MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT
ENVIRONMENTAL LABORATORY
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Sample Number: AB73277 SS-09

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/15/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/09/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	300		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	750		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	750		2.0
86-74-8	Carbazole	Not Detected	750		2.0
218-01-9	Chrysene	1200	300		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	600		2.0
132-64-9	Dibenzofuran	Not Detected	750		2.0
84-66-2	Diethylphthalate	Not Detected	750		2.0
131-11-3	Dimethyl phthalate	Not Detected	750		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	750		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	750		2.0
206-44-0	Fluoranthene	1600	300		2.0
86-73-7	Fluorene	Not Detected	300		2.0
118-74-1	Hexachlorobenzene	Not Detected	600		2.0
87-68-3	Hexachlorobutadiene	Not Detected	300	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	3000	Z	2.0
67-72-1	Hexachloroethane	Not Detected	300		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	600		2.0
78-59-1	Isophorone	Not Detected	300		2.0
91-20-3	Naphthalene	Not Detected	300		2.0
98-95-3	Nitrobenzene	Not Detected	600		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	750		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	600		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	600		2.0
87-86-5	Pentachlorophenol	Not Detected	5100	Z=800	2.0
85-01-8	Phenanthrene	700	300		2.0
108-95-2	Phenol	Not Detected	990		2.0
129-00-0	Pyrene	2900	300		2.0

Result(s) and RL(s) are estimated for base neutral compounds due to low surrogate recovery.
RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	9.00			
SURROGATE	#Bromofluorobenzene#	128			
SURROGATE	#Dibromofluoromethane#	144			

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

Laboratory Contacts
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Organic Unit Mgr: Carol Smith
Systems Mgmt Unit: George Krisztian

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Sample Number: AB73277 SS-09

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Toluene-d8#	143			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	110		50
71-55-6	1,1,1-Trichloroethane	Not Detected	110		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	110		50
79-00-5	1,1,2-Trichloroethane	Not Detected	110		50
75-34-3	1,1-Dichloroethane	Not Detected	110		50
75-35-4	1,1-Dichloroethylene	Not Detected	110		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	540		50
96-18-4	1,2,3-Trichloropropane	Not Detected	110		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	110		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	540		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	110		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	540		50
106-93-4	1,2-Dibromoethane	Not Detected	110	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	110		50
107-06-2	1,2-Dichloroethane	Not Detected	110		50
78-87-5	1,2-Dichloropropane	Not Detected	110		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	110		50
541-73-1	1,3-Dichlorobenzene	Not Detected	110		50
106-46-7	1,4-Dichlorobenzene	Not Detected	110		50
78-93-3	2-Butanone (MEK)	Not Detected	540		50
591-78-6	2-Hexanone	Not Detected	540		50
91-57-6	2-Methylnaphthalene	Not Detected	540	X,7	50
67-64-1	2-Propanone (acetone)	Not Detected	2200	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	540		50
107-13-1	Acrylonitrile	Not Detected	540	Z	50
71-43-2	Benzene	Not Detected	110		50
108-86-1	Bromobenzene	Not Detected	110		50
74-97-5	Bromochloromethane	Not Detected	110		50
75-27-4	Bromodichloromethane	Not Detected	110		50
75-25-2	Bromoform	Not Detected	110		50
74-83-9	Bromomethane	Not Detected	430		50
75-15-0	Carbon disulfide	Not Detected	110		50
56-23-5	Carbon tetrachloride	Not Detected	110		50
108-90-7	Chlorobenzene	Not Detected	110		50
75-00-3	Chloroethane	Not Detected	540		50
67-66-3	Chloroform	Not Detected	110		50
74-87-3	Chloromethane	Not Detected	540		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	110		50
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	110		50

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mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73277 SS-09

