3
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Dermal Contact with Soils

Intake Equation = $\frac{CS \times CF \times EF \times ED \times AF \times ABS \times SA}{BW \times AT}$

SA	Surface area of exposed skin (50th percentile, hands only)	5800	cm^2/day
AF	Adherence Factor	1	mg/cm^2
ABS	Absorption factor (see table below)	csv	
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	250	d/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	365	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	ABS (unitless)	Concentration (mg/kg)
1,1-dichloroethene	1.00E-01	2.57E-03
1,2,4-trimethylbenzene	1.00E-01	3.82E-03
1,3,5-trimethylbenzene	1.00E-01	2.96E-03
aroclor 1248	1.00E-01	3.69E-02
aroclor 1254	1.00E-01	3.28E-02
aroclor 1260	1.00E-01	2.08E-02
arsenic	3.00E-02	1.56E+00
benzo(a)anthracene	1.50E-01	2.43E-01
benzo(a)pyrene	1.50E-01	3.39E-01
benzo(b)fluoranthene	1.50E-01	3.91E-01
benzo(k)fluoranthene	1.50E-01	3.06E-01
bis(2-ethylhexyl)phthalate	1.00E-01	2.58E-01
chrysene	1.50E-01	2.86E-01
dibenzo(a,h)anthracene	1.50E-01	1.36E-01
fluoranthene	1.00E-01	2.66E-01
indeno(1,2,3-cd)pyrene	1.00E-01	3.33E-01

Compound	ABS (unitless)	Concentration (mg/kg)
naphthalene	1.50E-01	2.05E-01
n-butylbenzene	1.00E-01	2.81E-03
n-propylbenzene	1.00E-01	2.57E-03
p-cymene	1.00E-01	2.47E-03
phenanthrene	1.50E-01	2.03E-01
pyrene	1.50E-01	3.12E-01
tetrachloroethene	1.00E-01	2.69E-03
trichloroethene	1.00E-01	2.63E-03
xylenes	1.00E-01	2.34E-03

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Table B-3 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Dermal Contact with Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	1.46E-08	9.00E-03	1.62E-06
1,2,4-trimethylbenzene	2.17E-08	5.00E-01	4.34E-08
1,3,5-trimethylbenzene	1.68E-08	5.00E-01	3.36E-08
aroclor 1248	2.09E-07	7.00E-05	2.99E-03
aroclor 1254	1.86E-07	7.00E-05	2.66E-03
aroclor 1260	1.18E-07	7.00E-05	1.69E-03
arsenic	2.66E-06	3.00E-04	8.85E-03
benzo(a)anthracene	2.07E-06	4.00E-02	5.17E-05
benzo(a)pyrene	2.89E-06	4.00E-02	7.21E-05
benzo(b)fluoranthene	3.33E-06	4.00E-02	8.32E-05
benzo(k)fluoranthene	2.60E-06	4.00E-02	6.51E-05
bis(2-ethylhexyl)phthalate	1.46E-06	2.00E-02	7.32E-05
chrysene	2.43E-06	4.00E-02	6.09E-05
dibenzo(a,h)anthracene	1.16E-06	4.00E-02	2.89E-05
fluoranthene	1.51E-06	4.00E-01	3.77E-06
indeno(1,2,3-cd)pyrene	1.89E-06	4.00E-02	4.72E-05
naphthalene	1.75E-06	4.00E-02	4.36E-05
n-butylbenzene	1.59E-08	1.00E-01	1.59E-07
n-propylbenzene	1.46E-08	1.00E-01	1.46E-07
p-cymene	1.40E-08	1.00E-01	1.40E-07
phenanthrene	1.73E-06	3.00E-01	5.76E-06
pyrene	2.66E-06	3.00E-01	8.85E-06
tetrachloroethene	1.53E-08	1.00E-01	1.53E-07
trichloroethene	1.49E-08	7.35E-03	2.03E-06
xylenes	1.33E-08	2.00E+00	6.64E-09
	HQ Summation =		1.7E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	2.08E-10	NA	NA
1,2,4-trimethylbenzene	3.10E-10	NA	NA
1,3,5-trimethylbenzene	2.40E-10	NA	NA
aroclor 1248	2.99E-09	7.70E+00	2.30E-08
aroclor 1254	2.66E-09	7.70E+00	2.05E-08
aroclor 1260	1.69E-09	7.70E+00	1.30E-08
arsenic	3.79E-08	1.50E+00	5.69E-08
benzo(a)anthracene	2.96E-08	1.15E+00	3.40E-08
benzo(a)pyrene	4.12E-08	1.15E+01	4.74E-07
benzo(b)fluoranthene	4.75E-08	1.15E+00	5.47E-08
benzo(k)fluoranthene	3.72E-08	1.15E+00	4.28E-08
bis(2-ethylhexyl)phthalate	2.09E-08	8.40E-03	1.76E-10
chrysene	3.48E-08	1.15E-01	4.00E-09
dibenzo(a,h)anthracene	1.65E-08	4.10E+00	6.78E-08
fluoranthene	2.16E-08	NA	NA
indeno(1,2,3-cd)pyrene	2.70E-08	1.15E+00	3.10E-08
naphthalene	2.49E-08	NA	NA
n-butylbenzene	2.28E-10	NA	NA
n-propylbenzene	2.08E-10	NA	NA
p-cymene	2.00E-10	NA	NA
phenanthrene	2.47E-08	NA	NA
pyrene	3.79E-08	NA	NA
tetrachloroethene	2.18E-10	5.10E-02	1.11E-11
trichloroethene	2.13E-10	1.50E-02	3.20E-12
xylenes	1.90E-10	NA	NA
	ILCR Summation =		8.2E-07

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Table B-4
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Inhalation of Particulates and Volatiles

Intake Equation = $\frac{CS \times (1/VF + 1/PEF) \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	2.5	m3/h
EF	Exposure frequency	250	days/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	365	days
ET	Exposure tim outdoors	8	h/d
CS	Concentration of chemicals in soil	(see Table 5-1)	
VF	Volatilization Factor	(see Table 5-4)	
PEF	Particulate Emission Factor	(see Section 5.3.1.2)	

Chemical Concentrations

Compound	VF (m3/kg)	PEF (m3/kg)	Cs (mg/kg)
1,1-dichloroethene	2.07E+01	NA	2.57E-03
1,2,4-trimethylbenzene	1.79E+03	NA	3.82E-03
1,3,5-trimethylbenzene	8.99E+02	NA	2.96E-03
aroclor 1248	NA	4.77E+09	3.69E-02
aroclor 1254	NA	4.77E+09	3.28E-02
aroclor 1260	NA	4.77E+09	2.08E-02
arsenic	NA	4.77E+09	1.56E+00
benzo(a)anthracene	NA	4.77E+09	2.43E-01
benzo(a)pyrene	NA	4.77E+09	3.39E-01
benzo(b)fluoranthene	NA	4.77E+09	3.91E-01
benzo(k)fluoranthene	NA	4.77E+09	3.06E-01
bis(2-ethylhexyl)phthalate	NA	4.77E+09	2.58E-01
chrysene	NA	4.77E+09	2.86E-01
dibenzo(a,h)anthracene	NA	4.77E+09	1.36E-01
fluoranthene	NA	4.77E+09	2.66E-01
indeno(1,2,3-cd)pyrene	NA	4.77E+09	3.33E-01

Compound	VF (m3/kg)	PEF (m3/kg)	Cs (mg/kg)
naphthalene	NA	4.77E+09	2.05E-01
n-butylbenzene	1.26E+03	NA	2.81E-03
n-propylbenzene	7.29E+02	NA	2.57E-03
p-cymene	2.94E+03	NA	2.47E-03
phenanthrene	NA	4.77E+09	2.03E-01
pyrene	NA	4.77E+09	3.12E-01
tetrachloroethene	3.02E+02	NA	2.69E-03
trichloroethene	2.72E+02	NA	2.63E-03
xylenes	8.50E+02	NA	2.34E-03

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Table B-4 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Inhalation of Particulates and Volatiles

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.43E-05	9.00E-03	2.70E-03
1,2,4-trimethylbenzene	4.18E-07	2.00E-03	2.09E-04
1,3,5-trimethylbenzene	6.44E-07	2.00E-03	3.22E-04
aroclor 1248	1.51E-12	7.00E-05	2.16E-08
aroclor 1254	1.34E-12	7.00E-05	1.92E-08
aroclor 1260	8.53E-13	7.00E-05	1.22E-08
arsenic	6.39E-11	3.00E-04	2.13E-07
benzo(a)anthracene	9.96E-12	4.00E-02	2.49E-10
benzo(a)pyrene	1.39E-11	4.00E-02	3.47E-10
benzo(b)fluoranthene	1.60E-11	4.00E-02	4.01E-10
benzo(k)fluoranthene	1.25E-11	4.00E-02	3.14E-10
bis(2-ethylhexyl)phthalate	1.06E-11	2.00E-02	5.29E-10
chrysene	1.17E-11	4.00E-02	2.93E-10
dibenzo(a,h)anthracene	5.57E-12	4.00E-02	1.39E-10
fluoranthene	1.09E-11	4.00E-01	2.73E-11
indeno(1,2,3-cd)pyrene	1.36E-11	4.00E-02	3.41E-10
naphthalene	8.40E-12	4.00E-02	2.10E-10
n-butylbenzene	4.38E-07	2.90E-01	1.51E-06
n-propylbenzene	6.90E-07	2.90E-01	2.38E-06
p-cymene	1.64E-07	1.00E-01	1.64E-06
phenanthrene	8.32E-12	3.00E-01	2.77E-11
pyrene	1.28E-11	3.00E-01	4.26E-11
tetrachloroethene	1.74E-06	1.00E-01	1.74E-05
trichloroethene	1.89E-06	7.35E-03	2.58E-04
xylenes	5.39E-07	2.00E-01	2.69E-06
	HQ Summation =		3.5E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	3.47E-07	NA	NA
1,2,4-trimethylbenzene	5.97E-09	NA	NA
1,3,5-trimethylbenzene	9.21E-09	NA	NA
aroclor 1248	2.16E-14	7.70E+00	1.66E-13
aroclor 1254	1.92E-14	7.70E+00	1.48E-13
aroclor 1260	1.22E-14	7.70E+00	9.38E-14
arsenic	9.13E-13	1.20E+01	1.10E-11
benzo(a)anthracene	1.42E-13	3.90E-01	5.55E-14
benzo(a)pyrene	1.99E-13	3.90E+00	7.74E-13
benzo(b)fluoranthene	2.29E-13	3.90E-01	8.93E-14
benzo(k)fluoranthene	1.79E-13	3.90E-01	6.99E-14
bis(2-ethylhexyl)phthalate	1.51E-13	8.40E-03	1.27E-15
chrysene	1.67E-13	3.90E-02	6.53E-15
dibenzo(a,h)anthracene	7.96E-14	4.10E+00	3.27E-13
fluoranthene	1.56E-13	NA	NA
indeno(1,2,3-cd)pyrene	1.95E-13	3.90E-01	7.60E-14
naphthalene	1.20E-13	NA	NA
n-butylbenzene	6.26E-09	NA	NA
n-propylbenzene	9.85E-09	NA	NA
p-cymene	2.35E-09	NA	NA
phenanthrene	1.19E-13	NA	NA
pyrene	1.83E-13	NA	NA
tetrachloroethene	2.49E-08	2.10E-02	5.22E-10
trichloroethene	2.71E-08	1.00E-02	2.71E-10
xylenes	7.70E-09	NA	NA
	ILCR Summation =		8.1E-10

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Table B-5
Summary of Potential Health Effects
On-Site Construction Worker AOPC 2

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Particulates and Volatiles	7.1E-03
Incidental ingestion of soils	3.5E-03
Dermal contact with soils	4.4E-03
Total Population Hazard Quotient =	1.5E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Particulates and Volatiles	1.8E-09
Incidental ingestion of soils	2.8E-07
Dermal contact with soils	4.8E-07
Total Population Incremental Lifetime Cancer Risk =	7.7E-07

Table B-6
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Incidental Ingestion of Soils

Intake Equation = $\frac{CS \times EF \times ED \times CF \times IR}{BW \times AT}$

IRs	Ingestion rate of soil (RAGS, 1989)	480	mg/day
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	250	d/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	365	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	Concentration
1,1-dichloroethene	4.05E-03
1,2,4-trimethylbenzene	1.85E-02
1,3,5-trimethylbenzene	8.93E-03
aroclor 1248	1.63E-02
aroclor 1254	1.63E-02
aroclor 1260	1.72E-02
arsenic	NA
benzo(a)anthracene	1.06E-01
benzo(a)pyrene	2.24E-01
benzo(b)fluoranthene	2.28E-01
benzo(k)fluoranthene	2.05E-01
bis(2-ethylhexyl)phthalate	1.03E-01
chrysene	1.22E-01
dibenzo(a,h)anthracene	8.54E-02
fluoranthene	1.18E-01
indeno(1,2,3-cd)pyrene	2.12E-01

Compound	Concentration
naphthalene	2.15E-01
n-butylbenzene	6.18E-03
n-propylbenzene	5.78E-03
p-cymene	6.45E-03
phenanthrene	1.42E-01
pyrene	1.28E-01
tetrachloroethene	4.53E-03
trichloroethene	8.56E-03
xylenes	6.45E-03

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Table B-6 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Incidental Ingestion of Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	1.90E-08	9.00E-03	2.11E-06
1,2,4-trimethylbenzene	8.69E-08	5.00E-01	1.74E-07
1,3,5-trimethylbenzene	4.19E-08	5.00E-01	8.39E-08
aroclor 1248	7.66E-08	7.00E-05	1.09E-03
aroclor 1254	7.66E-08	7.00E-05	1.09E-03
aroclor 1260	8.08E-08	7.00E-05	1.15E-03
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	4.98E-07	4.00E-02	1.24E-05
benzo(a)pyrene	1.05E-06	4.00E-02	2.63E-05
benzo(b)fluoranthene	1.07E-06	4.00E-02	2.68E-05
benzo(k)fluoranthene	9.63E-07	4.00E-02	2.41E-05
bis(2-ethylhexyl)phthalate	4.84E-07	2.00E-02	2.42E-05
chrysene	5.73E-07	4.00E-02	1.43E-05
dibenzo(a,h)anthracene	4.01E-07	4.00E-02	1.00E-05
fluoranthene	5.54E-07	4.00E-01	1.39E-06
indeno(1,2,3-cd)pyrene	9.96E-07	4.00E-02	2.49E-05
naphthalene	1.01E-06	4.00E-02	2.52E-05
n-butylbenzene	2.90E-08	1.00E-01	2.90E-07
n-propylbenzene	2.71E-08	1.00E-01	2.71E-07
p-cymene	3.03E-08	1.00E-01	3.03E-07
phenanthrene	6.67E-07	3.00E-01	2.22E-06
pyrene	6.01E-07	3.00E-01	2.00E-06
tetrachloroethene	2.13E-08	1.00E-01	2.13E-07
trichloroethene	4.02E-08	7.35E-03	5.47E-06
xylenes	3.03E-08	2.00E+00	1.51E-08
	HQ Summation =		3.5E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	2.72E-10	NA	NA
1,2,4-trimethylbenzene	1.24E-09	NA	NA
1,3,5-trimethylbenzene	5.99E-10	NA	NA
aroclor 1248	1.09E-09	7.70E+00	8.42E-09
aroclor 1254	1.09E-09	7.70E+00	8.42E-09
aroclor 1260	1.15E-09	7.70E+00	8.89E-09
arsenic	NA	1.50E+00	NA
benzo(a)anthracene	7.11E-09	1.15E+00	8.18E-09
benzo(a)pyrene	1.50E-08	1.15E+01	1.73E-07
benzo(b)fluoranthene	1.53E-08	1.15E+00	1.76E-08
benzo(k)fluoranthene	1.38E-08	1.15E+00	1.58E-08
bis(2-ethylhexyl)phthalate	6.91E-09	8.40E-03	5.81E-11
chrysene	8.19E-09	1.15E-01	9.41E-10
dibenzo(a,h)anthracene	5.73E-09	4.10E+00	2.35E-08
fluoranthene	7.92E-09	NA	NA
indeno(1,2,3-cd)pyrene	1.42E-08	1.15E+00	1.64E-08
naphthalene	1.44E-08	NA	NA
n-butylbenzene	4.15E-10	NA	NA
n-propylbenzene	3.88E-10	NA	NA
p-cymene	4.33E-10	NA	NA
phenanthrene	9.53E-09	NA	NA
pyrene	8.59E-09	NA	NA
tetrachloroethene	3.04E-10	5.10E-02	1.55E-11
trichloroethene	5.74E-10	1.50E-02	8.62E-12
xylenes	4.33E-10	NA	NA
	ILCR Summation =		2.8E-07

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Table B-7
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Dermal Contact with Soils

Intake Equation = $\frac{CS \times CF \times EF \times ED \times AF \times ABS \times SA}{BW \times AT}$

SA	Surface area of exposed skin (50th percentile, hands only)	5800	cm^2/day
AF	Adherence Factor	1	mg/cm^2
ABS	Absorption factor (see table below)	csv	
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	250	d/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	365	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	ABS (unitless)	Concentration (mg/kg)
1,1-dichloroethene	1.00E-01	4.05E-03
1,2,4-trimethylbenzene	1.00E-01	1.85E-02
1,3,5-trimethylbenzene	1.00E-01	8.93E-03
aroclor 1248	1.00E-01	1.63E-02
aroclor 1254	1.00E-01	1.63E-02
aroclor 1260	1.00E-01	1.72E-02
arsenic	3.00E-02	NA
benzo(a)anthracene	1.50E-01	1.06E-01
benzo(a)pyrene	1.50E-01	2.24E-01
benzo(b)fluoranthene	1.50E-01	2.28E-01
benzo(k)fluoranthene	1.50E-01	2.05E-01
bis(2-ethylhexyl)phthalate	1.00E-01	1.03E-01
chrysene	1.50E-01	1.22E-01
dibenzo(a,h)anthracene	1.50E-01	8.54E-02
fluoranthene	1.00E-01	1.18E-01
indeno(1,2,3-cd)pyrene	1.00E-01	2.12E-01

Compound	ABS (unitless)	Concentration (mg/kg)
naphthalene	1.50E-01	2.15E-01
n-butylbenzene	1.00E-01	6.18E-03
n-propylbenzene	1.00E-01	5.78E-03
p-cymene	1.00E-01	6.45E-03
phenanthrene	1.50E-01	1.42E-01
pyrene	1.50E-01	1.28E-01
tetrachloroethene	1.00E-01	4.53E-03
trichloroethene	1.00E-01	8.56E-03
xylenes	1.00E-01	6.45E-03