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
110-82-7	Cyclohexane	Not Detected	540		50
124-48-1	Dibromochloromethane	Not Detected	110		50
74-95-3	Dibromomethane	Not Detected	110		50
75-71-8	Dichlorodifluoromethane	Not Detected	540		50
60-29-7	Diethyl ether	Not Detected	430		50
108-20-3	Diisopropyl Ether	Not Detected	540		50
100-41-4	Ethylbenzene	Not Detected	110		50
637-92-3	Ethyltertiarybutylether	Not Detected	540		50
67-72-1	Hexachloroethane	Not Detected	540		50
98-82-8	Isopropylbenzene	Not Detected	110		50
108383,106423	m & p - Xylene	Not Detected	220		50
74-88-4	Methyl iodide	Not Detected	110		50
75-09-2	Methylene chloride	Not Detected	220		50
1634-04-4	Methyltertiarybutylether	Not Detected	110		50
91-20-3	Naphthalene	Not Detected	540	X	50
104-51-8	n-Butylbenzene	Not Detected	110		50
103-65-1	n-Propylbenzene	Not Detected	110		50
95-47-6	o-Xylene	Not Detected	110		50
99-87-6	p-Isopropyl toluene	Not Detected	110		50
135-98-8	sec-Butylbenzene	Not Detected	110		50
100-42-5	Styrene	Not Detected	110		50
98-06-6	tert-Butylbenzene	Not Detected	110		50
75-65-0	tertiary Butyl Alcohol	Not Detected	5400		50
994-05-8	tertiaryAmylmethylether	Not Detected	540		50
127-18-4	Tetrachloroethylene	Not Detected	110		50
109-99-9	Tetrahydrofuran	Not Detected	540		50
108-88-3	Toluene	Not Detected	110		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	110		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	110		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	540	Z	50
79-01-6	Trichloroethylene	Not Detected	110		50
75-69-4	Trichlorofluoromethane	Not Detected	110		50
75-01-4	Vinyl chloride	Not Detected	110	Z	50

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ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73277 SS-09

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	0.2	mg/Kg dry	0.1		05/11/2011	ASTM D 751	MB
	Cyanide-Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	17	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	1.9	mg/Kg dry	0.3		05/21/2011	6020	KS
7440-38-2	Arsenic - Sediment	12	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	85	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	0.52	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-43-9	Cadmium - Sediment	0.78	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	18	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	4.3	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	36	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/20/2011	3050	WN
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	15000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	250	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	250	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	1.7	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	15	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	0.75	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-22-4	Silver - Sediment	0.26	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	18	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	130	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	67.0	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

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Sample Number: AB73278 SS-10

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/12/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	43.6			
SURROGATE	#Tetrachloro-m-xylene#	74.7			
72-54-8	4,4'-DDD	40	120	T K	5.0
72-55-9	4,4'-DDE	84	23		1.0
50-29-3	4,4'-DDT	150	120		5.0
319-84-6	a-BHC	Not Detected	12		1.0
5103-71-9	a-Chlordane	Not Detected	23		1.0
309-00-2	Aldrin	Not Detected	23		1.0
12674-11-2	Aroclor 1016	Not Detected	120		1.0
11104-28-2	Aroclor 1221	Not Detected	120		1.0
11141-16-5	Aroclor 1232	Not Detected	120		1.0
53469-21-9	Aroclor 1242	Not Detected	120		1.0
12672-29-6	Aroclor 1248	Not Detected	120		1.0
11097-69-1	Aroclor 1254	Not Detected	120		1.0
11096-82-5	Aroclor 1260	Not Detected	120		1.0
37324-23-5	Aroclor 1262	Not Detected	120		1.0
11100-14-4	Aroclor 1268	Not Detected	120		1.0
319-85-7	b-BHC	Not Detected	23		1.0
319-86-8	d-BHC	Not Detected	23		1.0
60-57-1	Dieldrin	Not Detected	23		1.0
959-98-8	Endosulfan I	Not Detected	23		1.0
33213-65-9	Endosulfan II	Not Detected	23		1.0
1031-07-8	Endosulfan sulfate	Not Detected	23		1.0
72-20-8	Endrin	Not Detected	23		1.0
7421-93-4	Endrin aldehyde	Not Detected	23		1.0
53494-70-5	Endrin ketone	Not Detected	23		1.0
58-89-9	g-BHC (Lindane)	Not Detected	23		1.0
5103-74-2	g-Chlordane	Not Detected	23		1.0
76-44-8	Heptachlor	Not Detected	23		1.0
1024-57-3	Heptachlor epoxide	Not Detected	23		1.0
87-82-1	Hexabromobenzene	Not Detected	120		1.0
72-43-5	Methoxychlor	Not Detected	290	K	5.0
2385-85-5	Mirex	Not Detected	58		1.0
59080-40-9	PBB (BP-6)	Not Detected	290		1.0
8001-35-2	Toxaphene	Not Detected	990	K	5.0

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Sample Number: AB73278 SS-10

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/15/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/09/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	70.1			
SURROGATE	#2,4,6-Tribromophenol#	68.6			
SURROGATE	#2-Fluorophenol#	63.4			
SURROGATE	#Nitrobenzene - D5#	59.4			
SURROGATE	#Phenol - D6#	74.6			
SURROGATE	#p-Terphenyl-d14#	113			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	470		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	770		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	770		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	770		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	770		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	4000	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	580		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	580		2.0
91-58-7	2-Chloronaphthalene	Not Detected	470		2.0
95-57-8	2-Chlorophenol	Not Detected	770		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	4000	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	580		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	770		2.0
88-74-4	2-Nitroaniline	Not Detected	1200		2.0
88-75-5	2-Nitrophenol	Not Detected	770		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	1500		2.0
99-09-2	3-Nitroaniline	Not Detected	1200	3	2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	470		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	470		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	230		2.0
100-01-6	4-Nitroaniline	Not Detected	1200		2.0
100-02-7	4-Nitrophenol	Not Detected	4000	Z	2.0
83-32-9	Acenaphthene	Not Detected	230		2.0
208-96-8	Acenaphthylene	Not Detected	230		2.0
120-12-7	Anthracene	Not Detected	230		2.0
103-33-3	Azobenzene	Not Detected	470		2.0
56-55-3	Benzo[a]anthracene	Not Detected	230		2.0
50-32-8	Benzo[a]pyrene	Not Detected	470		2.0
205-99-2	Benzo[b]fluoranthene	Not Detected	470		2.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	470		2.0
207-08-9	Benzo[k]fluoranthene	Not Detected	470		2.0
100-51-6	Benzyl Alcohol	Not Detected	5800		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	470		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	230		2.0

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Sample Number: AB73278 SS-10

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/15/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/09/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	230		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	580		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	580		2.0
86-74-8	Carbazole	Not Detected	580		2.0
218-01-9	Chrysene	Not Detected	230		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	470		2.0
132-64-9	Dibenzofuran	Not Detected	580		2.0
84-66-2	Diethylphthalate	Not Detected	580		2.0
131-11-3	Dimethyl phthalate	Not Detected	580		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	580		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	580		2.0
206-44-0	Fluoranthene	260	230		2.0
86-73-7	Fluorene	Not Detected	230		2.0
118-74-1	Hexachlorobenzene	Not Detected	470		2.0
87-68-3	Hexachlorobutadiene	Not Detected	230	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	2300	Z	2.0
67-72-1	Hexachloroethane	Not Detected	230		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	470		2.0
78-59-1	Isophorone	Not Detected	230		2.0
91-20-3	Naphthalene	Not Detected	230		2.0
98-95-3	Nitrobenzene	Not Detected	470		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	580		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	470		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	470		2.0
87-86-5	Pentachlorophenol	Not Detected	4000	Z=800	2.0
85-01-8	Phenanthrene	Not Detected	230		2.0
108-95-2	Phenol	Not Detected	770		2.0
129-00-0	Pyrene	420	230		2.0

RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	9.93			
SURROGATE	#Bromofluorobenzene#	125			
SURROGATE	#Dibromofluoromethane#	143			
SURROGATE	#Toluene-d8#	137			

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

Laboratory Contacts
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Organic Unit Mgr: Carol Smith
Systems Mgmt Unit: George Krisztian

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Sample Number: AB73278 SS-10