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Table B-7 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Dermal Contact with Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.30E-08	9.00E-03	2.55E-06
1,2,4-trimethylbenzene	1.05E-07	5.00E-01	2.10E-07
1,3,5-trimethylbenzene	5.07E-08	5.00E-01	1.01E-07
aroclor 1248	9.25E-08	7.00E-05	1.32E-03
aroclor 1254	9.25E-08	7.00E-05	1.32E-03
aroclor 1260	9.76E-08	7.00E-05	1.39E-03
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	9.02E-07	4.00E-02	2.26E-05
benzo(a)pyrene	1.91E-06	4.00E-02	4.77E-05
benzo(b)fluoranthene	1.94E-06	4.00E-02	4.85E-05
benzo(k)fluoranthene	1.75E-06	4.00E-02	4.36E-05
bis(2-ethylhexyl)phthalate	5.85E-07	2.00E-02	2.92E-05
chrysene	1.04E-06	4.00E-02	2.60E-05
dibenzo(a,h)anthracene	7.27E-07	4.00E-02	1.82E-05
fluoranthene	6.70E-07	4.00E-01	1.67E-06
indeno(1,2,3-cd)pyrene	1.20E-06	4.00E-02	3.01E-05
naphthalene	1.83E-06	4.00E-02	4.58E-05
n-butylbenzene	3.51E-08	1.00E-01	3.51E-07
n-propylbenzene	3.28E-08	1.00E-01	3.28E-07
p-cymene	3.66E-08	1.00E-01	3.66E-07
phenanthrene	1.21E-06	3.00E-01	4.03E-06
pyrene	1.09E-06	3.00E-01	3.63E-06
tetrachloroethene	2.57E-08	1.00E-01	2.57E-07
trichloroethene	4.86E-08	7.35E-03	6.61E-06
xylenes	3.66E-08	2.00E+00	1.83E-08
	HQ Summation =		4.4E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	3.28E-10	NA	NA
1,2,4-trimethylbenzene	1.50E-09	NA	NA
1,3,5-trimethylbenzene	7.24E-10	NA	NA
aroclor 1248	1.32E-09	7.70E+00	1.02E-08
aroclor 1254	1.32E-09	7.70E+00	1.02E-08
aroclor 1260	1.39E-09	7.70E+00	1.07E-08
arsenic	NA	1.50E+00	NA
benzo(a)anthracene	1.29E-08	1.15E+00	1.48E-08
benzo(a)pyrene	2.72E-08	1.15E+01	3.13E-07
benzo(b)fluoranthene	2.77E-08	1.15E+00	3.19E-08
benzo(k)fluoranthene	2.49E-08	1.15E+00	2.87E-08
bis(2-ethylhexyl)phthalate	8.35E-09	8.40E-03	7.01E-11
chrysene	1.48E-08	1.15E-01	1.71E-09
dibenzo(a,h)anthracene	1.04E-08	4.10E+00	4.26E-08
fluoranthene	9.57E-09	NA	NA
indeno(1,2,3-cd)pyrene	1.72E-08	1.15E+00	1.98E-08
naphthalene	2.61E-08	NA	NA
n-butylbenzene	5.01E-10	NA	NA
n-propylbenzene	4.69E-10	NA	NA
p-cymene	5.23E-10	NA	NA
phenanthrene	1.73E-08	NA	NA
pyrene	1.56E-08	NA	NA
tetrachloroethene	3.67E-10	5.10E-02	1.87E-11
trichloroethene	6.94E-10	1.50E-02	1.04E-11
xylenes	5.23E-10	NA	NA
	ILCR Summation =		4.8E-07

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Table B-8
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Inhalation of Particulates and Volatiles

Intake Equation = $\frac{CS \times (1/VF + 1/PEF) \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	2.5	m3/h
EF	Exposure frequency	250	days/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	365	days
ET	Exposure tim outdoors	8	h/d
CS	Concentration of chemicals in soil	(see Table 5-1)	
VF	Volatilization Factor	(see Table 5-4)	
PEF	Particulate Emission Factor	(see Section 5.3.1.2)	

Chemical Concentrations

Compound	VF (m3/kg)	PEF (m3/kg)	Cs (mg/kg)
1,1-dichloroethene	2.07E+01	NA	4.05E-03
1,2,4-trimethylbenzene	1.79E+03	NA	1.85E-02
1,3,5-trimethylbenzene	8.99E+02	NA	8.93E-03
aroclor 1248	NA	4.77E+09	1.63E-02
aroclor 1254	NA	4.77E+09	1.63E-02
aroclor 1260	NA	4.77E+09	1.72E-02
arsenic	NA	4.77E+09	NA
benzo(a)anthracene	NA	4.77E+09	1.06E-01
benzo(a)pyrene	NA	4.77E+09	2.24E-01
benzo(b)fluoranthene	NA	4.77E+09	2.28E-01
benzo(k)fluoranthene	NA	4.77E+09	2.05E-01
bis(2-ethylhexyl)phthalate	NA	4.77E+09	1.03E-01
chrysene	NA	4.77E+09	1.22E-01
dibenzo(a,h)anthracene	NA	4.77E+09	8.54E-02
fluoranthene	NA	4.77E+09	1.18E-01
indeno(1,2,3-cd)pyrene	NA	4.77E+09	2.12E-01

Compound	VF (m3/kg)	PEF (m3/kg)	Cs (mg/kg)
naphthalene	NA	4.77E+09	2.15E-01
n-butylbenzene	1.26E+03	NA	6.18E-03
n-propylbenzene	7.29E+02	NA	5.78E-03
p-cymene	2.94E+03	NA	6.45E-03
phenanthrene	NA	4.77E+09	1.42E-01
pyrene	NA	4.77E+09	1.28E-01
tetrachloroethene	3.02E+02	NA	4.53E-03
trichloroethene	2.72E+02	NA	8.56E-03
xylenes	8.50E+02	NA	6.45E-03

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Table B-8 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Inhalation of Particulates and Volatiles

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	3.83E-05	9.00E-03	4.26E-03
1,2,4-trimethylbenzene	2.02E-06	2.00E-03	1.01E-03
1,3,5-trimethylbenzene	1.94E-06	2.00E-03	9.72E-04
aroclor 1248	6.68E-13	7.00E-05	9.54E-09
aroclor 1254	6.68E-13	7.00E-05	9.54E-09
aroclor 1260	7.05E-13	7.00E-05	1.01E-08
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	4.34E-12	4.00E-02	1.09E-10
benzo(a)pyrene	9.18E-12	4.00E-02	2.30E-10
benzo(b)fluoranthene	9.35E-12	4.00E-02	2.34E-10
benzo(k)fluoranthene	8.40E-12	4.00E-02	2.10E-10
bis(2-ethylhexyl)phthalate	4.22E-12	2.00E-02	2.11E-10
chrysene	5.00E-12	4.00E-02	1.25E-10
dibenzo(a,h)anthracene	3.50E-12	4.00E-02	8.75E-11
fluoranthene	4.84E-12	4.00E-01	1.21E-11
indeno(1,2,3-cd)pyrene	8.69E-12	4.00E-02	2.17E-10
naphthalene	8.81E-12	4.00E-02	2.20E-10
n-butylbenzene	9.64E-07	2.90E-01	3.32E-06
n-propylbenzene	1.55E-06	2.90E-01	5.35E-06
p-cymene	4.29E-07	1.00E-01	4.29E-06
phenanthrene	5.82E-12	3.00E-01	1.94E-11
pyrene	5.25E-12	3.00E-01	1.75E-11
tetrachloroethene	2.93E-06	1.00E-01	2.93E-05
trichloroethene	6.16E-06	7.35E-03	8.39E-04
xylenes	1.49E-06	2.00E-01	7.43E-06
	HQ Summation =		7.1E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	5.48E-07	NA	NA
1,2,4-trimethylbenzene	2.89E-08	NA	NA
1,3,5-trimethylbenzene	2.78E-08	NA	NA
aroclor 1248	9.54E-15	7.70E+00	7.35E-14
aroclor 1254	9.54E-15	7.70E+00	7.35E-14
aroclor 1260	1.01E-14	7.70E+00	7.76E-14
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	6.21E-14	3.90E-01	2.42E-14
benzo(a)pyrene	1.31E-13	3.90E+00	5.12E-13
benzo(b)fluoranthene	1.34E-13	3.90E-01	5.21E-14
benzo(k)fluoranthene	1.20E-13	3.90E-01	4.68E-14
bis(2-ethylhexyl)phthalate	6.03E-14	8.40E-03	5.07E-16
chrysene	7.14E-14	3.90E-02	2.79E-15
dibenzo(a,h)anthracene	5.00E-14	4.10E+00	2.05E-13
fluoranthene	6.91E-14	NA	NA
indeno(1,2,3-cd)pyrene	1.24E-13	3.90E-01	4.84E-14
naphthalene	1.26E-13	NA	NA
n-butylbenzene	1.38E-08	NA	NA
n-propylbenzene	2.22E-08	NA	NA
p-cymene	6.13E-09	NA	NA
phenanthrene	8.32E-14	NA	NA
pyrene	7.50E-14	NA	NA
tetrachloroethene	4.19E-08	2.10E-02	8.79E-10
trichloroethene	8.80E-08	1.00E-02	8.80E-10
xylenes	2.12E-08	NA	NA
	ILCR Summation =		1.8E-09

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Table B-9
Summary of Potential Health Effects
On-Site Commercial/Industrial Worker AOPC 1

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Indoor Air	4.8E-02
Total Population Hazard Quotient =	4.8E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Indoor Air	9.3E-08
Total Population Incremental Lifetime Cancer Risk =	9.3E-08

Table B-10
Summary of Risk Quantitation
On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Indoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim indoors	8	h/d
Ci	Concentration of chemicals indoors (indoor + outdoor)	(see Tables 5-6 and 5-7)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	1.24E-02
1,2,4-trimethylbenzene	2.38E-05
1,3,5-trimethylbenzene	4.37E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	1.43E-05
n-propylbenzene	4.48E-05
p-cymene	2.18E-06
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.70E-04
trichloroethene	4.46E-04
xylenes	2.79E-05

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Table B-10 (cont.)
Summary of Risk Quantitation
On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Indoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	4.03E-04	9.00E-03	4.48E-02
1,2,4-trimethylbenzene	7.73E-07	2.00E-03	3.87E-04
1,3,5-trimethylbenzene	1.42E-06	2.00E-03	7.10E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	4.65E-07	2.90E-01	1.60E-06
n-propylbenzene	1.46E-06	2.90E-01	5.02E-06
p-cymene	7.08E-08	1.00E-01	7.08E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	5.53E-06	1.00E-02	5.53E-04
trichloroethene	1.45E-05	7.35E-03	1.97E-03
xylenes	9.07E-07	2.00E-01	4.53E-06
	HQ Summation =		4.8E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF $(mg/kg\text{-}d)^{-1}$	ILCR (unitless)
1,1-dichloroethene	1.44E-04	NA	NA
1,2,4-trimethylbenzene	2.76E-07	NA	NA
1,3,5-trimethylbenzene	5.07E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	1.66E-07	NA	NA
n-propylbenzene	5.20E-07	NA	NA
p-cymene	2.53E-08	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	1.97E-06	2.10E-02	4.14E-08
trichloroethene	5.18E-06	1.00E-02	5.18E-08
xylenes	3.24E-07	NA	NA
	ILCR Summation =		9.3E-08

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Table B-11
Summary of Potential Health Effects
On-Site Commercial/Industrial Worker AOPC 2

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Indoor Air	4.8E-02
Total Population Hazard Quotient =	4.8E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Indoor Air	9.3E-08
Total Population Incremental Lifetime Cancer Risk =	9.3E-08

Table B-12
Summary of Risk Quantitation
On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Indoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim indoor	8	h/d
Ci	Concentration of chemicals indoors (indoor + outdoor)	(see Tables 5-6 and 5-7)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	1.24E-02
1,2,4-trimethylbenzene	2.38E-05
1,3,5-trimethylbenzene	4.37E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	1.43E-05
n-propylbenzene	4.48E-05
p-cymene	2.18E-06
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.70E-04
trichloroethene	4.46E-04
xylenes	2.79E-05

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Table B-12 (cont.)
Summary of Risk Quantitation
On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Indoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	4.03E-04	9.00E-03	4.48E-02
1,2,4-trimethylbenzene	7.74E-07	2.00E-03	3.87E-04
1,3,5-trimethylbenzene	1.42E-06	2.00E-03	7.10E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	4.65E-07	2.90E-01	1.60E-06
n-propylbenzene	1.46E-06	2.90E-01	5.02E-06
p-cymene	7.09E-08	1.00E-01	7.09E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	5.53E-06	1.00E-02	5.53E-04
trichloroethene	1.45E-05	7.35E-03	1.97E-03
xylenes	9.06E-07	2.00E-01	4.53E-06
	HQ Summation =		4.8E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF $(mg/kg\text{-}d)^{-1}$	ILCR (unitless)
1,1-dichloroethene	1.44E-04	NA	NA
1,2,4-trimethylbenzene	2.76E-07	NA	NA
1,3,5-trimethylbenzene	5.07E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	1.66E-07	NA	NA
n-propylbenzene	5.20E-07	NA	NA
p-cymene	2.53E-08	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	1.97E-06	2.10E-02	4.14E-08
trichloroethene	5.18E-06	1.00E-02	5.18E-08
xylenes	3.24E-07	NA	NA
	ILCR Summation =		9.3E-08

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Table B-13
Summary of Potential Health Effects
DTSC Commercial/Industrial Worker AOPC 1

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Indoor Air	2.4E-02
Inhalation of Outdoor Air	2.4E-02
Incidental Ingestion of Soil	1.6E-03
Dermal Contact with Soil	2.9E-03
Total Population Hazard Quotient =	5.3E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Indoor Air	4.7E-08
Inhalation of Outdoor Air	4.7E-08
Incidental Ingestion of Soil	7.9E-07
Dermal Contact with Soil	3.6E-06
Total Population Incremental Lifetime Cancer Risk =	4.5E-06

Table B-14
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Incidental Ingestion of Soils

Intake Equation = $\frac{CS \times EF \times ED \times CF \times IR}{BW \times AT}$

IRs	Ingestion rate of soil (RAGS, 1989)	50	mg/day
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	125	d/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	9125	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	Concentration (mg/kg)
1,1-dichloroethene	2.57E-03
1,2,4-trimethylbenzene	3.82E-03
1,3,5-trimethylbenzene	2.96E-03
aroclor 1248	3.69E-02
aroclor 1254	3.28E-02
aroclor 1260	2.08E-02
arsenic	1.56E+00
benzo(a)anthracene	2.43E-01
benzo(a)pyrene	3.39E-01
benzo(b)fluoranthene	3.91E-01
benzo(k)fluoranthene	3.06E-01
bis(2-ethylhexyl)phthalate	2.58E-01
chrysene	2.86E-01
dibenzo(a,h)anthracene	1.36E-01
fluoranthene	2.66E-01
indeno(1,2,3-cd)pyrene	3.33E-01

Compound	Concentration (mg/kg)
naphthalene	2.05E-01
n-butylbenzene	2.81E-03
n-propylbenzene	2.57E-03
p-cymene	2.47E-03
phenanthrene	2.03E-01
pyrene	3.12E-01
tetrachloroethene	2.69E-03
trichloroethene	2.63E-03
xylenes	2.34E-03

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Table B-14 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Incidental Ingestion of Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	UH (unitless)
1,1-dichloroethene	6.29E-10	9.00E-03	6.99E-08
1,2,4-trimethylbenzene	9.34E-10	5.00E-01	1.87E-09
1,3,5-trimethylbenzene	7.24E-10	5.00E-01	1.45E-09
aroclor 1248	9.03E-09	7.00E-05	1.29E-04
aroclor 1254	8.02E-09	7.00E-05	1.15E-04
aroclor 1260	5.09E-09	7.00E-05	7.27E-05
arsenic	3.82E-07	3.00E-04	1.27E-03
benzo(a)anthracene	5.94E-08	4.00E-02	1.49E-06
benzo(a)pyrene	8.29E-08	4.00E-02	2.07E-06
benzo(b)fluoranthene	9.56E-08	4.00E-02	2.39E-06
benzo(k)fluoranthene	7.49E-08	4.00E-02	1.87E-06
bis(2-ethylhexyl)phthalate	6.31E-08	2.00E-02	3.16E-06
chrysene	7.00E-08	4.00E-02	1.75E-06
dibenzo(a,h)anthracene	3.33E-08	4.00E-02	8.32E-07
fluoranthene	6.51E-08	4.00E-02	1.63E-06
indeno(1,2,3-cd)pyrene	8.15E-08	4.00E-02	2.04E-06
naphthalene	5.01E-08	4.00E-02	1.25E-06
n-butylbenzene	6.87E-10	1.00E-01	6.87E-09
n-propylbenzene	6.29E-10	1.00E-01	6.29E-09
p-cymene	6.04E-10	1.00E-01	6.04E-09
phenanthrene	4.97E-08	3.00E-01	1.66E-07
pyrene	7.63E-08	3.00E-02	2.54E-06
tetrachloroethene	6.58E-10	1.00E-02	6.58E-08
trichloroethene	6.43E-10	7.35E-03	8.75E-08
xylenes	5.72E-10	2.00E+00	2.86E-10
	HQ Summation =		1.6E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF $(mg/kg\text{-}d)^{-1}$	UR (unitless)
1,1-dichloroethene	2.25E-10	NA	NA
1,2,4-trimethylbenzene	3.34E-10	NA	NA
1,3,5-trimethylbenzene	2.59E-10	NA	NA
aroclor 1248	3.22E-09	7.70E+00	2.48E-08
aroclor 1254	2.87E-09	7.70E+00	2.21E-08
aroclor 1260	1.82E-09	7.70E+00	1.40E-08
arsenic	1.36E-07	1.50E+00	2.04E-07
benzo(a)anthracene	2.12E-08	1.15E+00	2.44E-08
benzo(a)pyrene	2.96E-08	1.15E+01	3.41E-07
benzo(b)fluoranthene	3.42E-08	1.15E+00	3.93E-08
benzo(k)fluoranthene	2.67E-08	1.15E+00	3.07E-08
bis(2-ethylhexyl)phthalate	2.25E-08	8.40E-03	1.89E-10
chrysene	2.50E-08	1.15E-01	2.87E-09
dibenzo(a,h)anthracene	1.19E-08	4.10E+00	4.87E-08
fluoranthene	2.32E-08	NA	NA
indeno(1,2,3-cd)pyrene	2.91E-08	1.15E+00	3.35E-08
naphthalene	1.79E-08	NA	NA
n-butylbenzene	2.45E-10	NA	NA
n-propylbenzene	2.25E-10	NA	NA
p-cymene	2.16E-10	NA	NA
phenanthrene	1.77E-08	NA	NA
pyrene	2.73E-08	NA	NA
tetrachloroethene	2.35E-10	5.10E-02	1.20E-11
trichloroethene	2.30E-10	1.50E-02	3.45E-12
xylenes	2.04E-10	NA	NA
	ILCR Summation =		7.9E-07

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Table B-15
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Dermal Contact with Soils

Intake Equation = $\frac{CS \times CF \times EF \times ED \times AF \times ABS \times SA}{BW \times AT}$

SA	Surface area of exposed skin (50th percentile, hands only)	2020	cm_2/day
AF	Adherence Factor	1	mg/cm_2
ABS	Absorption factor (see table below)	csv	
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	125	d/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	9125	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	ABS (unitless)	Concentration (mg/kg)
1,1-dichloroethene	1.00E-01	2.57E-03
1,2,4-trimethylbenzene	1.00E-01	3.82E-03
1,3,5-trimethylbenzene	1.00E-01	2.96E-03
aroclor 1248	1.00E-01	3.69E-02
aroclor 1254	1.00E-01	3.28E-02
aroclor 1260	1.00E-01	2.08E-02
arsenic	3.00E-02	1.56E+00
benzo(a)anthracene	1.50E-01	2.43E-01
benzo(a)pyrene	1.50E-01	3.39E-01
benzo(b)fluoranthene	1.50E-01	3.91E-01
benzo(k)fluoranthene	1.50E-01	3.06E-01
bis(2-ethylhexyl)phthalate	1.00E-01	2.58E-01
chrysene	1.50E-01	2.86E-01
dibenzo(a,h)anthracene	1.50E-01	1.36E-01
fluoranthene	1.00E-01	2.66E-01
indeno(1,2,3-cd)pyrene	1.00E-01	3.33E-01