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	67		50
71-55-6	1,1,1-Trichloroethane	Not Detected	67		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	67		50
79-00-5	1,1,2-Trichloroethane	Not Detected	67		50
75-34-3	1,1-Dichloroethane	Not Detected	67		50
75-35-4	1,1-Dichloroethylene	Not Detected	67		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	330		50
96-18-4	1,2,3-Trichloropropane	Not Detected	67		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	67		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	330		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	67		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	330		50
106-93-4	1,2-Dibromoethane	Not Detected	67	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	67		50
107-06-2	1,2-Dichloroethane	Not Detected	67		50
78-87-5	1,2-Dichloropropane	Not Detected	67		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	67		50
541-73-1	1,3-Dichlorobenzene	Not Detected	67		50
106-46-7	1,4-Dichlorobenzene	Not Detected	67		50
78-93-3	2-Butanone (MEK)	Not Detected	330	5	50
591-78-6	2-Hexanone	Not Detected	330		50
91-57-6	2-Methylnaphthalene	Not Detected	330	X	50
67-64-1	2-Propanone (acetone)	Not Detected	1300	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	330		50
107-13-1	Acrylonitrile	Not Detected	330	Z	50
71-43-2	Benzene	Not Detected	67		50
108-86-1	Bromobenzene	Not Detected	67		50
74-97-5	Bromochloromethane	Not Detected	67		50
75-27-4	Bromodichloromethane	Not Detected	67		50
75-25-2	Bromoform	Not Detected	67		50
74-83-9	Bromomethane	Not Detected	270		50
75-15-0	Carbon disulfide	Not Detected	67		50
56-23-5	Carbon tetrachloride	Not Detected	67		50
108-90-7	Chlorobenzene	Not Detected	67		50
75-00-3	Chloroethane	Not Detected	330		50
67-66-3	Chloroform	Not Detected	67		50
74-87-3	Chloromethane	Not Detected	330		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	67		50
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	67		50
110-82-7	Cyclohexane	Not Detected	330		50

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Sample Number: AB73278 SS-10

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
124-48-1	Dibromochloromethane	Not Detected	67		50
74-95-3	Dibromomethane	Not Detected	67		50
75-71-8	Dichlorodifluoromethane	Not Detected	330		50
60-29-7	Diethyl ether	Not Detected	270		50
108-20-3	Diisopropyl Ether	Not Detected	330		50
100-41-4	Ethylbenzene	Not Detected	67		50
637-92-3	Ethyltertiarybutylether	Not Detected	330		50
67-72-1	Hexachloroethane	Not Detected	330	7	50
98-82-8	Isopropylbenzene	Not Detected	67		50
108383,106423	m & p - Xylene	Not Detected	130		50
74-88-4	Methyl iodide	Not Detected	67		50
75-09-2	Methylene chloride	Not Detected	130		50
1634-04-4	Methyltertiarybutylether	Not Detected	67		50
91-20-3	Naphthalene	Not Detected	330	X	50
104-51-8	n-Butylbenzene	Not Detected	67		50
103-65-1	n-Propylbenzene	Not Detected	67		50
95-47-6	o-Xylene	Not Detected	67		50
99-87-6	p-Isopropyl toluene	Not Detected	67		50
135-98-8	sec-Butylbenzene	Not Detected	67		50
100-42-5	Styrene	Not Detected	67		50
98-06-6	tert-Butylbenzene	Not Detected	67		50
75-65-0	tertiary Butyl Alcohol	Not Detected	3300		50
994-05-8	tertiary Amylmethylether	Not Detected	330		50
127-18-4	Tetrachloroethylene	Not Detected	67		50
109-99-9	Tetrahydrofuran	Not Detected	330		50
108-88-3	Toluene	Not Detected	67		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	67		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	67		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	330	7Z	50
79-01-6	Trichloroethylene	Not Detected	67		50
75-69-4	Trichlorofluoromethane	Not Detected	67		50
75-01-4	Vinyl chloride	Not Detected	67	Z	50

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ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73278 SS-10

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	ND	mg/Kg dry	0.1		05/11/2011	ASTM D 751	MB
	Cyanide Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	0.48	mg/Kg dry	0.3		05/21/2011	6020	KS
7440-38-2	Arsenic - Sediment	5.5	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	53	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	0.50	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-43-9	Cadmium - Sediment	0.23	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	16	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	7.6	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	15	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/20/2011	3050	WN
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	19000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	21	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	450	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	1.6	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	19	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	0.26	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	20	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	47	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	86.0	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

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ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73279 SS-11

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/12/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	51.2			
SURROGATE	#Tetrachloro-m-xylene#	79.7			
72-54-8	4,4'-DDD	Not Detected	24		1.0
72-55-9	4,4'-DDE	Not Detected	24		1.0
50-29-3	4,4'-DDT	Not Detected	24		1.0
319-84-6	a-BHC	Not Detected	12		1.0
5103-71-9	a-Chlordane	Not Detected	24		1.0
309-00-2	Aldrin	Not Detected	24		1.0
12674-11-2	Aroclor 1016	Not Detected	120		1.0
11104-28-2	Aroclor 1221	Not Detected	120		1.0
11141-16-5	Aroclor 1232	Not Detected	120		1.0
53469-21-9	Aroclor 1242	Not Detected	120		1.0
12672-29-6	Aroclor 1248	Not Detected	120		1.0
11097-69-1	Aroclor 1254	Not Detected	120		1.0
11096-82-5	Aroclor 1260	Not Detected	120		1.0
37324-23-5	Aroclor 1262	Not Detected	120		1.0
11100-14-4	Aroclor 1268	Not Detected	120		1.0
319-85-7	b-BHC	Not Detected	24		1.0
319-86-8	d-BHC	Not Detected	24		1.0
60-57-1	Dieldrin	Not Detected	24		1.0
959-98-8	Endosulfan I	Not Detected	24		1.0
33213-65-9	Endosulfan II	Not Detected	24		1.0
1031-07-8	Endosulfan sulfate	Not Detected	24		1.0
72-20-8	Endrin	Not Detected	24		1.0
7421-93-4	Endrin aldehyde	Not Detected	24		1.0
53494-70-5	Endrin ketone	Not Detected	24		1.0
58-89-9	g-BHC (Lindane)	Not Detected	24		1.0
5103-74-2	g-Chlordane	Not Detected	24		1.0
76-44-8	Heptachlor	Not Detected	24		1.0
1024-57-3	Heptachlor epoxide	Not Detected	24		1.0
87-82-1	Hexabromobenzene	Not Detected	120		1.0
72-43-5	Methoxychlor	Not Detected	59		1.0
2385-85-5	Mirex	Not Detected	59		1.0
59080-40-9	PBB (BP-6)	Not Detected	300		1.0
8001-35-2	Toxaphene	Not Detected	200		1.0

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mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73279 SS-11

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/15/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/09/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	55.4			
SURROGATE	#2,4,6-Tribromophenol#	57.9			
SURROGATE	#2-Fluorophenol#	39.1			
SURROGATE	#Nitrobenzene - D5#	47.4			
SURROGATE	#Phenol - D6#	55.5			
SURROGATE	#p-Terphenyl-d14#	94.2			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	470		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	780		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	780		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	780		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	780		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	4000	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	590		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	590		2.0
91-58-7	2-Chloronaphthalene	Not Detected	470		2.0
95-57-8	2-Chlorophenol	Not Detected	780		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	4000	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	590		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	780		2.0
88-74-4	2-Nitroaniline	Not Detected	1200		2.0
88-75-5	2-Nitrophenol	Not Detected	780		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	1600		2.0
99-09-2	3-Nitroaniline	Not Detected	1200	Z	2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	470		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	470		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	240		2.0
100-01-6	4-Nitroaniline	Not Detected	1200		2.0
100-02-7	4-Nitrophenol	Not Detected	4000	Z	2.0
83-32-9	Acenaphthene	Not Detected	240		2.0
208-96-8	Acenaphthylene	Not Detected	240		2.0
120-12-7	Anthracene	Not Detected	240		2.0
103-33-3	Azobenzene	Not Detected	470		2.0
56-55-3	Benzo[a]anthracene	Not Detected	240		2.0
50-32-8	Benzo[a]pyrene	Not Detected	470		2.0
205-99-2	Benzo[b]fluoranthene	Not Detected	470		2.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	470		2.0
207-08-9	Benzo[k]fluoranthene	Not Detected	470		2.0
100-51-6	Benzyl Alcohol	Not Detected	5900		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	470		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	240		2.0

CAS# : Chemical Abstract Service Registry Number
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mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73279 SS-11