Compound	ABS (unitless)	Concentration (mg/kg)
naphthalene	1.50E-01	2.05E-01
n-butylbenzene	1.00E-01	2.81E-03
n-propylbenzene	1.00E-01	2.57E-03
p-cymene	1.00E-01	2.47E-03
phenanthrene	1.50E-01	2.03E-01
pyrene	1.50E-01	3.12E-01
tetrachloroethene	1.00E-01	2.69E-03
trichloroethene	1.00E-01	2.63E-03
xylenes	1.00E-01	2.34E-03

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Table B-15 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Dermal Contact with Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	UH (unitless)
1,1-dichloroethene	2.54E-09	9.00E-03	2.82E-07
1,2,4-trimethylbenzene	3.78E-09	5.00E-01	7.55E-09
1,3,5-trimethylbenzene	2.93E-09	5.00E-01	5.85E-09
aroclor 1248	3.65E-08	7.00E-05	5.21E-04
aroclor 1254	3.24E-08	7.00E-05	4.63E-04
aroclor 1260	2.06E-08	7.00E-05	2.94E-04
arsenic	4.63E-07	3.00E-04	1.54E-03
benzo(a)anthracene	3.60E-07	4.00E-02	9.01E-06
benzo(a)pyrene	5.03E-07	4.00E-02	1.26E-05
benzo(b)fluoranthene	5.80E-07	4.00E-02	1.45E-05
benzo(k)fluoranthene	4.54E-07	4.00E-02	1.13E-05
bis(2-ethylhexyl)phthalate	2.55E-07	2.00E-02	1.27E-05
chrysene	4.24E-07	4.00E-02	1.06E-05
dibenzo(a,h)anthracene	2.02E-07	4.00E-02	5.04E-06
fluoranthene	2.63E-07	4.00E-02	6.57E-06
indeno(1,2,3-cd)pyrene	3.29E-07	4.00E-02	8.23E-06
naphthalene	3.04E-07	4.00E-02	7.60E-06
n-butylbenzene	2.78E-09	1.00E-01	2.78E-08
n-propylbenzene	2.54E-09	1.00E-01	2.54E-08
p-cymene	2.44E-09	1.00E-01	2.44E-08
phenanthrene	3.01E-07	3.00E-01	1.00E-06
pyrene	4.63E-07	3.00E-02	1.54E-05
tetrachloroethene	2.66E-09	1.00E-02	2.66E-07
trichloroethene	2.60E-09	7.35E-03	3.54E-07
xylenes	2.31E-09	2.00E+00	1.16E-09
	HQ Summation =		2.9E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF $(mg/kg\text{-}d)^{-1}$	UR (unitless)
1,1-dichloroethene	9.07E-10	NA	NA
1,2,4-trimethylbenzene	1.35E-09	NA	NA
1,3,5-trimethylbenzene	1.04E-09	NA	NA
aroclor 1248	1.30E-08	7.70E+00	1.00E-07
aroclor 1254	1.16E-08	7.70E+00	8.91E-08
aroclor 1260	7.34E-09	7.70E+00	5.65E-08
arsenic	1.65E-07	1.50E+00	2.48E-07
benzo(a)anthracene	1.29E-07	1.15E+00	1.48E-07
benzo(a)pyrene	1.79E-07	1.15E+01	2.06E-06
benzo(b)fluoranthene	2.07E-07	1.15E+00	2.38E-07
benzo(k)fluoranthene	1.62E-07	1.15E+00	1.86E-07
bis(2-ethylhexyl)phthalate	9.11E-08	8.40E-03	7.65E-10
chrysene	1.51E-07	1.15E-01	1.74E-08
dibenzo(a,h)anthracene	7.20E-08	4.10E+00	2.95E-07
fluoranthene	9.39E-08	NA	NA
indeno(1,2,3-cd)pyrene	1.18E-07	1.15E+00	1.35E-07
naphthalene	1.09E-07	NA	NA
n-butylbenzene	9.92E-10	NA	NA
n-propylbenzene	9.07E-10	NA	NA
p-cymene	8.72E-10	NA	NA
phenanthrene	1.07E-07	NA	NA
pyrene	1.65E-07	NA	NA
tetrachloroethene	9.49E-10	5.10E-02	4.84E-11
trichloroethene	9.28E-10	1.50E-02	1.39E-11
xylenes	8.26E-10	NA	NA
	ILCR Summation =		3.6E-06

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Table B-16
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Indoor Air

Intake Equation = $\frac{Ci \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim indoor	4	h/d
Ci	Concentration of chemicals indoors (indoor + outdoor)	(see Tables 5-6 and 5-7)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	1.24E-02
1,2,4-trimethylbenzene	2.38E-05
1,3,5-trimethylbenzene	4.37E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	1.43E-05
n-propylbenzene	4.48E-05
p-cymene	2.18E-06
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.70E-04
trichloroethene	4.46E-04
xylenes	2.79E-05

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Table B-16 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Indoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.01E-04	9.00E-03	2.24E-02
1,2,4-trimethylbenzene	3.87E-07	2.00E-03	1.93E-04
1,3,5-trimethylbenzene	7.10E-07	2.00E-03	3.55E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	2.32E-07	2.90E-01	8.01E-07
n-propylbenzene	7.28E-07	2.90E-01	2.51E-06
p-cymene	3.54E-08	1.00E-01	3.54E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	2.76E-06	1.00E-02	2.76E-04
trichloroethene	7.25E-06	7.35E-03	9.86E-04
xylenes	4.53E-07	2.00E-01	2.27E-06
	HQ Summation =		2.4E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.20E-05	NA	NA
1,2,4-trimethylbenzene	1.38E-07	NA	NA
1,3,5-trimethylbenzene	2.54E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	8.30E-08	NA	NA
n-propylbenzene	2.60E-07	NA	NA
p-cymene	1.27E-08	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	9.87E-07	2.10E-02	2.07E-08
trichloroethene	2.59E-06	1.00E-02	2.59E-08
xylenes	1.62E-07	NA	NA
	ILCR Summation =		4.7E-08

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Table B-17
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Outdoor Air

Intake Equation = $\frac{(Ci + (Cs \times 1/PEF)) \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim outdoor	4	h/d
Ci	Concentration of volatiles in ambient air	(see Table 5-6)	
PEF	Particulate Emission Factor (see Table below)	(see Section 5.3.1.2)	

Chemical Concentrations

Compound	Soil Conc (mg/kg)	PEF (m3/kg)	Volatile Concentration (mg/m3)
1,1-dichloroethene	2.57E-03	NA	1.24E-02
1,2,4-trimethylbenzene	3.82E-03	NA	2.38E-05
1,3,5-trimethylbenzene	2.96E-03	NA	4.37E-05
aroclor 1248	3.69E-02	4.77E+09	NA
aroclor 1254	3.28E-02	4.77E+09	NA
aroclor 1260	2.08E-02	4.77E+09	NA
arsenic	1.56E+00	4.77E+09	NA
benzo(a)anthracene	2.43E-01	4.77E+09	NA
benzo(a)pyrene	3.39E-01	4.77E+09	NA
benzo(b)fluoranthene	3.91E-01	4.77E+09	NA
benzo(k)fluoranthene	3.06E-01	4.77E+09	NA
bis(2-ethylhexyl)phtha	2.58E-01	4.77E+09	NA
chrysene	2.86E-01	4.77E+09	NA
dibenzo(a,h)anthracene	1.36E-01	4.77E+09	NA
fluoranthene	2.66E-01	4.77E+09	NA
indeno(1,2,3-cd)pyrene	3.33E-01	4.77E+09	NA

Compound	Soil Conc (mg/k	PEF	Volatile Concentration (mg/m3)
naphthalene	2.05E-01	4.77E+09	NA
n-butylbenzene	2.81E-03	NA	1.43E-05
n-propylbenzene	2.57E-03	NA	4.48E-05
p-cymene	2.47E-03	NA	2.18E-06
phenanthrene	2.03E-01	4.77E+09	NA
pyrene	3.12E-01	4.77E+09	NA
tetrachloroethene	2.69E-03	NA	1.70E-04
trichloroethene	2.63E-03	NA	4.46E-04
xylenes	2.34E-03	NA	2.79E-05

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Table B-17 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.01E-04	9.00E-03	2.24E-02
1,2,4-trimethylbenzene	3.87E-07	2.00E-03	1.93E-04
1,3,5-trimethylbenzene	7.10E-07	2.00E-03	3.55E-04
aroclor 1248	1.26E-13	7.00E-05	1.79E-09
aroclor 1254	1.12E-13	7.00E-05	1.59E-09
aroclor 1260	7.08E-14	7.00E-05	1.01E-09
arsenic	5.31E-12	3.00E-04	1.77E-08
benzo(a)anthracene	8.27E-13	4.00E-02	2.07E-11
benzo(a)pyrene	1.15E-12	4.00E-02	2.88E-11
benzo(b)fluoranthene	1.33E-12	4.00E-02	3.33E-11
benzo(k)fluoranthene	1.04E-12	4.00E-02	2.60E-11
bis(2-ethylhexyl)phthalate	8.78E-13	2.00E-02	4.39E-11
chrysene	9.73E-13	4.00E-02	2.43E-11
dibenzo(a,h)anthracene	4.63E-13	4.00E-02	1.16E-11
fluoranthene	9.05E-13	4.00E-02	2.26E-11
indeno(1,2,3-cd)pyrene	1.13E-12	4.00E-02	2.83E-11
naphthalene	6.97E-13	4.00E-02	1.74E-11
n-butylbenzene	2.32E-07	2.90E-01	8.01E-07
n-propylbenzene	7.28E-07	2.90E-01	2.51E-06
p-cymene	3.54E-08	1.00E-01	3.54E-07
phenanthrene	6.91E-13	3.00E-01	2.30E-12
pyrene	1.06E-12	3.00E-02	3.54E-11
tetrachloroethene	2.76E-06	1.00E-02	2.76E-04
trichloroethene	7.24E-06	7.35E-03	9.86E-04
xylenes	4.53E-07	2.00E-01	2.27E-06
	HQ Summation =		2.4E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.19E-05	NA	NA
1,2,4-trimethylbenzene	1.38E-07	NA	NA
1,3,5-trimethylbenzene	2.54E-07	NA	NA
aroclor 1248	4.48E-14	7.70E+00	3.45E-13
aroclor 1254	3.99E-14	7.70E+00	3.07E-13
aroclor 1260	2.53E-14	7.70E+00	1.95E-13
arsenic	1.90E-12	1.20E+01	2.27E-11
benzo(a)anthracene	2.95E-13	3.90E-01	1.15E-13
benzo(a)pyrene	4.12E-13	3.90E+00	1.61E-12
benzo(b)fluoranthene	4.75E-13	3.90E-01	1.85E-13
benzo(k)fluoranthene	3.72E-13	3.90E-01	1.45E-13
bis(2-ethylhexyl)phthalate	3.13E-13	8.40E-03	2.63E-15
chrysene	3.48E-13	3.90E-02	1.36E-14
dibenzo(a,h)anthracene	1.65E-13	4.10E+00	6.78E-13
fluoranthene	3.23E-13	NA	NA
indeno(1,2,3-cd)pyrene	4.05E-13	3.90E-01	1.58E-13
naphthalene	2.49E-13	NA	NA
n-butylbenzene	8.30E-08	NA	NA
n-propylbenzene	2.60E-07	NA	NA
p-cymene	1.26E-08	NA	NA
phenanthrene	2.47E-13	NA	NA
pyrene	3.79E-13	NA	NA
tetrachloroethene	9.86E-07	2.10E-02	2.07E-08
trichloroethene	2.59E-06	1.00E-02	2.59E-08
xylenes	1.62E-07	NA	NA
	ILCR Summation =		4.7E-08

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Table B-18
Summary of Potential Health Effects
DTSC Commercial/Industrial Worker AOPC 2

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Indoor Air	2.4E-02
Inhalation of Outdoor Air	2.4E-02
Incidental Ingestion of Soil	1.9E-04
Dermal Contact with Soil	7.7E-04
Total Population Hazard Quotient =	4.9E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Indoor Air	4.7E-08
Inhalation of Outdoor Air	4.7E-08
Incidental Ingestion of Soil	3.7E-07
Dermal Contact with Soil	2.1E-06
Total Population Incremental Lifetime Cancer Risk =	2.6E-06

Table B-19
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Incidental Ingestion of Soils

Intake Equation = $\frac{CS \times EF \times ED \times CF \times IR}{BW \times AT}$

IRs	Ingestion rate of soil (RAGS, 1989)	50	mg/day
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	125	d/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	9125	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	Concentration (mg/kg)
1,1-dichloroethene	4.05E-03
1,2,4-trimethylbenzene	1.85E-02
1,3,5-trimethylbenzene	8.93E-03
aroclor 1248	1.63E-02
aroclor 1254	1.63E-02
aroclor 1260	1.72E-02
arsenic	
benzo(a)anthracene	1.06E-01
benzo(a)pyrene	2.24E-01
benzo(b)fluoranthene	2.28E-01
benzo(k)fluoranthene	2.05E-01
bis(2-ethylhexyl)phthalate	1.03E-01
chrysene	1.22E-01
dibenzo(a,h)anthracene	8.54E-02
fluoranthene	1.18E-01
indeno(1,2,3-cd)pyrene	2.12E-01

Compound	Concentration (mg/kg)
naphthalene	2.15E-01
n-butylbenzene	6.18E-03
n-propylbenzene	5.78E-03
p-cymene	6.45E-03
phenanthrene	1.42E-01
pyrene	1.28E-01
tetrachloroethene	4.53E-03
trichloroethene	8.56E-03
xylenes	6.45E-03

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Table B-19 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Incidental Ingestion of Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	UH (unitless)
1,1-dichloroethene	9.91E-10	9.00E-03	1.10E-07
1,2,4-trimethylbenzene	4.53E-09	5.00E-01	9.05E-09
1,3,5-trimethylbenzene	2.18E-09	5.00E-01	4.37E-09
aroclor 1248	3.99E-09	7.00E-05	5.70E-05
aroclor 1254	3.99E-09	7.00E-05	5.70E-05
aroclor 1260	4.21E-09	7.00E-05	6.01E-05
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	2.59E-08	4.00E-02	6.48E-07
benzo(a)pyrene	5.48E-08	4.00E-02	1.37E-06
benzo(b)fluoranthene	5.58E-08	4.00E-02	1.39E-06
benzo(k)fluoranthene	5.01E-08	4.00E-02	1.25E-06
bis(2-ethylhexyl)phthalate	2.52E-08	2.00E-02	1.26E-06
chrysene	2.98E-08	4.00E-02	7.46E-07
dibenzo(a,h)anthracene	2.09E-08	4.00E-02	5.22E-07
fluoranthene	2.89E-08	4.00E-02	7.22E-07
indeno(1,2,3-cd)pyrene	5.19E-08	4.00E-02	1.30E-06
naphthalene	5.26E-08	4.00E-02	1.31E-06
n-butylbenzene	1.51E-09	1.00E-01	1.51E-08
n-propylbenzene	1.41E-09	1.00E-01	1.41E-08
p-cymene	1.58E-09	1.00E-01	1.58E-08
phenanthrene	3.47E-08	3.00E-01	1.16E-07
pyrene	3.13E-08	3.00E-02	1.04E-06
tetrachloroethene	1.11E-09	1.00E-02	1.11E-07
trichloroethene	2.09E-09	7.35E-03	2.85E-07
xylenes	1.58E-09	2.00E+00	7.89E-10
	HQ Summation =		1.9E-04

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF $(mg/kg\text{-}d)^{-1}$	UR (unitless)
1,1-dichloroethene	3.54E-10	NA	NA
1,2,4-trimethylbenzene	1.62E-09	NA	NA
1,3,5-trimethylbenzene	7.80E-10	NA	NA
aroclor 1248	1.42E-09	7.70E+00	1.10E-08
aroclor 1254	1.42E-09	7.70E+00	1.10E-08
aroclor 1260	1.50E-09	7.70E+00	1.16E-08
arsenic	NA	1.50E+00	NA
benzo(a)anthracene	9.26E-09	1.15E+00	1.06E-08
benzo(a)pyrene	1.96E-08	1.15E+01	2.25E-07
benzo(b)fluoranthene	1.99E-08	1.15E+00	2.29E-08
benzo(k)fluoranthene	1.79E-08	1.15E+00	2.06E-08
bis(2-ethylhexyl)phthalate	9.00E-09	8.40E-03	7.56E-11
chrysene	1.07E-08	1.15E-01	1.23E-09
dibenzo(a,h)anthracene	7.46E-09	4.10E+00	3.06E-08
fluoranthene	1.03E-08	NA	NA
indeno(1,2,3-cd)pyrene	1.85E-08	1.15E+00	2.13E-08
naphthalene	1.88E-08	NA	NA
n-butylbenzene	5.40E-10	NA	NA
n-propylbenzene	5.05E-10	NA	NA
p-cymene	5.63E-10	NA	NA
phenanthrene	1.24E-08	NA	NA
pyrene	1.12E-08	NA	NA
tetrachloroethene	3.96E-10	5.10E-02	2.02E-11
trichloroethene	7.48E-10	1.50E-02	1.12E-11
xylenes	5.63E-10	NA	NA
	ILCR Summation =		3.7E-07

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Table B-20
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Dermal Contact with Soils

Intake Equation = $\frac{CS \times CF \times EF \times ED \times AF \times ABS \times SA}{BW \times AT}$

SA	Surface area of exposed skin (50th percentile, hands only)	2020	cm^2/day
AF	Adherence Factor	1	mg/cm^2
ABS	Absorption factor (see table below)	csv	
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	125	d/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	9125	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	ABS (unitless)	Concentration (mg/kg)
1,1-dichloroethene	1.00E-01	4.05E-03
1,2,4-trimethylbenzene	1.00E-01	1.85E-02
1,3,5-trimethylbenzene	1.00E-01	8.93E-03
aroclor 1248	1.00E-01	1.63E-02
aroclor 1254	1.00E-01	1.63E-02
aroclor 1260	1.00E-01	1.72E-02
arsenic	3.00E-02	NA
benzo(a)anthracene	1.50E-01	1.06E-01
benzo(a)pyrene	1.50E-01	2.24E-01
benzo(b)fluoranthene	1.50E-01	2.28E-01
benzo(k)fluoranthene	1.50E-01	2.05E-01
bis(2-ethylhexyl)phthalate	1.00E-01	1.03E-01
chrysene	1.50E-01	1.22E-01
dibenzo(a,h)anthracene	1.50E-01	8.54E-02
fluoranthene	1.00E-01	1.18E-01
indeno(1,2,3-cd)pyrene	1.00E-01	2.12E-01

Compound	ABS (unitless)	Concentration (mg/kg)
naphthalene	1.50E-01	2.15E-01
n-butylbenzene	1.00E-01	6.18E-03
n-propylbenzene	1.00E-01	5.78E-03
p-cymene	1.00E-01	6.45E-03
phenanthrene	1.50E-01	1.42E-01
pyrene	1.50E-01	1.28E-01
tetrachloroethene	1.00E-01	4.53E-03
trichloroethene	1.00E-01	8.56E-03
xylenes	1.00E-01	6.45E-03