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/15/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/09/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	240		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	590		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	590		2.0
86-74-8	Carbazole	Not Detected	590		2.0
218-01-9	Chrysene	Not Detected	240		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	470		2.0
132-64-9	Dibenzofuran	Not Detected	590		2.0
84-66-2	Diethylphthalate	Not Detected	590		2.0
131-11-3	Dimethyl phthalate	Not Detected	590		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	590		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	590		2.0
206-44-0	Fluoranthene	Not Detected	240		2.0
86-73-7	Fluorene	Not Detected	240		2.0
118-74-1	Hexachlorobenzene	Not Detected	470		2.0
87-68-3	Hexachlorobutadiene	Not Detected	240	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	2400	Z	2.0
67-72-1	Hexachloroethane	Not Detected	240		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	470		2.0
78-59-1	Isophorone	Not Detected	240		2.0
91-20-3	Naphthalene	Not Detected	240		2.0
98-95-3	Nitrobenzene	Not Detected	470		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	590		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	470		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	470		2.0
87-86-5	Pentachlorophenol	Not Detected	4000	Z-800	2.0
85-01-8	Phenanthrene	Not Detected	240		2.0
108-95-2	Phenol	Not Detected	780		2.0
129-00-0	Pyrene	Not Detected	240		2.0

RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	9.77			
SURROGATE	#Bromofluorobenzene#	129			
SURROGATE	#Dibromofluoromethane#	156			
SURROGATE	#Toluene-d8#	142			

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
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Sample Number: AB73279 SS-11

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	70		50
71-55-6	1,1,1-Trichloroethane	Not Detected	70		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	70		50
79-00-5	1,1,2-Trichloroethane	Not Detected	70		50
75-34-3	1,1-Dichloroethane	Not Detected	70		50
75-35-4	1,1-Dichloroethylene	Not Detected	70		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	350		50
96-18-4	1,2,3-Trichloropropane	Not Detected	70		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	70		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	350		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	70		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	350		50
106-93-4	1,2-Dibromoethane	Not Detected	70	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	70		50
107-06-2	1,2-Dichloroethane	Not Detected	70		50
78-87-5	1,2-Dichloropropane	Not Detected	70		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	70		50
541-73-1	1,3-Dichlorobenzene	Not Detected	70		50
106-46-7	1,4-Dichlorobenzene	Not Detected	70		50
78-93-3	2-Butanone (MEK)	Not Detected	350	5	50
591-78-6	2-Hexanone	Not Detected	350		50
91-57-6	2-Methylnaphthalene	Not Detected	350	X	50
67-64-1	2-Propanone (acetone)	Not Detected	1400	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	350		50
107-13-1	Acrylonitrile	Not Detected	350	Z	50
71-43-2	Benzene	Not Detected	70		50
108-86-1	Bromobenzene	Not Detected	70		50
74-97-5	Bromochloromethane	Not Detected	70		50
75-27-4	Bromodichloromethane	Not Detected	70		50
75-25-2	Bromoform	Not Detected	70		50
74-83-9	Bromomethane	Not Detected	280		50
75-15-0	Carbon disulfide	Not Detected	70		50
56-23-5	Carbon tetrachloride	Not Detected	70		50
108-90-7	Chlorobenzene	Not Detected	70		50
75-00-3	Chloroethane	Not Detected	350		50
67-66-3	Chloroform	Not Detected	70		50
74-87-3	Chloromethane	Not Detected	350		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	70		50
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	70		50
110-82-7	Cyclohexane	Not Detected	350		50

•CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73279 SS-11

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
124-48-1	Dibromochloromethane	Not Detected	70		50
74-95-3	Dibromomethane	Not Detected	70		50
75-71-8	Dichlorodifluoromethane	Not Detected	350		50
60-29-7	Diethyl ether	Not Detected	280		50
108-20-3	Diisopropyl Ether	Not Detected	350		50
100-41-4	Ethylbenzene	Not Detected	70		50
637-92-3	Ethyltertiarybutylether	Not Detected	350		50
67-72-1	Hexachloroethane	Not Detected	350	7	50
98-82-8	Isopropylbenzene	Not Detected	70		50
108383,106423	m & p - Xylene	Not Detected	140		50
74-88-4	Methyl iodide	Not Detected	70		50
75-09-2	Methylene chloride	Not Detected	140		50
1634-04-4	Methyltertiarybutylether	Not Detected	70		50
91-20-3	Naphthalene	Not Detected	350	X	50
104-51-8	n-Butylbenzene	Not Detected	70		50
103-65-1	n-Propylbenzene	Not Detected	70		50
95-47-6	o-Xylene	Not Detected	70		50
99-87-6	p-Isopropyl toluene	Not Detected	70		50
135-98-8	sec-Butylbenzene	Not Detected	70		50
100-42-5	Styrene	Not Detected	70		50
98-06-6	tert-Butylbenzene	Not Detected	70		50
75-65-0	tertiary Butyl Alcohol	Not Detected	3500		50
994-05-8	tertiary Amylmethylether	Not Detected	350		50
127-18-4	Tetrachloroethylene	Not Detected	70		50
109-99-9	Tetrahydrofuran	Not Detected	350		50
108-88-3	Toluene	Not Detected	70		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	70		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	70		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	350	7Z	50
79-01-6	Trichloroethylene	Not Detected	70		50
75-69-4	Trichlorofluoromethane	Not Detected	70		50
75-01-4	Vinyl chloride	Not Detected	70	Z	50

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ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73279 SS-11

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	ND	mg/Kg dry	0.1		05/11/2011	ASTM D 751	MB
	Cyanide Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	0.41	mg/Kg dry	0.3		05/21/2011	6020	KS
7440-38-2	Arsenic - Sediment	7.0	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	57	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	0.61	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-43-9	Cadmium - Sediment	0.25	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	26	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	9.1	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	16	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/20/2011	3050	WN
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	26000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	12	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	940	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	1.5	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	23	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	0.21	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	32	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	46	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	84.3	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

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Sample Number: AB73280 SS-12

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/12/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	47.2			
SURROGATE	#Tetrachloro-m-xylene#	77.4			
72-54-8	4,4'-DDD	Not Detected	24		1.0
72-55-9	4,4'-DDE	Not Detected	24		1.0
50-29-3	4,4'-DDT	Not Detected	24		1.0
319-84-6	a-BHC	Not Detected	12		1.0
5103-71-9	a-Chlordane	7.7	24	T	1.0
309-00-2	Aldrin	Not Detected	24		1.0
12674-11-2	Aroclor 1016	Not Detected	120		1.0
11104-28-2	Aroclor 1221	Not Detected	120		1.0
11141-16-5	Aroclor 1232	Not Detected	120		1.0
53469-21-9	Aroclor 1242	Not Detected	120		1.0
12672-29-6	Aroclor 1248	Not Detected	120		1.0
11097-69-1	Aroclor 1254	Not Detected	120		1.0
11096-82-5	Aroclor 1260	Not Detected	120		1.0
37324-23-5	Aroclor 1262	Not Detected	120		1.0
11100-14-4	Aroclor 1268	Not Detected	120		1.0
319-85-7	b-BHC	Not Detected	24		1.0
319-86-8	d-BHC	Not Detected	24		1.0
60-57-1	Dieldrin	Not Detected	24		1.0
959-98-8	Endosulfan I	Not Detected	24		1.0
33213-65-9	Endosulfan II	Not Detected	24		1.0
1031-07-8	Endosulfan sulfate	Not Detected	24		1.0
72-20-8	Endrin	Not Detected	24		1.0
7421-93-4	Endrin aldehyde	Not Detected	24		1.0
53494-70-5	Endrin ketone	Not Detected	24		1.0
58-89-9	g-BHC (Lindane)	Not Detected	24		1.0
5103-74-2	g-Chlordane	13	24	T	1.0
76-44-8	Heptachlor	Not Detected	24		1.0
1024-57-3	Heptachlor epoxide	Not Detected	24		1.0
87-82-1	Hexabromobenzene	Not Detected	120		1.0
72-43-5	Methoxychlor	Not Detected	59		1.0
2385-85-5	Mirex	Not Detected	59		1.0
59080-40-9	PBB (BP-6)	Not Detected	300		1.0
8001-35-2	Toxaphene	Not Detected	200		1.0

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ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73280 SS-12