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Table B-20 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Dermal Contact with Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	UH (unitless)
1,1-dichloroethene	4.00E-09	9.00E-03	4.45E-07
1,2,4-trimethylbenzene	1.83E-08	5.00E-01	3.66E-08
1,3,5-trimethylbenzene	8.83E-09	5.00E-01	1.77E-08
aroclor 1248	1.61E-08	7.00E-05	2.30E-04
aroclor 1254	1.61E-08	7.00E-05	2.30E-04
aroclor 1260	1.70E-08	7.00E-05	2.43E-04
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	1.57E-07	4.00E-02	3.93E-06
benzo(a)pyrene	3.32E-07	4.00E-02	8.30E-06
benzo(b)fluoranthene	3.38E-07	4.00E-02	8.45E-06
benzo(k)fluoranthene	3.04E-07	4.00E-02	7.60E-06
bis(2-ethylhexyl)phthalate	1.02E-07	2.00E-02	5.09E-06
chrysene	1.81E-07	4.00E-02	4.52E-06
dibenzo(a,h)anthracene	1.27E-07	4.00E-02	3.16E-06
fluoranthene	1.17E-07	4.00E-02	2.92E-06
indeno(1,2,3-cd)pyrene	2.10E-07	4.00E-02	5.24E-06
naphthalene	3.19E-07	4.00E-02	7.97E-06
n-butylbenzene	6.11E-09	1.00E-01	6.11E-08
n-propylbenzene	5.71E-09	1.00E-01	5.71E-08
p-cymene	6.37E-09	1.00E-01	6.37E-08
phenanthrene	2.10E-07	3.00E-01	7.02E-07
pyrene	1.90E-07	3.00E-02	6.32E-06
tetrachloroethene	4.48E-09	1.00E-02	4.48E-07
trichloroethene	8.46E-09	7.35E-03	1.15E-06
xylenes	6.37E-09	2.00E+00	3.19E-09
	HQ Summation =		7.7E-04

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF $(mg/kg\text{-}d)^{-1}$	UR (unitless)
1,1-dichloroethene	1.43E-09	NA	NA
1,2,4-trimethylbenzene	6.53E-09	NA	NA
1,3,5-trimethylbenzene	3.15E-09	NA	NA
aroclor 1248	5.75E-09	7.70E+00	4.43E-08
aroclor 1254	5.75E-09	7.70E+00	4.43E-08
aroclor 1260	6.07E-09	7.70E+00	4.67E-08
arsenic	NA	1.50E+00	NA
benzo(a)anthracene	5.61E-08	1.15E+00	6.45E-08
benzo(a)pyrene	1.19E-07	1.15E+01	1.36E-06
benzo(b)fluoranthene	1.21E-07	1.15E+00	1.39E-07
benzo(k)fluoranthene	1.09E-07	1.15E+00	1.25E-07
bis(2-ethylhexyl)phthalate	3.64E-08	8.40E-03	3.05E-10
chrysene	6.46E-08	1.15E-01	7.43E-09
dibenzo(a,h)anthracene	4.52E-08	4.10E+00	1.85E-07
fluoranthene	4.16E-08	NA	NA
indeno(1,2,3-cd)pyrene	7.48E-08	1.15E+00	8.60E-08
naphthalene	1.14E-07	NA	NA
n-butylbenzene	2.18E-09	NA	NA
n-propylbenzene	2.04E-09	NA	NA
p-cymene	2.28E-09	NA	NA
phenanthrene	7.52E-08	NA	NA
pyrene	6.78E-08	NA	NA
tetrachloroethene	1.60E-09	5.10E-02	8.15E-11
trichloroethene	3.02E-09	1.50E-02	4.53E-11
xylenes	2.28E-09	NA	NA
	ILCR Summation =		2.1E-06

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Table B-21
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Indoor Air

Intake Equation = $\frac{Ci \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim indoor	4	h/d
Ci	Concentration of chemicals indoors (indoor + outdoor)	(see Tables 5-6 and 5-7)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	1.24E-02
1,2,4-trimethylbenzene	2.38E-05
1,3,5-trimethylbenzene	4.37E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	1.43E-05
n-propylbenzene	4.48E-05
p-cymene	2.18E-06
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.70E-04
trichloroethene	4.46E-04
xylenes	2.79E-05

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Table B-21 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Indoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.02E-04	9.00E-03	2.24E-02
1,2,4-trimethylbenzene	3.87E-07	2.00E-03	1.93E-04
1,3,5-trimethylbenzene	7.10E-07	2.00E-03	3.55E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	2.32E-07	2.90E-01	8.02E-07
n-propylbenzene	7.28E-07	2.90E-01	2.51E-06
p-cymene	3.54E-08	1.00E-01	3.54E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	2.76E-06	1.00E-02	2.76E-04
trichloroethene	7.25E-06	7.35E-03	9.86E-04
xylenes	4.53E-07	2.00E-01	2.27E-06
	HQ Summation =		2.4E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.20E-05	NA	NA
1,2,4-trimethylbenzene	1.38E-07	NA	NA
1,3,5-trimethylbenzene	2.54E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	8.30E-08	NA	NA
n-propylbenzene	2.60E-07	NA	NA
p-cymene	1.27E-08	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	9.87E-07	2.10E-02	2.07E-08
trichloroethene	2.59E-06	1.00E-02	2.59E-08
xylenes	1.62E-07	NA	NA
	ILCR Summation =		4.7E-08

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Table B-22
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Outdoor Air

Intake Equation = $\frac{\{Ci + (Cs \times 1/PEF)\} \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim outdoor	4	h/d
Ci	Concentration of chemicals outdoors	(see Table 5-6)	
PEF	Particulate Emission Factor	(see Section 5.3.1.2)	

Chemical Concentrations

Compound	Soil Conc (mg/kg)	PEF (m3/kg)	Volatile Concentration (mg/m3)
1,1-dichloroethene	4.05E-03	NA	1.24E-02
1,2,4-trimethylbenzen	1.85E-02	NA	2.38E-05
1,3,5-trimethylbenzen	8.93E-03	NA	4.37E-05
aroclor 1248	1.63E-02	4.77E+09	NA
aroclor 1254	1.63E-02	4.77E+09	NA
aroclor 1260	1.72E-02	4.77E+09	NA
arsenic	NA	4.77E+09	NA
benzo(a)anthracene	1.06E-01	4.77E+09	NA
benzo(a)pyrene	2.24E-01	4.77E+09	NA
benzo(b)fluoranthene	2.28E-01	4.77E+09	NA
benzo(k)fluoranthene	2.05E-01	4.77E+09	NA
bis(2-ethylhexyl)phtha	1.03E-01	4.77E+09	NA
chrysene	1.22E-01	4.77E+09	NA
dibenzo(a,h)anthracen	8.54E-02	4.77E+09	NA
fluoranthene	1.18E-01	4.77E+09	NA
indeno(1,2,3-cd)pyren	2.12E-01	4.77E+09	NA

Compound	Soil Conc (mg/k	PEF	Volatile Concentration (mg/m3)
naphthalene	2.15E-01	4.77E+09	NA
n-butylbenzene	6.18E-03	NA	1.43E-05
n-propylbenzene	5.78E-03	NA	4.48E-05
p-cymene	6.45E-03	NA	2.18E-06
phenanthrene	1.42E-01	4.77E+09	NA
pyrene	1.28E-01	4.77E+09	NA
tetrachloroethene	4.53E-03	NA	1.70E-04
trichloroethene	8.56E-03	NA	4.46E-04
xylenes	6.45E-03	NA	2.79E-05

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Table B-22 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.01E-04	9.00E-03	2.24E-02
1,2,4-trimethylbenzene	3.87E-07	2.00E-03	1.93E-04
1,3,5-trimethylbenzene	7.10E-07	2.00E-03	3.55E-04
aroclor 1248	5.55E-14	7.00E-05	7.92E-10
aroclor 1254	5.55E-14	7.00E-05	7.92E-10
aroclor 1260	5.85E-14	7.00E-05	8.36E-10
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	3.61E-13	4.00E-02	9.02E-12
benzo(a)pyrene	7.62E-13	4.00E-02	1.91E-11
benzo(b)fluoranthene	7.76E-13	4.00E-02	1.94E-11
benzo(k)fluoranthene	6.97E-13	4.00E-02	1.74E-11
bis(2-ethylhexyl)phthalate	3.50E-13	2.00E-02	1.75E-11
chrysene	4.15E-13	4.00E-02	1.04E-11
dibenzo(a,h)anthracene	2.91E-13	4.00E-02	7.26E-12
fluoranthene	4.01E-13	4.00E-02	1.00E-11
indeno(1,2,3-cd)pyrene	7.21E-13	4.00E-02	1.80E-11
naphthalene	7.31E-13	4.00E-02	1.83E-11
n-butylbenzene	2.32E-07	2.90E-01	8.01E-07
n-propylbenzene	7.28E-07	2.90E-01	2.51E-06
p-cymene	3.54E-08	1.00E-01	3.54E-07
phenanthrene	4.83E-13	3.00E-01	1.61E-12
pyrene	4.35E-13	3.00E-02	1.45E-11
tetrachloroethene	2.76E-06	1.00E-02	2.76E-04
trichloroethene	7.24E-06	7.35E-03	9.86E-04
xylenes	4.53E-07	2.00E-01	2.27E-06
	HQ Summation =		2.4E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.19E-05	NA	NA
1,2,4-trimethylbenzene	1.38E-07	NA	NA
1,3,5-trimethylbenzene	2.54E-07	NA	NA
aroclor 1248	1.98E-14	7.70E+00	1.53E-13
aroclor 1254	1.98E-14	7.70E+00	1.53E-13
aroclor 1260	2.09E-14	7.70E+00	1.61E-13
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	1.29E-13	3.90E-01	5.02E-14
benzo(a)pyrene	2.72E-13	3.90E+00	1.06E-12
benzo(b)fluoranthene	2.77E-13	3.90E-01	1.08E-13
benzo(k)fluoranthene	2.49E-13	3.90E-01	9.71E-14
bis(2-ethylhexyl)phthalate	1.25E-13	8.40E-03	1.05E-15
chrysene	1.48E-13	3.90E-02	5.78E-15
dibenzo(a,h)anthracene	1.04E-13	4.10E+00	4.25E-13
fluoranthene	1.43E-13	NA	NA
indeno(1,2,3-cd)pyrene	2.58E-13	3.90E-01	1.00E-13
naphthalene	2.61E-13	NA	NA
n-butylbenzene	8.30E-08	NA	NA
n-propylbenzene	2.60E-07	NA	NA
p-cymene	1.26E-08	NA	NA
phenanthrene	1.73E-13	NA	NA
pyrene	1.56E-13	NA	NA
tetrachloroethene	9.86E-07	2.10E-02	2.07E-08
trichloroethene	2.59E-06	1.00E-02	2.59E-08
xylenes	1.62E-07	NA	NA
	ILCR Summation =		4.7E-08

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Table B-23
Summary of Potential Health Effects
Off-Site Commercial/Industrial Worker

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Outdoor Air	2.5E-02
Total Population Hazard Quotient =	2.5E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Outdoor Air	5.2E-08
Total Population Incremental Lifetime Cancer Risk =	5.2E-08

Table B-24
Summary of Risk Quantitation
Off-Site Commercial/Industrial Worker
Via Inhalation of Outdoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure time outdoors	8	h/d
Ci	Concentration of chemicals indoors	(see Table 5-6)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	6.57E-03
1,2,4-trimethylbenzene	7.04E-06
1,3,5-trimethylbenzene	2.01E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	8.09E-06
n-propylbenzene	2.54E-05
p-cymene	4.07E-07
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.36E-04
trichloroethene	1.66E-04
xylenes	1.70E-05

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Table B-24 (cont.)
Summary of Risk Quantitation
Off-Site Commercial/Industrial Worker
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.13E-04	9.00E-03	2.37E-02
1,2,4-trimethylbenzene	2.29E-07	2.00E-03	1.14E-04
1,3,5-trimethylbenzene	6.53E-07	2.00E-03	3.26E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	2.63E-07	2.90E-01	9.06E-07
n-propylbenzene	8.25E-07	2.90E-01	2.85E-06
p-cymene	1.32E-08	1.00E-01	1.32E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	4.42E-06	1.00E-02	4.42E-04
trichloroethene	5.39E-06	7.35E-03	7.34E-04
xylenes	5.52E-07	2.00E-01	2.76E-06
	HQ Summation =		2.5E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.62E-05	NA	NA
1,2,4-trimethylbenzene	8.17E-08	NA	NA
1,3,5-trimethylbenzene	2.33E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	9.39E-08	NA	NA
n-propylbenzene	2.95E-07	NA	NA
p-cymene	4.72E-09	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	1.58E-06	2.10E-02	3.31E-08
trichloroethene	1.93E-06	1.00E-02	1.93E-08
xylenes	1.97E-07	NA	NA
	ILCR Summation =		5.2E-08

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Table B-25
Summary of Potential Health Effects
Off-Site RME Resident Adult

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Outdoor Air	1.2E-03
Total Population Hazard Quotient =	1.2E-03

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Outdoor Air	2.9E-09
Total Population Incremental Lifetime Cancer Risk =	2.9E-09

Table B-26
Summary of Risk Quantitation
Off-Site RME Resident Adult
Via Inhalation of Outdoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	350	days/year
EDn	Exposure duration for non-carcinogens	30	year
EDc	Exposure duration for carcinogens	30	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	10950	days
ET	Exposure time	24	h/d
Ci	Concentration of chemicals Outdoors	(see Table 5-6)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	3.65E-05
1,2,4-trimethylbenzene	3.83E-08
1,3,5-trimethylbenzene	1.11E-07
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	4.96E-08
n-propylbenzene	1.41E-07
p-cymene	8.57E-10
phenanthrene	NA
pyrene	NA
tetrachloroethene	7.61E-07
trichloroethene	9.09E-07
xylenes	9.47E-08

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Table B-26 (cont.)
Summary of Risk Quantitation
Off-Site RME Resident Adult
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	9.96E-06	9.00E-03	1.11E-03
1,2,4-trimethylbenzene	1.05E-08	2.00E-03	5.23E-06
1,3,5-trimethylbenzene	3.03E-08	2.00E-03	1.51E-05
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	1.35E-08	2.90E-01	4.67E-08
n-propylbenzene	3.85E-08	2.90E-01	1.33E-07
p-cymene	2.34E-10	1.00E-01	2.34E-09
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	2.08E-07	1.00E-02	2.08E-05
trichloroethene	2.48E-07	7.35E-03	3.37E-05
xylenes	2.58E-08	2.00E-01	1.29E-07
	HQ Summation =		1.2E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	4.27E-06	NA	NA
1,2,4-trimethylbenzene	4.48E-09	NA	NA
1,3,5-trimethylbenzene	1.30E-08	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	5.80E-09	NA	NA
n-propylbenzene	1.65E-08	NA	NA
p-cymene	1.00E-10	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	8.90E-08	2.10E-02	1.87E-09
trichloroethene	1.06E-07	1.00E-02	1.06E-09
xylenes	1.11E-08	NA	NA
	ILCR Summation =		2.9E-09

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Table B-27
Summary of Potential Health Effects
Off-Site RME Resident Child

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Outdoor Air	5.5E-03
Total Population Hazard Quotient =	5.5E-03

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Outdoor Air	2.7E-09
Total Population Incremental Lifetime Cancer Risk =	2.7E-09

Table B-28
Summary of Risk Quantitation
Off-Site RME Resident Child
Via Inhalation of Outdoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	350	days/year
EDn	Exposure duration for non-carcinogens	6	year
EDc	Exposure duration for carcinogens	6	year
BW	Body weight	15	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	2190	days
ET	Exposure time	24	h/d
Ci	Concentration of chemicals Outdoors	(see Table 5-6)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	3.65E-05
1,2,4-trimethylbenzene	3.83E-08
1,3,5-trimethylbenzene	1.11E-07
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	4.96E-08
n-propylbenzene	1.41E-07
p-cymene	8.57E-10
phenanthrene	NA
pyrene	NA
tetrachloroethene	7.61E-07
trichloroethene	9.09E-07
xylenes	9.47E-08

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Table B-28 (cont.)
Summary of Risk Quantitation
Off-Site RME Resident Child
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	4.65E-05	9.00E-03	5.16E-03
1,2,4-trimethylbenzene	4.88E-08	2.00E-03	2.44E-05
1,3,5-trimethylbenzene	1.41E-07	2.00E-03	7.07E-05
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	6.32E-08	2.90E-01	2.18E-07
n-propylbenzene	1.80E-07	2.90E-01	6.19E-07
p-cymene	1.09E-09	1.00E-01	1.09E-08
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	9.69E-07	1.00E-02	9.69E-05
trichloroethene	1.16E-06	7.35E-03	1.57E-04
xylenes	1.21E-07	2.00E-01	6.03E-07
	HQ Summation =		5.5E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	3.98E-06	NA	NA
1,2,4-trimethylbenzene	4.18E-09	NA	NA
1,3,5-trimethylbenzene	1.21E-08	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	5.41E-09	NA	NA
n-propylbenzene	1.54E-08	NA	NA
p-cymene	9.35E-11	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	8.31E-08	2.10E-02	1.74E-09
trichloroethene	9.92E-08	1.00E-02	9.92E-10
xylenes	1.03E-08	NA	NA
	ILCR Summation =		2.7E-09

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Table B-3
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Dermal Contact with Soils

Intake Equation = $\frac{CS \times CF \times EF \times ED \times AF \times ABS \times SA}{BW \times AT}$

SA	Surface area of exposed skin (50th percentile, hands only)	5800	cm^2/day
AF	Adherence Factor	1	mg/cm^2
ABS	Absorption factor (see table below)	csv	
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	250	d/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	365	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	ABS (unitless)	Concentration (mg/kg)
1,1-dichloroethene	1.00E-01	2.57E-03
1,2,4-trimethylbenzene	1.00E-01	3.82E-03
1,3,5-trimethylbenzene	1.00E-01	2.96E-03
aroclor 1248	1.00E-01	3.69E-02
aroclor 1254	1.00E-01	3.28E-02
aroclor 1260	1.00E-01	2.08E-02
arsenic	3.00E-02	1.56E+00
benzo(a)anthracene	1.50E-01	2.43E-01
benzo(a)pyrene	1.50E-01	3.39E-01
benzo(b)fluoranthene	1.50E-01	3.91E-01
benzo(k)fluoranthene	1.50E-01	3.06E-01
bis(2-ethylhexyl)phthalate	1.00E-01	2.58E-01
chrysene	1.50E-01	2.86E-01
dibenzo(a,h)anthracene	1.50E-01	1.36E-01
fluoranthene	1.00E-01	2.66E-01
indeno(1,2,3-cd)pyrene	1.00E-01	3.33E-01

Compound	ABS (unitless)	Concentration (mg/kg)
naphthalene	1.50E-01	2.05E-01
n-butylbenzene	1.00E-01	2.81E-03
n-propylbenzene	1.00E-01	2.57E-03
p-cymene	1.00E-01	2.47E-03
phenanthrene	1.50E-01	2.03E-01
pyrene	1.50E-01	3.12E-01
tetrachloroethene	1.00E-01	2.69E-03
trichloroethene	1.00E-01	2.63E-03
xylenes	1.00E-01	2.34E-03

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Table B-3 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Dermal Contact with Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	1.46E-08	9.00E-03	1.62E-06
1,2,4-trimethylbenzene	2.17E-08	5.00E-01	4.34E-08
1,3,5-trimethylbenzene	1.68E-08	5.00E-01	3.36E-08
aroclor 1248	2.09E-07	7.00E-05	2.99E-03
aroclor 1254	1.86E-07	7.00E-05	2.66E-03
aroclor 1260	1.18E-07	7.00E-05	1.69E-03
arsenic	2.66E-06	3.00E-04	8.85E-03
benzo(a)anthracene	2.07E-06	4.00E-02	5.17E-05
benzo(a)pyrene	2.89E-06	4.00E-02	7.21E-05
benzo(b)fluoranthene	3.33E-06	4.00E-02	8.32E-05
benzo(k)fluoranthene	2.60E-06	4.00E-02	6.51E-05
bis(2-ethylhexyl)phthalate	1.46E-06	2.00E-02	7.32E-05
chrysene	2.43E-06	4.00E-02	6.09E-05
dibenzo(a,h)anthracene	1.16E-06	4.00E-02	2.89E-05
fluoranthene	1.51E-06	4.00E-01	3.77E-06
indeno(1,2,3-cd)pyrene	1.89E-06	4.00E-02	4.72E-05
naphthalene	1.75E-06	4.00E-02	4.36E-05
n-butylbenzene	1.59E-08	1.00E-01	1.59E-07
n-propylbenzene	1.46E-08	1.00E-01	1.46E-07
p-cymene	1.40E-08	1.00E-01	1.40E-07
phenanthrene	1.73E-06	3.00E-01	5.76E-06
pyrene	2.66E-06	3.00E-01	8.85E-06
tetrachloroethene	1.53E-08	1.00E-01	1.53E-07
trichloroethene	1.49E-08	7.35E-03	2.03E-06
xylenes	1.33E-08	2.00E+00	6.64E-09
	HQ Summation =		1.7E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	2.08E-10	NA	NA
1,2,4-trimethylbenzene	3.10E-10	NA	NA
1,3,5-trimethylbenzene	2.40E-10	NA	NA
aroclor 1248	2.99E-09	7.70E+00	2.30E-08
aroclor 1254	2.66E-09	7.70E+00	2.05E-08
aroclor 1260	1.69E-09	7.70E+00	1.30E-08
arsenic	3.79E-08	1.50E+00	5.69E-08
benzo(a)anthracene	2.96E-08	1.15E+00	3.40E-08
benzo(a)pyrene	4.12E-08	1.15E+01	4.74E-07
benzo(b)fluoranthene	4.75E-08	1.15E+00	5.47E-08
benzo(k)fluoranthene	3.72E-08	1.15E+00	4.28E-08
bis(2-ethylhexyl)phthalate	2.09E-08	8.40E-03	1.76E-10
chrysene	3.48E-08	1.15E-01	4.00E-09
dibenzo(a,h)anthracene	1.65E-08	4.10E+00	6.78E-08
fluoranthene	2.16E-08	NA	NA
indeno(1,2,3-cd)pyrene	2.70E-08	1.15E+00	3.10E-08
naphthalene	2.49E-08	NA	NA
n-butylbenzene	2.28E-10	NA	NA
n-propylbenzene	2.08E-10	NA	NA
p-cymene	2.00E-10	NA	NA
phenanthrene	2.47E-08	NA	NA
pyrene	3.79E-08	NA	NA
tetrachloroethene	2.18E-10	5.10E-02	1.11E-11
trichloroethene	2.13E-10	1.50E-02	3.20E-12
xylenes	1.90E-10	NA	NA
	ILCR Summation =		8.2E-07

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Table B-4
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Inhalation of Particulates and Volatiles

Intake Equation = $\frac{CS \times (1/VF + 1/PEF) \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	2.5	m3/h
EF	Exposure frequency	250	days/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	365	days
ET	Exposure tim outdoors	8	h/d
CS	Concentration of chemicals in soil	(see Table 5-1)	
VF	Volatilization Factor	(see Table 5-4)	
PEF	Particulate Emission Factor	(see Section 5.3.1.2)	

Chemical Concentrations

Compound	VF (m3/kg)	PEF (m3/kg)	Cs (mg/kg)
1,1-dichloroethene	2.07E+01	NA	2.57E-03
1,2,4-trimethylbenzene	1.79E+03	NA	3.82E-03
1,3,5-trimethylbenzene	8.99E+02	NA	2.96E-03
aroclor 1248	NA	4.77E+09	3.69E-02
aroclor 1254	NA	4.77E+09	3.28E-02
aroclor 1260	NA	4.77E+09	2.08E-02
arsenic	NA	4.77E+09	1.56E+00
benzo(a)anthracene	NA	4.77E+09	2.43E-01
benzo(a)pyrene	NA	4.77E+09	3.39E-01
benzo(b)fluoranthene	NA	4.77E+09	3.91E-01
benzo(k)fluoranthene	NA	4.77E+09	3.06E-01
bis(2-ethylhexyl)phthalate	NA	4.77E+09	2.58E-01
chrysene	NA	4.77E+09	2.86E-01
dibenzo(a,h)anthracene	NA	4.77E+09	1.36E-01
fluoranthene	NA	4.77E+09	2.66E-01
indeno(1,2,3-cd)pyrene	NA	4.77E+09	3.33E-01

Compound	VF (m3/kg)	PEF (m3/kg)	Cs (mg/kg)
naphthalene	NA	4.77E+09	2.05E-01
n-butylbenzene	1.26E+03	NA	2.81E-03
n-propylbenzene	7.29E+02	NA	2.57E-03
p-cymene	2.94E+03	NA	2.47E-03
phenanthrene	NA	4.77E+09	2.03E-01
pyrene	NA	4.77E+09	3.12E-01
tetrachloroethene	3.02E+02	NA	2.69E-03
trichloroethene	2.72E+02	NA	2.63E-03
xylenes	8.50E+02	NA	2.34E-03

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Table B-4 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 1
Via Inhalation of Particulates and Volatiles

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.43E-05	9.00E-03	2.70E-03
1,2,4-trimethylbenzene	4.18E-07	2.00E-03	2.09E-04
1,3,5-trimethylbenzene	6.44E-07	2.00E-03	3.22E-04
aroclor 1248	1.51E-12	7.00E-05	2.16E-08
aroclor 1254	1.34E-12	7.00E-05	1.92E-08
aroclor 1260	8.53E-13	7.00E-05	1.22E-08
arsenic	6.39E-11	3.00E-04	2.13E-07
benzo(a)anthracene	9.96E-12	4.00E-02	2.49E-10
benzo(a)pyrene	1.39E-11	4.00E-02	3.47E-10
benzo(b)fluoranthene	1.60E-11	4.00E-02	4.01E-10
benzo(k)fluoranthene	1.25E-11	4.00E-02	3.14E-10
bis(2-ethylhexyl)phthalate	1.06E-11	2.00E-02	5.29E-10
chrysene	1.17E-11	4.00E-02	2.93E-10
dibenzo(a,h)anthracene	5.57E-12	4.00E-02	1.39E-10
fluoranthene	1.09E-11	4.00E-01	2.73E-11
indeno(1,2,3-cd)pyrene	1.36E-11	4.00E-02	3.41E-10
naphthalene	8.40E-12	4.00E-02	2.10E-10
n-butylbenzene	4.38E-07	2.90E-01	1.51E-06
n-propylbenzene	6.90E-07	2.90E-01	2.38E-06
p-cymene	1.64E-07	1.00E-01	1.64E-06
phenanthrene	8.32E-12	3.00E-01	2.77E-11
pyrene	1.28E-11	3.00E-01	4.26E-11
tetrachloroethene	1.74E-06	1.00E-01	1.74E-05
trichloroethene	1.89E-06	7.35E-03	2.58E-04
xylenes	5.39E-07	2.00E-01	2.69E-06
	HQ Summation =		3.5E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	3.47E-07	NA	NA
1,2,4-trimethylbenzene	5.97E-09	NA	NA
1,3,5-trimethylbenzene	9.21E-09	NA	NA
aroclor 1248	2.16E-14	7.70E+00	1.66E-13
aroclor 1254	1.92E-14	7.70E+00	1.48E-13
aroclor 1260	1.22E-14	7.70E+00	9.38E-14
arsenic	9.13E-13	1.20E+01	1.10E-11
benzo(a)anthracene	1.42E-13	3.90E-01	5.55E-14
benzo(a)pyrene	1.99E-13	3.90E+00	7.74E-13
benzo(b)fluoranthene	2.29E-13	3.90E-01	8.93E-14
benzo(k)fluoranthene	1.79E-13	3.90E-01	6.99E-14
bis(2-ethylhexyl)phthalate	1.51E-13	8.40E-03	1.27E-15
chrysene	1.67E-13	3.90E-02	6.53E-15
dibenzo(a,h)anthracene	7.96E-14	4.10E+00	3.27E-13
fluoranthene	1.56E-13	NA	NA
indeno(1,2,3-cd)pyrene	1.95E-13	3.90E-01	7.60E-14
naphthalene	1.20E-13	NA	NA
n-butylbenzene	6.26E-09	NA	NA
n-propylbenzene	9.85E-09	NA	NA
p-cymene	2.35E-09	NA	NA
phenanthrene	1.19E-13	NA	NA
pyrene	1.83E-13	NA	NA
tetrachloroethene	2.49E-08	2.10E-02	5.22E-10
trichloroethene	2.71E-08	1.00E-02	2.71E-10
xylenes	7.70E-09	NA	NA
	ILCR Summation =		8.1E-10

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Table B-5
Summary of Potential Health Effects
On-Site Construction Worker AOPC 2

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Particulates and Volatiles	7.1E-03
Incidental ingestion of soils	3.5E-03
Dermal contact with soils	4.4E-03
Total Population Hazard Quotient =	1.5E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Particulates and Volatiles	1.8E-09
Incidental ingestion of soils	2.8E-07
Dermal contact with soils	4.8E-07
Total Population Incremental Lifetime Cancer Risk =	7.7E-07

Table B-6
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Incidental Ingestion of Soils

Intake Equation = $\frac{CS \times EF \times ED \times CF \times IR}{BW \times AT}$

IRs	Ingestion rate of soil (RAGS, 1989)	480	mg/day
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	250	d/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	365	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	Concentration
1,1-dichloroethene	4.05E-03
1,2,4-trimethylbenzene	1.85E-02
1,3,5-trimethylbenzene	8.93E-03
aroclor 1248	1.63E-02
aroclor 1254	1.63E-02
aroclor 1260	1.72E-02
arsenic	NA
benzo(a)anthracene	1.06E-01
benzo(a)pyrene	2.24E-01
benzo(b)fluoranthene	2.28E-01
benzo(k)fluoranthene	2.05E-01
bis(2-ethylhexyl)phthalate	1.03E-01
chrysene	1.22E-01
dibenzo(a,h)anthracene	8.54E-02
fluoranthene	1.18E-01
indeno(1,2,3-cd)pyrene	2.12E-01

Compound	Concentration
naphthalene	2.15E-01
n-butylbenzene	6.18E-03
n-propylbenzene	5.78E-03
p-cymene	6.45E-03
phenanthrene	1.42E-01
pyrene	1.28E-01
tetrachloroethene	4.53E-03
trichloroethene	8.56E-03
xylenes	6.45E-03

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Table B-6 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Incidental Ingestion of Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	1.90E-08	9.00E-03	2.11E-06
1,2,4-trimethylbenzene	8.69E-08	5.00E-01	1.74E-07
1,3,5-trimethylbenzene	4.19E-08	5.00E-01	8.39E-08
aroclor 1248	7.66E-08	7.00E-05	1.09E-03
aroclor 1254	7.66E-08	7.00E-05	1.09E-03
aroclor 1260	8.08E-08	7.00E-05	1.15E-03
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	4.98E-07	4.00E-02	1.24E-05
benzo(a)pyrene	1.05E-06	4.00E-02	2.63E-05
benzo(b)fluoranthene	1.07E-06	4.00E-02	2.68E-05
benzo(k)fluoranthene	9.63E-07	4.00E-02	2.41E-05
bis(2-ethylhexyl)phthalate	4.84E-07	2.00E-02	2.42E-05
chrysene	5.73E-07	4.00E-02	1.43E-05
dibenzo(a,h)anthracene	4.01E-07	4.00E-02	1.00E-05
fluoranthene	5.54E-07	4.00E-01	1.39E-06
indeno(1,2,3-cd)pyrene	9.96E-07	4.00E-02	2.49E-05
naphthalene	1.01E-06	4.00E-02	2.52E-05
n-butylbenzene	2.90E-08	1.00E-01	2.90E-07
n-propylbenzene	2.71E-08	1.00E-01	2.71E-07
p-cymene	3.03E-08	1.00E-01	3.03E-07
phenanthrene	6.67E-07	3.00E-01	2.22E-06
pyrene	6.01E-07	3.00E-01	2.00E-06
tetrachloroethene	2.13E-08	1.00E-01	2.13E-07
trichloroethene	4.02E-08	7.35E-03	5.47E-06
xylenes	3.03E-08	2.00E+00	1.51E-08
	HQ Summation =		3.5E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	2.72E-10	NA	NA
1,2,4-trimethylbenzene	1.24E-09	NA	NA
1,3,5-trimethylbenzene	5.99E-10	NA	NA
aroclor 1248	1.09E-09	7.70E+00	8.42E-09
aroclor 1254	1.09E-09	7.70E+00	8.42E-09
aroclor 1260	1.15E-09	7.70E+00	8.89E-09
arsenic	NA	1.50E+00	NA
benzo(a)anthracene	7.11E-09	1.15E+00	8.18E-09
benzo(a)pyrene	1.50E-08	1.15E+01	1.73E-07
benzo(b)fluoranthene	1.53E-08	1.15E+00	1.76E-08
benzo(k)fluoranthene	1.38E-08	1.15E+00	1.58E-08
bis(2-ethylhexyl)phthalate	6.91E-09	8.40E-03	5.81E-11
chrysene	8.19E-09	1.15E-01	9.41E-10
dibenzo(a,h)anthracene	5.73E-09	4.10E+00	2.35E-08
fluoranthene	7.92E-09	NA	NA
indeno(1,2,3-cd)pyrene	1.42E-08	1.15E+00	1.64E-08
naphthalene	1.44E-08	NA	NA
n-butylbenzene	4.15E-10	NA	NA
n-propylbenzene	3.88E-10	NA	NA
p-cymene	4.33E-10	NA	NA
phenanthrene	9.53E-09	NA	NA
pyrene	8.59E-09	NA	NA
tetrachloroethene	3.04E-10	5.10E-02	1.55E-11
trichloroethene	5.74E-10	1.50E-02	8.62E-12
xylenes	4.33E-10	NA	NA
	ILCR Summation =		2.8E-07

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Table B-7
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Dermal Contact with Soils

Intake Equation = $\frac{CS \times CF \times EF \times ED \times AF \times ABS \times SA}{BW \times AT}$

SA	Surface area of exposed skin (50th percentile, hands only)	5800	cm^2/day
AF	Adherence Factor	1	mg/cm^2
ABS	Absorption factor (see table below)	csv	
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	250	d/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	365	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	ABS (unitless)	Concentration (mg/kg)
1,1-dichloroethene	1.00E-01	4.05E-03
1,2,4-trimethylbenzene	1.00E-01	1.85E-02
1,3,5-trimethylbenzene	1.00E-01	8.93E-03
aroclor 1248	1.00E-01	1.63E-02
aroclor 1254	1.00E-01	1.63E-02
aroclor 1260	1.00E-01	1.72E-02
arsenic	3.00E-02	NA
benzo(a)anthracene	1.50E-01	1.06E-01
benzo(a)pyrene	1.50E-01	2.24E-01
benzo(b)fluoranthene	1.50E-01	2.28E-01
benzo(k)fluoranthene	1.50E-01	2.05E-01
bis(2-ethylhexyl)phthalate	1.00E-01	1.03E-01
chrysene	1.50E-01	1.22E-01
dibenzo(a,h)anthracene	1.50E-01	8.54E-02
fluoranthene	1.00E-01	1.18E-01
indeno(1,2,3-cd)pyrene	1.00E-01	2.12E-01

Compound	ABS (unitless)	Concentration (mg/kg)
naphthalene	1.50E-01	2.15E-01
n-butylbenzene	1.00E-01	6.18E-03
n-propylbenzene	1.00E-01	5.78E-03
p-cymene	1.00E-01	6.45E-03
phenanthrene	1.50E-01	1.42E-01
pyrene	1.50E-01	1.28E-01
tetrachloroethene	1.00E-01	4.53E-03
trichloroethene	1.00E-01	8.56E-03
xylenes	1.00E-01	6.45E-03

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Table B-7 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Dermal Contact with Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.30E-08	9.00E-03	2.55E-06
1,2,4-trimethylbenzene	1.05E-07	5.00E-01	2.10E-07
1,3,5-trimethylbenzene	5.07E-08	5.00E-01	1.01E-07
aroclor 1248	9.25E-08	7.00E-05	1.32E-03
aroclor 1254	9.25E-08	7.00E-05	1.32E-03
aroclor 1260	9.76E-08	7.00E-05	1.39E-03
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	9.02E-07	4.00E-02	2.26E-05
benzo(a)pyrene	1.91E-06	4.00E-02	4.77E-05
benzo(b)fluoranthene	1.94E-06	4.00E-02	4.85E-05
benzo(k)fluoranthene	1.75E-06	4.00E-02	4.36E-05
bis(2-ethylhexyl)phthalate	5.85E-07	2.00E-02	2.92E-05
chrysene	1.04E-06	4.00E-02	2.60E-05
dibenzo(a,h)anthracene	7.27E-07	4.00E-02	1.82E-05
fluoranthene	6.70E-07	4.00E-01	1.67E-06
indeno(1,2,3-cd)pyrene	1.20E-06	4.00E-02	3.01E-05
naphthalene	1.83E-06	4.00E-02	4.58E-05
n-butylbenzene	3.51E-08	1.00E-01	3.51E-07
n-propylbenzene	3.28E-08	1.00E-01	3.28E-07
p-cymene	3.66E-08	1.00E-01	3.66E-07
phenanthrene	1.21E-06	3.00E-01	4.03E-06
pyrene	1.09E-06	3.00E-01	3.63E-06
tetrachloroethene	2.57E-08	1.00E-01	2.57E-07
trichloroethene	4.86E-08	7.35E-03	6.61E-06
xylenes	3.66E-08	2.00E+00	1.83E-08
	HQ Summation =		4.4E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	3.28E-10	NA	NA
1,2,4-trimethylbenzene	1.50E-09	NA	NA
1,3,5-trimethylbenzene	7.24E-10	NA	NA
aroclor 1248	1.32E-09	7.70E+00	1.02E-08
aroclor 1254	1.32E-09	7.70E+00	1.02E-08
aroclor 1260	1.39E-09	7.70E+00	1.07E-08
arsenic	NA	1.50E+00	NA
benzo(a)anthracene	1.29E-08	1.15E+00	1.48E-08
benzo(a)pyrene	2.72E-08	1.15E+01	3.13E-07
benzo(b)fluoranthene	2.77E-08	1.15E+00	3.19E-08
benzo(k)fluoranthene	2.49E-08	1.15E+00	2.87E-08
bis(2-ethylhexyl)phthalate	8.35E-09	8.40E-03	7.01E-11
chrysene	1.48E-08	1.15E-01	1.71E-09
dibenzo(a,h)anthracene	1.04E-08	4.10E+00	4.26E-08
fluoranthene	9.57E-09	NA	NA
indeno(1,2,3-cd)pyrene	1.72E-08	1.15E+00	1.98E-08
naphthalene	2.61E-08	NA	NA
n-butylbenzene	5.01E-10	NA	NA
n-propylbenzene	4.69E-10	NA	NA
p-cymene	5.23E-10	NA	NA
phenanthrene	1.73E-08	NA	NA
pyrene	1.56E-08	NA	NA
tetrachloroethene	3.67E-10	5.10E-02	1.87E-11
trichloroethene	6.94E-10	1.50E-02	1.04E-11
xylenes	5.23E-10	NA	NA
	ILCR Summation =		4.8E-07

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Table B-8
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Inhalation of Particulates and Volatiles

Intake Equation = $\frac{CS \times (1/VF + 1/PEF) \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	2.5	m/h
EF	Exposure frequency	250	days/year
EDn	Exposure duration for non-carcinogens	1	year
EDc	Exposure duration for carcinogens	1	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	365	days
ET	Exposure tim outdoors	8	h/d
CS	Concentration of chemicals in soil	(see Table 5-1)	
VF	Volatilization Factor	(see Table 5-4)	
PEF	Particulate Emission Factor	(see Section 5.3.1.2)	

Chemical Concentrations

Compound	VF (m3/kg)	PEF (m3/kg)	Cs (mg/kg)
1,1-dichloroethene	2.07E+01	NA	4.05E-03
1,2,4-trimethylbenzene	1.79E+03	NA	1.85E-02
1,3,5-trimethylbenzene	8.99E+02	NA	8.93E-03
aroclor 1248	NA	4.77E+09	1.63E-02
aroclor 1254	NA	4.77E+09	1.63E-02
aroclor 1260	NA	4.77E+09	1.72E-02
arsenic	NA	4.77E+09	NA
benzo(a)anthracene	NA	4.77E+09	1.06E-01
benzo(a)pyrene	NA	4.77E+09	2.24E-01
benzo(b)fluoranthene	NA	4.77E+09	2.28E-01
benzo(k)fluoranthene	NA	4.77E+09	2.05E-01
bis(2-ethylhexyl)phthalate	NA	4.77E+09	1.03E-01
chrysene	NA	4.77E+09	1.22E-01
dibenzo(a,h)anthracene	NA	4.77E+09	8.54E-02
fluoranthene	NA	4.77E+09	1.18E-01
indeno(1,2,3-cd)pyrene	NA	4.77E+09	2.12E-01

Compound	VF (m3/kg)	PEF (m3/kg)	Cs (mg/kg)
naphthalene	NA	4.77E+09	2.15E-01
n-butylbenzene	1.26E+03	NA	6.18E-03
n-propylbenzene	7.29E+02	NA	5.78E-03
p-cymene	2.94E+03	NA	6.45E-03
phenanthrene	NA	4.77E+09	1.42E-01
pyrene	NA	4.77E+09	1.28E-01
tetrachloroethene	3.02E+02	NA	4.53E-03
trichloroethene	2.72E+02	NA	8.56E-03
xylenes	8.50E+02	NA	6.45E-03

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Table B-8 (cont.)
Summary of Unit Risk Characterization
On-Site Construction Worker AOPC 2
Via Inhalation of Particulates and Volatiles

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	3.83E-05	9.00E-03	4.26E-03
1,2,4-trimethylbenzene	2.02E-06	2.00E-03	1.01E-03
1,3,5-trimethylbenzene	1.94E-06	2.00E-03	9.72E-04
aroclor 1248	6.68E-13	7.00E-05	9.54E-09
aroclor 1254	6.68E-13	7.00E-05	9.54E-09
aroclor 1260	7.05E-13	7.00E-05	1.01E-08
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	4.34E-12	4.00E-02	1.09E-10
benzo(a)pyrene	9.18E-12	4.00E-02	2.30E-10
benzo(b)fluoranthene	9.35E-12	4.00E-02	2.34E-10
benzo(k)fluoranthene	8.40E-12	4.00E-02	2.10E-10
bis(2-ethylhexyl)phthalate	4.22E-12	2.00E-02	2.11E-10
chrysene	5.00E-12	4.00E-02	1.25E-10
dibenzo(a,h)anthracene	3.50E-12	4.00E-02	8.75E-11
fluoranthene	4.84E-12	4.00E-01	1.21E-11
indeno(1,2,3-cd)pyrene	8.69E-12	4.00E-02	2.17E-10
naphthalene	8.81E-12	4.00E-02	2.20E-10
n-butylbenzene	9.64E-07	2.90E-01	3.32E-06
n-propylbenzene	1.55E-06	2.90E-01	5.35E-06
p-cymene	4.29E-07	1.00E-01	4.29E-06
phenanthrene	5.82E-12	3.00E-01	1.94E-11
pyrene	5.25E-12	3.00E-01	1.75E-11
tetrachloroethene	2.93E-06	1.00E-01	2.93E-05
trichloroethene	6.16E-06	7.35E-03	8.39E-04
xylenes	1.49E-06	2.00E-01	7.43E-06
	HQ Summation =		7.1E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	5.48E-07	NA	NA
1,2,4-trimethylbenzene	2.89E-08	NA	NA
1,3,5-trimethylbenzene	2.78E-08	NA	NA
aroclor 1248	9.54E-15	7.70E+00	7.35E-14
aroclor 1254	9.54E-15	7.70E+00	7.35E-14
aroclor 1260	1.01E-14	7.70E+00	7.76E-14
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	6.21E-14	3.90E-01	2.42E-14
benzo(a)pyrene	1.31E-13	3.90E+00	5.12E-13
benzo(b)fluoranthene	1.34E-13	3.90E-01	5.21E-14
benzo(k)fluoranthene	1.20E-13	3.90E-01	4.68E-14
bis(2-ethylhexyl)phthalate	6.03E-14	8.40E-03	5.07E-16
chrysene	7.14E-14	3.90E-02	2.79E-15
dibenzo(a,h)anthracene	5.00E-14	4.10E+00	2.05E-13
fluoranthene	6.91E-14	NA	NA
indeno(1,2,3-cd)pyrene	1.24E-13	3.90E-01	4.84E-14
naphthalene	1.26E-13	NA	NA
n-butylbenzene	1.38E-08	NA	NA
n-propylbenzene	2.22E-08	NA	NA
p-cymene	6.13E-09	NA	NA
phenanthrene	8.32E-14	NA	NA
pyrene	7.50E-14	NA	NA
tetrachloroethene	4.19E-08	2.10E-02	8.79E-10
trichloroethene	8.80E-08	1.00E-02	8.80E-10
xylenes	2.12E-08	NA	NA
	ILCR Summation =		1.8E-09

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Table B-9
Summary of Potential Health Effects
On-Site Commercial/Industrial Worker AOPC 1

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Indoor Air	4.8E-02
Total Population Hazard Quotient =	4.8E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Indoor Air	9.3E-08
Total Population Incremental Lifetime Cancer Risk =	9.3E-08

Table B-10
Summary of Risk Quantitation
On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Indoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim indoors	8	h/d
Ci	Concentration of chemicals indoors (indoor + outdoor)	(see Tables 5-6 and 5-7)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	1.24E-02
1,2,4-trimethylbenzene	2.38E-05
1,3,5-trimethylbenzene	4.37E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	1.43E-05
n-propylbenzene	4.48E-05
p-cymene	2.18E-06
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.70E-04
trichloroethene	4.46E-04
xylenes	2.79E-05

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Table B-10 (cont.)
Summary of Risk Quantitation
On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Indoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	4.03E-04	9.00E-03	4.48E-02
1,2,4-trimethylbenzene	7.73E-07	2.00E-03	3.87E-04
1,3,5-trimethylbenzene	1.42E-06	2.00E-03	7.10E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	4.65E-07	2.90E-01	1.60E-06
n-propylbenzene	1.46E-06	2.90E-01	5.02E-06
p-cymene	7.08E-08	1.00E-01	7.08E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	5.53E-06	1.00E-02	5.53E-04
trichloroethene	1.45E-05	7.35E-03	1.97E-03
xylenes	9.07E-07	2.00E-01	4.53E-06
	HQ Summation =		4.8E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	1.44E-04	NA	NA
1,2,4-trimethylbenzene	2.76E-07	NA	NA
1,3,5-trimethylbenzene	5.07E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	1.66E-07	NA	NA
n-propylbenzene	5.20E-07	NA	NA
p-cymene	2.53E-08	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	1.97E-06	2.10E-02	4.14E-08
trichloroethene	5.18E-06	1.00E-02	5.18E-08
xylenes	3.24E-07	NA	NA
	ILCR Summation =		9.3E-08

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Table B-11
Summary of Potential Health Effects
On-Site Commercial/Industrial Worker AOPC 2

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Indoor Air	4.8E-02
Total Population Hazard Quotient =	4.8E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Indoor Air	9.3E-08
Total Population Incremental Lifetime Cancer Risk =	9.3E-08

Table B-12
Summary of Risk Quantitation
On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Indoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim indoor	8	h/d
Ci	Concentration of chemicals indoors (indoor + outdoor)	(see Tables 5-6 and 5-7)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	1.24E-02
1,2,4-trimethylbenzene	2.38E-05
1,3,5-trimethylbenzene	4.37E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	1.43E-05
n-propylbenzene	4.48E-05
p-cymene	2.18E-06
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.70E-04
trichloroethene	4.46E-04
xylenes	2.79E-05

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Table B-12 (cont.)
Summary of Risk Quantitation
On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Indoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	4.03E-04	9.00E-03	4.48E-02
1,2,4-trimethylbenzene	7.74E-07	2.00E-03	3.87E-04
1,3,5-trimethylbenzene	1.42E-06	2.00E-03	7.10E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	4.65E-07	2.90E-01	1.60E-06
n-propylbenzene	1.46E-06	2.90E-01	5.02E-06
p-cymene	7.09E-08	1.00E-01	7.09E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	5.53E-06	1.00E-02	5.53E-04
trichloroethene	1.45E-05	7.35E-03	1.97E-03
xylenes	9.06E-07	2.00E-01	4.53E-06
	HQ Summation =		4.8E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	1.44E-04	NA	NA
1,2,4-trimethylbenzene	2.76E-07	NA	NA
1,3,5-trimethylbenzene	5.07E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	1.66E-07	NA	NA
n-propylbenzene	5.20E-07	NA	NA
p-cymene	2.53E-08	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	1.97E-06	2.10E-02	4.14E-08
trichloroethene	5.18E-06	1.00E-02	5.18E-08
xylenes	3.24E-07	NA	NA
	ILCR Summation =		9.3E-08

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Table B-13
Summary of Potential Health Effects
DTSC Commercial/Industrial Worker AOPC 1

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Indoor Air	2.4E-02
Inhalation of Outdoor Air	2.4E-02
Incidental Ingestion of Soil	1.6E-03
Dermal Contact with Soil	2.9E-03
Total Population Hazard Quotient =	5.3E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Indoor Air	4.7E-08
Inhalation of Outdoor Air	4.7E-08
Incidental Ingestion of Soil	7.9E-07
Dermal Contact with Soil	3.6E-06
Total Population Incremental Lifetime Cancer Risk =	4.5E-06

Table B-14
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Incidental Ingestion of Soils

Intake Equation = $\frac{CS \times EF \times ED \times CF \times IR}{BW \times AT}$

IRs	Ingestion rate of soil (RAGS, 1989)	50	mg/day
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	125	d/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	9125	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	Concentration (mg/kg)
1,1-dichloroethene	2.57E-03
1,2,4-trimethylbenzene	3.82E-03
1,3,5-trimethylbenzene	2.96E-03
aroclor 1248	3.69E-02
aroclor 1254	3.28E-02
aroclor 1260	2.08E-02
arsenic	1.56E+00
benzo(a)anthracene	2.43E-01
benzo(a)pyrene	3.39E-01
benzo(b)fluoranthene	3.91E-01
benzo(k)fluoranthene	3.06E-01
bis(2-ethylhexyl)phthalate	2.58E-01
chrysene	2.86E-01
dibenzo(a,h)anthracene	1.36E-01
fluoranthene	2.66E-01
indeno(1,2,3-cd)pyrene	3.33E-01
naphthalene	2.05E-01
n-butylbenzene	2.81E-03
n-propylbenzene	2.57E-03
p-cymene	2.47E-03
phenanthrene	2.03E-01
pyrene	3.12E-01
tetrachloroethene	2.69E-03
trichloroethene	2.63E-03
xylenes	2.34E-03

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Table B-14 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Incidental Ingestion of Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	UH (unitless)
1,1-dichloroethene	6.29E-10	9.00E-03	6.99E-08
1,2,4-trimethylbenzene	9.34E-10	5.00E-01	1.87E-09
1,3,5-trimethylbenzene	7.24E-10	5.00E-01	1.45E-09
aroclor 1248	9.03E-09	7.00E-05	1.29E-04
aroclor 1254	8.02E-09	7.00E-05	1.15E-04
aroclor 1260	5.09E-09	7.00E-05	7.27E-05
arsenic	3.82E-07	3.00E-04	1.27E-03
benzo(a)anthracene	5.94E-08	4.00E-02	1.49E-06
benzo(a)pyrene	8.29E-08	4.00E-02	2.07E-06
benzo(b)fluoranthene	9.56E-08	4.00E-02	2.39E-06
benzo(k)fluoranthene	7.49E-08	4.00E-02	1.87E-06
bis(2-ethylhexyl)phthalate	6.31E-08	2.00E-02	3.16E-06
chrysene	7.00E-08	4.00E-02	1.75E-06
dibenzo(a,h)anthracene	3.33E-08	4.00E-02	8.32E-07
fluoranthene	6.51E-08	4.00E-02	1.63E-06
indeno(1,2,3-cd)pyrene	8.15E-08	4.00E-02	2.04E-06
naphthalene	5.01E-08	4.00E-02	1.25E-06
n-butylbenzene	6.87E-10	1.00E-01	6.87E-09
n-propylbenzene	6.29E-10	1.00E-01	6.29E-09
p-cymene	6.04E-10	1.00E-01	6.04E-09
phenanthrene	4.97E-08	3.00E-01	1.66E-07
pyrene	7.63E-08	3.00E-02	2.54E-06
tetrachloroethene	6.58E-10	1.00E-02	6.58E-08
trichloroethene	6.43E-10	7.35E-03	8.75E-08
xylenes	5.72E-10	2.00E+00	2.86E-10
	HQ Summation =		1.6E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	UR (unitless)
1,1-dichloroethene	2.25E-10	NA	NA
1,2,4-trimethylbenzene	3.34E-10	NA	NA
1,3,5-trimethylbenzene	2.59E-10	NA	NA
aroclor 1248	3.22E-09	7.70E+00	2.48E-08
aroclor 1254	2.87E-09	7.70E+00	2.21E-08
aroclor 1260	1.82E-09	7.70E+00	1.40E-08
arsenic	1.36E-07	1.50E+00	2.04E-07
benzo(a)anthracene	2.12E-08	1.15E+00	2.44E-08
benzo(a)pyrene	2.96E-08	1.15E+01	3.41E-07
benzo(b)fluoranthene	3.42E-08	1.15E+00	3.93E-08
benzo(k)fluoranthene	2.67E-08	1.15E+00	3.07E-08
bis(2-ethylhexyl)phthalate	2.25E-08	8.40E-03	1.89E-10
chrysene	2.50E-08	1.15E-01	2.87E-09
dibenzo(a,h)anthracene	1.19E-08	4.10E+00	4.87E-08
fluoranthene	2.32E-08	NA	NA
indeno(1,2,3-cd)pyrene	2.91E-08	1.15E+00	3.35E-08
naphthalene	1.79E-08	NA	NA
n-butylbenzene	2.45E-10	NA	NA
n-propylbenzene	2.25E-10	NA	NA
p-cymene	2.16E-10	NA	NA
phenanthrene	1.77E-08	NA	NA
pyrene	2.73E-08	NA	NA
tetrachloroethene	2.35E-10	5.10E-02	1.20E-11
trichloroethene	2.30E-10	1.50E-02	3.45E-12
xylenes	2.04E-10	NA	NA
	ILCR Summation =		7.9E-07

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Table B-15
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Dermal Contact with Soils

Intake Equation = $\frac{CS \times CF \times EF \times ED \times AF \times ABS \times SA}{BW \times AT}$

SA	Surface area of exposed skin (50th percentile, hands only)	2020	cm^2/day
AF	Adherence Factor	1	mg/cm^2
ABS	Absorption factor (see table below)	csv	
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	125	d/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	9125	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	ABS (unitless)	Concentration (mg/kg)
1,1-dichloroethene	1.00E-01	2.57E-03
1,2,4-trimethylbenzene	1.00E-01	3.82E-03
1,3,5-trimethylbenzene	1.00E-01	2.96E-03
aroclor 1248	1.00E-01	3.69E-02
aroclor 1254	1.00E-01	3.28E-02
aroclor 1260	1.00E-01	2.08E-02
arsenic	3.00E-02	1.56E+00
benzo(a)anthracene	1.50E-01	2.43E-01
benzo(a)pyrene	1.50E-01	3.39E-01
benzo(b)fluoranthene	1.50E-01	3.91E-01
benzo(k)fluoranthene	1.50E-01	3.06E-01
bis(2-ethylhexyl)phthalate	1.00E-01	2.58E-01
chrysene	1.50E-01	2.86E-01
dibenzo(a,h)anthracene	1.50E-01	1.36E-01
fluoranthene	1.00E-01	2.66E-01
indeno(1,2,3-cd)pyrene	1.00E-01	3.33E-01
naphthalene	1.50E-01	2.05E-01
n-butylbenzene	1.00E-01	2.81E-03
n-propylbenzene	1.00E-01	2.57E-03
p-cymene	1.00E-01	2.47E-03
phenanthrene	1.50E-01	2.03E-01
pyrene	1.50E-01	3.12E-01
tetrachloroethene	1.00E-01	2.69E-03
trichloroethene	1.00E-01	2.63E-03
xylenes	1.00E-01	2.34E-03

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Table B-15 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Dermal Contact with Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	UH (unitless)
1,1-dichloroethene	2.54E-09	9.00E-03	2.82E-07
1,2,4-trimethylbenzene	3.78E-09	5.00E-01	7.55E-09
1,3,5-trimethylbenzene	2.93E-09	5.00E-01	5.85E-09
aroclor 1248	3.65E-08	7.00E-05	5.21E-04
aroclor 1254	3.24E-08	7.00E-05	4.63E-04
aroclor 1260	2.06E-08	7.00E-05	2.94E-04
arsenic	4.63E-07	3.00E-04	1.54E-03
benzo(a)anthracene	3.60E-07	4.00E-02	9.01E-06
benzo(a)pyrene	5.03E-07	4.00E-02	1.26E-05
benzo(b)fluoranthene	5.80E-07	4.00E-02	1.45E-05
benzo(k)fluoranthene	4.54E-07	4.00E-02	1.13E-05
bis(2-ethylhexyl)phthalate	2.55E-07	2.00E-02	1.27E-05
chrysene	4.24E-07	4.00E-02	1.06E-05
dibenzo(a,h)anthracene	2.02E-07	4.00E-02	5.04E-06
fluoranthene	2.63E-07	4.00E-02	6.57E-06
indeno(1,2,3-cd)pyrene	3.29E-07	4.00E-02	8.23E-06
naphthalene	3.04E-07	4.00E-02	7.60E-06
n-butylbenzene	2.78E-09	1.00E-01	2.78E-08
n-propylbenzene	2.54E-09	1.00E-01	2.54E-08
p-cymene	2.44E-09	1.00E-01	2.44E-08
phenanthrene	3.01E-07	3.00E-01	1.00E-06
pyrene	4.63E-07	3.00E-02	1.54E-05
tetrachloroethene	2.66E-09	1.00E-02	2.66E-07
trichloroethene	2.60E-09	7.35E-03	3.54E-07
xylenes	2.31E-09	2.00E+00	1.16E-09
	HQ Summation =		2.9E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	UR (unitless)
1,1-dichloroethene	9.07E-10	NA	NA
1,2,4-trimethylbenzene	1.35E-09	NA	NA
1,3,5-trimethylbenzene	1.04E-09	NA	NA
aroclor 1248	1.30E-08	7.70E+00	1.00E-07
aroclor 1254	1.16E-08	7.70E+00	8.91E-08
aroclor 1260	7.34E-09	7.70E+00	5.65E-08
arsenic	1.65E-07	1.50E+00	2.48E-07
benzo(a)anthracene	1.29E-07	1.15E+00	1.48E-07
benzo(a)pyrene	1.79E-07	1.15E+01	2.06E-06
benzo(b)fluoranthene	2.07E-07	1.15E+00	2.38E-07
benzo(k)fluoranthene	1.62E-07	1.15E+00	1.86E-07
bis(2-ethylhexyl)phthalate	9.11E-08	8.40E-03	7.65E-10
chrysene	1.51E-07	1.15E-01	1.74E-08
dibenzo(a,h)anthracene	7.20E-08	4.10E+00	2.95E-07
fluoranthene	9.39E-08	NA	NA
indeno(1,2,3-cd)pyrene	1.18E-07	1.15E+00	1.35E-07
naphthalene	1.09E-07	NA	NA
n-butylbenzene	9.92E-10	NA	NA
n-propylbenzene	9.07E-10	NA	NA
p-cymene	8.72E-10	NA	NA
phenanthrene	1.07E-07	NA	NA
pyrene	1.65E-07	NA	NA
tetrachloroethene	9.49E-10	5.10E-02	4.84E-11
trichloroethene	9.28E-10	1.50E-02	1.39E-11
xylenes	8.26E-10	NA	NA
	ILCR Summation =		3.6E-06

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Table B-16
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Indoor Air

Intake Equation = $\frac{Ci \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim indoor	4	h/d
Ci	Concentration of chemicals indoors (indoor + outdoor)	(see Tables 5-6 and 5-7)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	1.24E-02
1,2,4-trimethylbenzene	2.38E-05
1,3,5-trimethylbenzene	4.37E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	1.43E-05
n-propylbenzene	4.48E-05
p-cymene	2.18E-06
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.70E-04
trichloroethene	4.46E-04
xylenes	2.79E-05

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Table B-16 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Indoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.01E-04	9.00E-03	2.24E-02
1,2,4-trimethylbenzene	3.87E-07	2.00E-03	1.93E-04
1,3,5-trimethylbenzene	7.10E-07	2.00E-03	3.55E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	2.32E-07	2.90E-01	8.01E-07
n-propylbenzene	7.28E-07	2.90E-01	2.51E-06
p-cymene	3.54E-08	1.00E-01	3.54E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	2.76E-06	1.00E-02	2.76E-04
trichloroethene	7.25E-06	7.35E-03	9.86E-04
xylenes	4.53E-07	2.00E-01	2.27E-06
	HQ Summation =		2.4E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.20E-05	NA	NA
1,2,4-trimethylbenzene	1.38E-07	NA	NA
1,3,5-trimethylbenzene	2.54E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	8.30E-08	NA	NA
n-propylbenzene	2.60E-07	NA	NA
p-cymene	1.27E-08	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	9.87E-07	2.10E-02	2.07E-08
trichloroethene	2.59E-06	1.00E-02	2.59E-08
xylenes	1.62E-07	NA	NA
	ILCR Summation =		4.7E-08

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Table B-17
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Outdoor Air

Intake Equation = $\frac{\{Ci + (Cs \times 1/PEF)\} \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim outdoor	4	h/d
Ci	Concentration of volatiles in ambient air	(see Table 5-6)	
PEF	Particulate Emission Factor (see Table below)	(see Section 5.3.1.2)	

Chemical Concentrations

Compound	Soil Conc (mg/kg)	PEF (m3/kg)	Volatile Concentration (mg/m3)
1,1-dichloroethene	2.57E-03	NA	1.24E-02
1,2,4-trimethylbenzene	3.82E-03	NA	2.38E-05
1,3,5-trimethylbenzene	2.96E-03	NA	4.37E-05
aroclor 1248	3.69E-02	4.77E+09	NA
aroclor 1254	3.28E-02	4.77E+09	NA
aroclor 1260	2.08E-02	4.77E+09	NA
arsenic	1.56E+00	4.77E+09	NA
benzo(a)anthracene	2.43E-01	4.77E+09	NA
benzo(a)pyrene	3.39E-01	4.77E+09	NA
benzo(b)fluoranthene	3.91E-01	4.77E+09	NA
benzo(k)fluoranthene	3.06E-01	4.77E+09	NA
bis(2-ethylhexyl)phtha	2.58E-01	4.77E+09	NA
chrysene	2.86E-01	4.77E+09	NA
dibenzo(a,h)anthracene	1.36E-01	4.77E+09	NA
fluoranthene	2.66E-01	4.77E+09	NA
indeno(1,2,3-cd)pyrene	3.33E-01	4.77E+09	NA

Compound	Soil Conc (mg/k	PEF	Volatile Concentration (mg/m3)
naphthalene	2.05E-01	4.77E+09	NA
n-butylbenzene	2.81E-03	NA	1.43E-05
n-propylbenzene	2.57E-03	NA	4.48E-05
p-cymene	2.47E-03	NA	2.18E-06
phenanthrene	2.03E-01	4.77E+09	NA
pyrene	3.12E-01	4.77E+09	NA
tetrachloroethene	2.69E-03	NA	1.70E-04
trichloroethene	2.63E-03	NA	4.46E-04
xylenes	2.34E-03	NA	2.79E-05

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Table B-17 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 1
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.01E-04	9.00E-03	2.24E-02
1,2,4-trimethylbenzene	3.87E-07	2.00E-03	1.93E-04
1,3,5-trimethylbenzene	7.10E-07	2.00E-03	3.55E-04
aroclor 1248	1.26E-13	7.00E-05	1.79E-09
aroclor 1254	1.12E-13	7.00E-05	1.59E-09
aroclor 1260	7.08E-14	7.00E-05	1.01E-09
arsenic	5.31E-12	3.00E-04	1.77E-08
benzo(a)anthracene	8.27E-13	4.00E-02	2.07E-11
benzo(a)pyrene	1.15E-12	4.00E-02	2.88E-11
benzo(b)fluoranthene	1.33E-12	4.00E-02	3.33E-11
benzo(k)fluoranthene	1.04E-12	4.00E-02	2.60E-11
bis(2-ethylhexyl)phthalate	8.78E-13	2.00E-02	4.39E-11
chrysene	9.73E-13	4.00E-02	2.43E-11
dibenzo(a,h)anthracene	4.63E-13	4.00E-02	1.16E-11
fluoranthene	9.05E-13	4.00E-02	2.26E-11
indeno(1,2,3-cd)pyrene	1.13E-12	4.00E-02	2.83E-11
naphthalene	6.97E-13	4.00E-02	1.74E-11
n-butylbenzene	2.32E-07	2.90E-01	8.01E-07
n-propylbenzene	7.28E-07	2.90E-01	2.51E-06
p-cymene	3.54E-08	1.00E-01	3.54E-07
phenanthrene	6.91E-13	3.00E-01	2.30E-12
pyrene	1.06E-12	3.00E-02	3.54E-11
tetrachloroethene	2.76E-06	1.00E-02	2.76E-04
trichloroethene	7.24E-06	7.35E-03	9.86E-04
xylenes	4.53E-07	2.00E-01	2.27E-06
	HQ Summation =		2.4E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.19E-05	NA	NA
1,2,4-trimethylbenzene	1.38E-07	NA	NA
1,3,5-trimethylbenzene	2.54E-07	NA	NA
aroclor 1248	4.48E-14	7.70E+00	3.45E-13
aroclor 1254	3.99E-14	7.70E+00	3.07E-13
aroclor 1260	2.53E-14	7.70E+00	1.95E-13
arsenic	1.90E-12	1.20E+01	2.27E-11
benzo(a)anthracene	2.95E-13	3.90E-01	1.15E-13
benzo(a)pyrene	4.12E-13	3.90E+00	1.61E-12
benzo(b)fluoranthene	4.75E-13	3.90E-01	1.85E-13
benzo(k)fluoranthene	3.72E-13	3.90E-01	1.45E-13
bis(2-ethylhexyl)phthalate	3.13E-13	8.40E-03	2.63E-15
chrysene	3.48E-13	3.90E-02	1.36E-14
dibenzo(a,h)anthracene	1.65E-13	4.10E+00	6.78E-13
fluoranthene	3.23E-13	NA	NA
indeno(1,2,3-cd)pyrene	4.05E-13	3.90E-01	1.58E-13
naphthalene	2.49E-13	NA	NA
n-butylbenzene	8.30E-08	NA	NA
n-propylbenzene	2.60E-07	NA	NA
p-cymene	1.26E-08	NA	NA
phenanthrene	2.47E-13	NA	NA
pyrene	3.79E-13	NA	NA
tetrachloroethene	9.86E-07	2.10E-02	2.07E-08
trichloroethene	2.59E-06	1.00E-02	2.59E-08
xylenes	1.62E-07	NA	NA
	ILCR Summation =		4.7E-08

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Table B-18
Summary of Potential Health Effects
DTSC Commercial/Industrial Worker AOPC 2

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Indoor Air	2.4E-02
Inhalation of Outdoor Air	2.4E-02
Incidental Ingestion of Soil	1.9E-04
Dermal Contact with Soil	7.7E-04
Total Population Hazard Quotient =	4.9E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Indoor Air	4.7E-08
Inhalation of Outdoor Air	4.7E-08
Incidental Ingestion of Soil	3.7E-07
Dermal Contact with Soil	2.1E-06
Total Population Incremental Lifetime Cancer Risk =	2.6E-06

Table B-19
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Incidental Ingestion of Soils

Intake Equation = $\frac{CS \times EF \times ED \times CF \times IR}{BW \times AT}$

IRs	Ingestion rate of soil (RAGS, 1989)	50	mg/day
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	125	d/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	9125	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	Concentration (mg/kg)	Compound	Concentration (mg/kg)
1,1-dichloroethene	4.05E-03	naphthalene	2.15E-01
1,2,4-trimethylbenzene	1.85E-02	n-butylbenzene	6.18E-03
1,3,5-trimethylbenzene	8.93E-03	n-propylbenzene	5.78E-03
aroclor 1248	1.63E-02	p-cymene	6.45E-03
aroclor 1254	1.63E-02	phenanthrene	1.42E-01
aroclor 1260	1.72E-02	pyrene	1.28E-01
arsenic		tetrachloroethene	4.53E-03
benzo(a)anthracene	1.06E-01	trichloroethene	8.56E-03
benzo(a)pyrene	2.24E-01	xylenes	6.45E-03
benzo(b)fluoranthene	2.28E-01		
benzo(k)fluoranthene	2.05E-01		
bis(2-ethylhexyl)phthalate	1.03E-01		
chrysene	1.22E-01		
dibenzo(a,h)anthracene	8.54E-02		
fluoranthene	1.18E-01		
indeno(1,2,3-cd)pyrene	2.12E-01		

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Table B-19 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Incidental Ingestion of Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	UH (unitless)
1,1-dichloroethene	9.91E-10	9.00E-03	1.10E-07
1,2,4-trimethylbenzene	4.53E-09	5.00E-01	9.05E-09
1,3,5-trimethylbenzene	2.18E-09	5.00E-01	4.37E-09
aroclor 1248	3.99E-09	7.00E-05	5.70E-05
aroclor 1254	3.99E-09	7.00E-05	5.70E-05
aroclor 1260	4.21E-09	7.00E-05	6.01E-05
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	2.59E-08	4.00E-02	6.48E-07
benzo(a)pyrene	5.48E-08	4.00E-02	1.37E-06
benzo(b)fluoranthene	5.58E-08	4.00E-02	1.39E-06
benzo(k)fluoranthene	5.01E-08	4.00E-02	1.25E-06
bis(2-ethylhexyl)phthalate	2.52E-08	2.00E-02	1.26E-06
chrysene	2.98E-08	4.00E-02	7.46E-07
dibenzo(a,h)anthracene	2.09E-08	4.00E-02	5.22E-07
fluoranthene	2.89E-08	4.00E-02	7.22E-07
indeno(1,2,3-cd)pyrene	5.19E-08	4.00E-02	1.30E-06
naphthalene	5.26E-08	4.00E-02	1.31E-06
n-butylbenzene	1.51E-09	1.00E-01	1.51E-08
n-propylbenzene	1.41E-09	1.00E-01	1.41E-08
p-cymene	1.58E-09	1.00E-01	1.58E-08
phenanthrene	3.47E-08	3.00E-01	1.16E-07
pyrene	3.13E-08	3.00E-02	1.04E-06
tetrachloroethene	1.11E-09	1.00E-02	1.11E-07
trichloroethene	2.09E-09	7.35E-03	2.85E-07
xylenes	1.58E-09	2.00E+00	7.89E-10
	HQ Summation =		1.9E-04

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	UR (unitless)
1,1-dichloroethene	3.54E-10	NA	NA
1,2,4-trimethylbenzene	1.62E-09	NA	NA
1,3,5-trimethylbenzene	7.80E-10	NA	NA
aroclor 1248	1.42E-09	7.70E+00	1.10E-08
aroclor 1254	1.42E-09	7.70E+00	1.10E-08
aroclor 1260	1.50E-09	7.70E+00	1.16E-08
arsenic	NA	1.50E+00	NA
benzo(a)anthracene	9.26E-09	1.15E+00	1.06E-08
benzo(a)pyrene	1.96E-08	1.15E+01	2.25E-07
benzo(b)fluoranthene	1.99E-08	1.15E+00	2.29E-08
benzo(k)fluoranthene	1.79E-08	1.15E+00	2.06E-08
bis(2-ethylhexyl)phthalate	9.00E-09	8.40E-03	7.56E-11
chrysene	1.07E-08	1.15E-01	1.23E-09
dibenzo(a,h)anthracene	7.46E-09	4.10E+00	3.06E-08
fluoranthene	1.03E-08	NA	NA
indeno(1,2,3-cd)pyrene	1.85E-08	1.15E+00	2.13E-08
naphthalene	1.88E-08	NA	NA
n-butylbenzene	5.40E-10	NA	NA
n-propylbenzene	5.05E-10	NA	NA
p-cymene	5.63E-10	NA	NA
phenanthrene	1.24E-08	NA	NA
pyrene	1.12E-08	NA	NA
tetrachloroethene	3.96E-10	5.10E-02	2.02E-11
trichloroethene	7.48E-10	1.50E-02	1.12E-11
xylenes	5.63E-10	NA	NA
	ILCR Summation =		3.7E-07

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Table B-20
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Dermal Contact with Soils

Intake Equation = $\frac{CS \times CF \times EF \times ED \times AF \times ABS \times SA}{BW \times AT}$

SA	Surface area of exposed skin (50th percentile, hands only)	2020	cm^2/day
AF	Adherence Factor	1	mg/cm^2
ABS	Absorption factor (see table below)	csv	
CF	Conversion factor	1.0E-06	kg/mg
EF	Exposure frequency	125	d/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	day
ATn	Average time for non-carcinogens (EDn x 365)	9125	day
CS	Concentration of chemicals in soil	(see Table 5-1)	

Chemical Concentrations

Compound	ABS (unitless)	Concentration (mg/kg)
1,1-dichloroethene	1.00E-01	4.05E-03
1,2,4-trimethylbenzene	1.00E-01	1.85E-02
1,3,5-trimethylbenzene	1.00E-01	8.93E-03
aroclor 1248	1.00E-01	1.63E-02
aroclor 1254	1.00E-01	1.63E-02
aroclor 1260	1.00E-01	1.72E-02
arsenic	3.00E-02	NA
benzo(a)anthracene	1.50E-01	1.06E-01
benzo(a)pyrene	1.50E-01	2.24E-01
benzo(b)fluoranthene	1.50E-01	2.28E-01
benzo(k)fluoranthene	1.50E-01	2.05E-01
bis(2-ethylhexyl)phthalate	1.00E-01	1.03E-01
chrysene	1.50E-01	1.22E-01
dibenzo(a,h)anthracene	1.50E-01	8.54E-02
fluoranthene	1.00E-01	1.18E-01
indeno(1,2,3-cd)pyrene	1.00E-01	2.12E-01

Compound	ABS (unitless)	Concentration (mg/kg)
naphthalene	1.50E-01	2.15E-01
n-butylbenzene	1.00E-01	6.18E-03
n-propylbenzene	1.00E-01	5.78E-03
p-cymene	1.00E-01	6.45E-03
phenanthrene	1.50E-01	1.42E-01
pyrene	1.50E-01	1.28E-01
tetrachloroethene	1.00E-01	4.53E-03
trichloroethene	1.00E-01	8.56E-03
xylenes	1.00E-01	6.45E-03

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Table B-20 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Dermal Contact with Soils

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	UH (unitless)
1,1-dichloroethene	4.00E-09	9.00E-03	4.45E-07
1,2,4-trimethylbenzene	1.83E-08	5.00E-01	3.66E-08
1,3,5-trimethylbenzene	8.83E-09	5.00E-01	1.77E-08
aroclor 1248	1.61E-08	7.00E-05	2.30E-04
aroclor 1254	1.61E-08	7.00E-05	2.30E-04
aroclor 1260	1.70E-08	7.00E-05	2.43E-04
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	1.57E-07	4.00E-02	3.93E-06
benzo(a)pyrene	3.32E-07	4.00E-02	8.30E-06
benzo(b)fluoranthene	3.38E-07	4.00E-02	8.45E-06
benzo(k)fluoranthene	3.04E-07	4.00E-02	7.60E-06
bis(2-ethylhexyl)phthalate	1.02E-07	2.00E-02	5.09E-06
chrysene	1.81E-07	4.00E-02	4.52E-06
dibenzo(a,h)anthracene	1.27E-07	4.00E-02	3.16E-06
fluoranthene	1.17E-07	4.00E-02	2.92E-06
indeno(1,2,3-cd)pyrene	2.10E-07	4.00E-02	5.24E-06
naphthalene	3.19E-07	4.00E-02	7.97E-06
n-butylbenzene	6.11E-09	1.00E-01	6.11E-08
n-propylbenzene	5.71E-09	1.00E-01	5.71E-08
p-cymene	6.37E-09	1.00E-01	6.37E-08
phenanthrene	2.10E-07	3.00E-01	7.02E-07
pyrene	1.90E-07	3.00E-02	6.32E-06
tetrachloroethene	4.48E-09	1.00E-02	4.48E-07
trichloroethene	8.46E-09	7.35E-03	1.15E-06
xylenes	6.37E-09	2.00E+00	3.19E-09
	HQ Summation =		7.7E-04

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	UR (unitless)
1,1-dichloroethene	1.43E-09	NA	NA
1,2,4-trimethylbenzene	6.53E-09	NA	NA
1,3,5-trimethylbenzene	3.15E-09	NA	NA
aroclor 1248	5.75E-09	7.70E+00	4.43E-08
aroclor 1254	5.75E-09	7.70E+00	4.43E-08
aroclor 1260	6.07E-09	7.70E+00	4.67E-08
arsenic	NA	1.50E+00	NA
benzo(a)anthracene	5.61E-08	1.15E+00	6.45E-08
benzo(a)pyrene	1.19E-07	1.15E+01	1.36E-06
benzo(b)fluoranthene	1.21E-07	1.15E+00	1.39E-07
benzo(k)fluoranthene	1.09E-07	1.15E+00	1.25E-07
bis(2-ethylhexyl)phthalate	3.64E-08	8.40E-03	3.05E-10
chrysene	6.46E-08	1.15E-01	7.43E-09
dibenzo(a,h)anthracene	4.52E-08	4.10E+00	1.85E-07
fluoranthene	4.16E-08	NA	NA
indeno(1,2,3-cd)pyrene	7.48E-08	1.15E+00	8.60E-08
naphthalene	1.14E-07	NA	NA
n-butylbenzene	2.18E-09	NA	NA
n-propylbenzene	2.04E-09	NA	NA
p-cymene	2.28E-09	NA	NA
phenanthrene	7.52E-08	NA	NA
pyrene	6.78E-08	NA	NA
tetrachloroethene	1.60E-09	5.10E-02	8.15E-11
trichloroethene	3.02E-09	1.50E-02	4.53E-11
xylenes	2.28E-09	NA	NA
	ILCR Summation =		2.1E-06

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Table B-21
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Indoor Air

Intake Equation = $\frac{Ci \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim indoor	4	h/d
Ci	Concentration of chemicals indoors (indoor + outdoor)	(see Tables 5-6 and 5-7)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	1.24E-02
1,2,4-trimethylbenzene	2.38E-05
1,3,5-trimethylbenzene	4.37E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	1.43E-05
n-propylbenzene	4.48E-05
p-cymene	2.18E-06
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.70E-04
trichloroethene	4.46E-04
xylenes	2.79E-05

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Table B-21 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Indoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.02E-04	9.00E-03	2.24E-02
1,2,4-trimethylbenzene	3.87E-07	2.00E-03	1.93E-04
1,3,5-trimethylbenzene	7.10E-07	2.00E-03	3.55E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	2.32E-07	2.90E-01	8.02E-07
n-propylbenzene	7.28E-07	2.90E-01	2.51E-06
p-cymene	3.54E-08	1.00E-01	3.54E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	2.76E-06	1.00E-02	2.76E-04
trichloroethene	7.25E-06	7.35E-03	9.86E-04
xylenes	4.53E-07	2.00E-01	2.27E-06
	HQ Summation =		2.4E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.20E-05	NA	NA
1,2,4-trimethylbenzene	1.38E-07	NA	NA
1,3,5-trimethylbenzene	2.54E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	8.30E-08	NA	NA
n-propylbenzene	2.60E-07	NA	NA
p-cymene	1.27E-08	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	9.87E-07	2.10E-02	2.07E-08
trichloroethene	2.59E-06	1.00E-02	2.59E-08
xylenes	1.62E-07	NA	NA
	ILCR Summation =		4.7E-08

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Table B-22
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Outdoor Air

Intake Equation = {Ci ÷(Cs X 1/PEF)} X EF X ED X ET X IR / BW X AT

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure tim outdoor	4	h/d
Ci	Concentration of chemicals outdoors	(see Table 5-6)	
PEF	Particulate Emission Factor	(see Section 5.3.1.2)	

Chemical Concentrations

Compound	Soil Conc (mg/kg)	PEF (m3/kg)	Volatile Concentration (mg/m3)
1,1-dichloroethene	4.05E-03	NA	1.24E-02
1,2,4-trimethylbenzen	1.85E-02	NA	2.38E-05
1,3,5-trimethylbenzen	8.93E-03	NA	4.37E-05
aroclor 1248	1.63E-02	4.77E+09	NA
aroclor 1254	1.63E-02	4.77E+09	NA
aroclor 1260	1.72E-02	4.77E+09	NA
arsenic	NA	4.77E+09	NA
benzo(a)anthracene	1.06E-01	4.77E+09	NA
benzo(a)pyrene	2.24E-01	4.77E+09	NA
benzo(b)fluoranthene	2.28E-01	4.77E+09	NA
benzo(k)fluoranthene	2.05E-01	4.77E+09	NA
bis(2-ethylhexyl)phtha	1.03E-01	4.77E+09	NA
chrysene	1.22E-01	4.77E+09	NA
dibenzo(a,h)anthracen	8.54E-02	4.77E+09	NA
fluoranthene	1.18E-01	4.77E+09	NA
indeno(1,2,3-cd)pyren	2.12E-01	4.77E+09	NA

Compound	Soil Conc (mg/k	PEF	Volatile Concentration (mg/m3)
naphthalene	2.15E-01	4.77E+09	NA
n-butylbenzene	6.18E-03	NA	1.43E-05
n-propylbenzene	5.78E-03	NA	4.48E-05
p-cymene	6.45E-03	NA	2.18E-06
phenanthrene	1.42E-01	4.77E+09	NA
pyrene	1.28E-01	4.77E+09	NA
tetrachloroethene	4.53E-03	NA	1.70E-04
trichloroethene	8.56E-03	NA	4.46E-04
xylenes	6.45E-03	NA	2.79E-05

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Table B-22 (cont.)
Summary of Risk Quantitation
DTSC On-Site Commercial/Industrial Worker AOPC 2
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.01E-04	9.00E-03	2.24E-02
1,2,4-trimethylbenzene	3.87E-07	2.00E-03	1.93E-04
1,3,5-trimethylbenzene	7.10E-07	2.00E-03	3.55E-04
aroclor 1248	5.55E-14	7.00E-05	7.92E-10
aroclor 1254	5.55E-14	7.00E-05	7.92E-10
aroclor 1260	5.85E-14	7.00E-05	8.36E-10
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	3.61E-13	4.00E-02	9.02E-12
benzo(a)pyrene	7.62E-13	4.00E-02	1.91E-11
benzo(b)fluoranthene	7.76E-13	4.00E-02	1.94E-11
benzo(k)fluoranthene	6.97E-13	4.00E-02	1.74E-11
bis(2-ethylhexyl)phthalate	3.50E-13	2.00E-02	1.75E-11
chrysene	4.15E-13	4.00E-02	1.04E-11
dibenzo(a,h)anthracene	2.91E-13	4.00E-02	7.26E-12
fluoranthene	4.01E-13	4.00E-02	1.00E-11
indeno(1,2,3-cd)pyrene	7.21E-13	4.00E-02	1.80E-11
naphthalene	7.31E-13	4.00E-02	1.83E-11
n-butylbenzene	2.32E-07	2.90E-01	8.01E-07
n-propylbenzene	7.28E-07	2.90E-01	2.51E-06
p-cymene	3.54E-08	1.00E-01	3.54E-07
phenanthrene	4.83E-13	3.00E-01	1.61E-12
pyrene	4.35E-13	3.00E-02	1.45E-11
tetrachloroethene	2.76E-06	1.00E-02	2.76E-04
trichloroethene	7.24E-06	7.35E-03	9.86E-04
xylenes	4.53E-07	2.00E-01	2.27E-06
	HQ Summation =		2.4E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.19E-05	NA	NA
1,2,4-trimethylbenzene	1.38E-07	NA	NA
1,3,5-trimethylbenzene	2.54E-07	NA	NA
aroclor 1248	1.98E-14	7.70E+00	1.53E-13
aroclor 1254	1.98E-14	7.70E+00	1.53E-13
aroclor 1260	2.09E-14	7.70E+00	1.61E-13
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	1.29E-13	3.90E-01	5.02E-14
benzo(a)pyrene	2.72E-13	3.90E+00	1.06E-12
benzo(b)fluoranthene	2.77E-13	3.90E-01	1.08E-13
benzo(k)fluoranthene	2.49E-13	3.90E-01	9.71E-14
bis(2-ethylhexyl)phthalate	1.25E-13	8.40E-03	1.05E-15
chrysene	1.48E-13	3.90E-02	5.78E-15
dibenzo(a,h)anthracene	1.04E-13	4.10E+00	4.25E-13
fluoranthene	1.43E-13	NA	NA
indeno(1,2,3-cd)pyrene	2.58E-13	3.90E-01	1.00E-13
naphthalene	2.61E-13	NA	NA
n-butylbenzene	8.30E-08	NA	NA
n-propylbenzene	2.60E-07	NA	NA
p-cymene	1.26E-08	NA	NA
phenanthrene	1.73E-13	NA	NA
pyrene	1.56E-13	NA	NA
tetrachloroethene	9.86E-07	2.10E-02	2.07E-08
trichloroethene	2.59E-06	1.00E-02	2.59E-08
xylenes	1.62E-07	NA	NA
	ILCR Summation =		4.7E-08

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Table B-23
Summary of Potential Health Effects
Off-Site Commercial/Industrial Worker

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Outdoor Air	2.5E-02
Total Population Hazard Quotient =	2.5E-02

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Outdoor Air	5.2E-08
Total Population Incremental Lifetime Cancer Risk =	5.2E-08

Table B-24
Summary of Risk Quantitation
Off-Site Commercial/Industrial Worker
Via Inhalation of Outdoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	125	days/year
EDn	Exposure duration for non-carcinogens	25	year
EDc	Exposure duration for carcinogens	25	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	9125	days
ET	Exposure time outdoors	8	h/d
Ci	Concentration of chemicals indoors	(see Table 5-6)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	6.57E-03
1,2,4-trimethylbenzene	7.04E-06
1,3,5-trimethylbenzene	2.01E-05
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	8.09E-06
n-propylbenzene	2.54E-05
p-cymene	4.07E-07
phenanthrene	NA
pyrene	NA
tetrachloroethene	1.36E-04
trichloroethene	1.66E-04
xylenes	1.70E-05

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Table B-24 (cont.)
Summary of Risk Quantitation
Off-Site Commercial/Industrial Worker
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	2.13E-04	9.00E-03	2.37E-02
1,2,4-trimethylbenzene	2.29E-07	2.00E-03	1.14E-04
1,3,5-trimethylbenzene	6.53E-07	2.00E-03	3.26E-04
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	2.63E-07	2.90E-01	9.06E-07
n-propylbenzene	8.25E-07	2.90E-01	2.85E-06
p-cymene	1.32E-08	1.00E-01	1.32E-07
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	4.42E-06	1.00E-02	4.42E-04
trichloroethene	5.39E-06	7.35E-03	7.34E-04
xylenes	5.52E-07	2.00E-01	2.76E-06
	HQ Summation =		2.5E-02

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	7.62E-05	NA	NA
1,2,4-trimethylbenzene	8.17E-08	NA	NA
1,3,5-trimethylbenzene	2.33E-07	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	9.39E-08	NA	NA
n-propylbenzene	2.95E-07	NA	NA
p-cymene	4.72E-09	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	1.58E-06	2.10E-02	3.31E-08
trichloroethene	1.93E-06	1.00E-02	1.93E-08
xylenes	1.97E-07	NA	NA
	ILCR Summation =		5.2E-08

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Table B-25
Summary of Potential Health Effects
Off-Site RME Resident Adult

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Outdoor Air	1.2E-03
Total Population Hazard Quotient =	1.2E-03

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Outdoor Air	2.9E-09
Total Population Incremental Lifetime Cancer Risk =	2.9E-09

Table B-26
Summary of Risk Quantitation
Off-Site RME Resident Adult
Via Inhalation of Outdoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m/h
EF	Exposure frequency	350	days/year
EDn	Exposure duration for non-carcinogens	30	year
EDc	Exposure duration for carcinogens	30	year
BW	Body weight	70	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	10950	days
ET	Exposure time	24	h/d
Ci	Concentration of chemicals Outdoors	(see Table 5-6)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	3.65E-05
1,2,4-trimethylbenzene	3.83E-08
1,3,5-trimethylbenzene	1.11E-07
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	4.96E-08
n-propylbenzene	1.41E-07
p-cymene	8.57E-10
phenanthrene	NA
pyrene	NA
tetrachloroethene	7.61E-07
trichloroethene	9.09E-07
xylenes	9.47E-08

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Table B-26 (cont.)
Summary of Risk Quantitation
Off-Site RME Resident Adult
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	9.96E-06	9.00E-03	1.11E-03
1,2,4-trimethylbenzene	1.05E-08	2.00E-03	5.23E-06
1,3,5-trimethylbenzene	3.03E-08	2.00E-03	1.51E-05
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	1.35E-08	2.90E-01	4.67E-08
n-propylbenzene	3.85E-08	2.90E-01	1.33E-07
p-cymene	2.34E-10	1.00E-01	2.34E-09
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	2.08E-07	1.00E-02	2.08E-05
trichloroethene	2.48E-07	7.35E-03	3.37E-05
xylenes	2.58E-08	2.00E-01	1.29E-07
	HQ Summation =		1.2E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	4.27E-06	NA	NA
1,2,4-trimethylbenzene	4.48E-09	NA	NA
1,3,5-trimethylbenzene	1.30E-08	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	5.80E-09	NA	NA
n-propylbenzene	1.65E-08	NA	NA
p-cymene	1.00E-10	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	8.90E-08	2.10E-02	1.87E-09
trichloroethene	1.06E-07	1.00E-02	1.06E-09
xylenes	1.11E-08	NA	NA
	ILCR Summation =		2.9E-09

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Table B-27
Summary of Potential Health Effects
Off-Site RME Resident Child

Exposure Pathway	Receptor Hazard Quotient
Inhalation of Outdoor Air	5.5E-03
Total Population Hazard Quotient =	5.5E-03

Exposure Pathway	Receptor Incremental Lifetime Cancer Risk
Inhalation of Outdoor Air	2.7E-09
Total Population Incremental Lifetime Cancer Risk =	2.7E-09

Table B-28
Summary of Risk Quantitation
Off-Site RME Resident Child
Via Inhalation of Outdoor Air

Intake Equation = $\frac{CS \times EF \times ED \times ET \times IR}{BW \times AT}$

IR	Inhalation rate of gases (RAGS, 1989)	0.83	m3/h
EF	Exposure frequency	350	days/year
EDn	Exposure duration for non-carcinogens	6	year
EDc	Exposure duration for carcinogens	6	year
BW	Body weight	15	kg
ATc	Average time for carcinogens (lifetime)	25550	days
ATn	Average time for non-carcinogens (EDn x 365)	2190	days
ET	Exposure time	24	h/d
Ci	Concentration of chemicals Outdoors	(see Table 5-6)	

Chemical Concentrations

Compound	Concentration (mg/m3)
1,1-dichloroethene	3.65E-05
1,2,4-trimethylbenzene	3.83E-08
1,3,5-trimethylbenzene	1.11E-07
aroclor 1248	NA
aroclor 1254	NA
aroclor 1260	NA
arsenic	NA
benzo(a)anthracene	NA
benzo(a)pyrene	NA
benzo(b)fluoranthene	NA
benzo(k)fluoranthene	NA
bis(2-ethylhexyl)phthalate	NA
chrysene	NA
dibenzo(a,h)anthracene	NA
fluoranthene	NA
indeno(1,2,3-cd)pyrene	NA

Compound	Concentration (mg/m3)
naphthalene	NA
n-butylbenzene	4.96E-08
n-propylbenzene	1.41E-07
p-cymene	8.57E-10
phenanthrene	NA
pyrene	NA
tetrachloroethene	7.61E-07
trichloroethene	9.09E-07
xylenes	9.47E-08

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Table B-28 (cont.)
Summary of Risk Quantitation
Off-Site RME Resident Child
Via Inhalation of Outdoor Air

	Non-Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	RfD (mg/kg-d)	HQ (unitless)
1,1-dichloroethene	4.65E-05	9.00E-03	5.16E-03
1,2,4-trimethylbenzene	4.88E-08	2.00E-03	2.44E-05
1,3,5-trimethylbenzene	1.41E-07	2.00E-03	7.07E-05
aroclor 1248	NA	7.00E-05	NA
aroclor 1254	NA	7.00E-05	NA
aroclor 1260	NA	7.00E-05	NA
arsenic	NA	3.00E-04	NA
benzo(a)anthracene	NA	4.00E-02	NA
benzo(a)pyrene	NA	4.00E-02	NA
benzo(b)fluoranthene	NA	4.00E-02	NA
benzo(k)fluoranthene	NA	4.00E-02	NA
bis(2-ethylhexyl)phthalate	NA	2.00E-02	NA
chrysene	NA	4.00E-02	NA
dibenzo(a,h)anthracene	NA	4.00E-02	NA
fluoranthene	NA	4.00E-02	NA
indeno(1,2,3-cd)pyrene	NA	4.00E-02	NA
naphthalene	NA	4.00E-02	NA
n-butylbenzene	6.32E-08	2.90E-01	2.18E-07
n-propylbenzene	1.80E-07	2.90E-01	6.19E-07
p-cymene	1.09E-09	1.00E-01	1.09E-08
phenanthrene	NA	3.00E-01	NA
pyrene	NA	3.00E-02	NA
tetrachloroethene	9.69E-07	1.00E-02	9.69E-05
trichloroethene	1.16E-06	7.35E-03	1.57E-04
xylenes	1.21E-07	2.00E-01	6.03E-07
	HQ Summation =		5.5E-03

	Carcinogenic Calculation		
Compound	CDI (mg/kg-d)	CSF (mg/kg-d)-1	ILCR (unitless)
1,1-dichloroethene	3.98E-06	NA	NA
1,2,4-trimethylbenzene	4.18E-09	NA	NA
1,3,5-trimethylbenzene	1.21E-08	NA	NA
aroclor 1248	NA	7.70E+00	NA
aroclor 1254	NA	7.70E+00	NA
aroclor 1260	NA	7.70E+00	NA
arsenic	NA	1.20E+01	NA
benzo(a)anthracene	NA	3.90E-01	NA
benzo(a)pyrene	NA	3.90E+00	NA
benzo(b)fluoranthene	NA	3.90E-01	NA
benzo(k)fluoranthene	NA	3.90E-01	NA
bis(2-ethylhexyl)phthalate	NA	8.40E-03	NA
chrysene	NA	3.90E-02	NA
dibenzo(a,h)anthracene	NA	4.10E+00	NA
fluoranthene	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	3.90E-01	NA
naphthalene	NA	NA	NA
n-butylbenzene	5.41E-09	NA	NA
n-propylbenzene	1.54E-08	NA	NA
p-cymene	9.35E-11	NA	NA
phenanthrene	NA	NA	NA
pyrene	NA	NA	NA
tetrachloroethene	8.31E-08	2.10E-02	1.74E-09
trichloroethene	9.92E-08	1.00E-02	9.92E-10
xylenes	1.03E-08	NA	NA
	ILCR Summation =		2.7E-09

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