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/15/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/09/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2-Fluorobiphenyl#	80.8			
SURROGATE	#2,4,6-Tribromophenol#	78.6			
SURROGATE	#2-Fluorophenol#	76.2			
SURROGATE	#Nitrobenzene - D5#	69.5			
SURROGATE	#Phenol - D6#	82.1			
SURROGATE	#p-Terphenyl-d14#	125			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	470		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	780		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	780		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	780		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	780		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	4000	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	590		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	590		2.0
91-58-7	2-Chloronaphthalene	Not Detected	470		2.0
95-57-8	2-Chlorophenol	Not Detected	780		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	4000	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	590		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	780		2.0
88-74-4	2-Nitroaniline	Not Detected	1200		2.0
88-75-5	2-Nitrophenol	Not Detected	780		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	1600		2.0
99-09-2	3-Nitroaniline	Not Detected	1200	3	2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	470		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	470		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	240		2.0
100-01-6	4-Nitroaniline	Not Detected	1200		2.0
100-02-7	4-Nitrophenol	Not Detected	4000	Z	2.0
83-32-9	Acenaphthene	Not Detected	240		2.0
208-96-8	Acenaphthylene	Not Detected	240		2.0
120-12-7	Anthracene	Not Detected	240		2.0
103-33-3	Azobenzene	Not Detected	470		2.0
56-55-3	Benzo[a]anthracene	250	240		2.0
50-32-8	Benzo[a]pyrene	Not Detected	470		2.0
205-99-2	Benzo[b]fluoranthene	Not Detected	470		2.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	470		2.0
207-08-9	Benzo[k]fluoranthene	Not Detected	470		2.0
100-51-6	Benzyl Alcohol	Not Detected	5900		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	470		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	240		2.0

CAS# : Chemical Abstract Service Registry Number
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ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73280 SS-12

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/15/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/09/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	240		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	590		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	590		2.0
86-74-8	Carbazole	Not Detected	590		2.0
218-01-9	Chrysene	250	240		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	470		2.0
132-64-9	Dibenzofuran	Not Detected	590		2.0
84-66-2	Diethylphthalate	Not Detected	590		2.0
131-11-3	Dimethyl phthalate	Not Detected	590		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	590		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	590		2.0
206-44-0	Fluoranthene	460	240		2.0
86-73-7	Fluorene	Not Detected	240		2.0
118-74-1	Hexachlorobenzene	Not Detected	470		2.0
87-68-3	Hexachlorobutadiene	Not Detected	240	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	2400	Z	2.0
67-72-1	Hexachloroethane	Not Detected	240		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	470		2.0
78-59-1	Isophorone	Not Detected	240		2.0
91-20-3	Naphthalene	Not Detected	240		2.0
98-95-3	Nitrobenzene	Not Detected	470		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	590		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	470		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	470		2.0
87-86-5	Pentachlorophenol	Not Detected	4000	Z=800	2.0
85-01-8	Phenanthrene	240	240		2.0
108-95-2	Phenol	Not Detected	780		2.0
129-00-0	Pyrene	340	240		2.0

RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	12.40			
SURROGATE	#Bromofluorobenzene#	145			
SURROGATE	#Dibromofluoromethane#	161			
SURROGATE	#Toluene-d8#	163			

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Sample Number: AB73280 SS-12

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	67		50
71-55-6	1,1,1-Trichloroethane	Not Detected	67		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	67		50
79-00-5	1,1,2-Trichloroethane	Not Detected	67		50
75-34-3	1,1-Dichloroethane	Not Detected	67		50
75-35-4	1,1-Dichloroethylene	Not Detected	67		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	330		50
96-18-4	1,2,3-Trichloropropane	Not Detected	67		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	67		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	330		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	67		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	330		50
106-93-4	1,2-Dibromoethane	Not Detected	67	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	67		50
107-06-2	1,2-Dichloroethane	Not Detected	67		50
78-87-5	1,2-Dichloropropane	Not Detected	67		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	67		50
541-73-1	1,3-Dichlorobenzene	Not Detected	67		50
106-46-7	1,4-Dichlorobenzene	Not Detected	67		50
78-93-3	2-Butanone (MEK)	Not Detected	330	5	50
591-78-6	2-Hexanone	Not Detected	330		50
91-57-6	2-Methylnaphthalene	Not Detected	330	X	50
67-64-1	2-Propanone (acetone)	Not Detected	1300	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	330		50
107-13-1	Acrylonitrile	Not Detected	330	Z	50
71-43-2	Benzene	Not Detected	67		50
108-86-1	Bromobenzene	Not Detected	67		50
74-97-5	Bromochloromethane	Not Detected	67		50
75-27-4	Bromodichloromethane	Not Detected	67		50
75-25-2	Bromoform	Not Detected	67		50
74-83-9	Bromomethane	Not Detected	270		50
75-15-0	Carbon disulfide	Not Detected	67		50
56-23-5	Carbon tetrachloride	Not Detected	67		50
108-90-7	Chlorobenzene	Not Detected	67		50
75-00-3	Chloroethane	Not Detected	330		50
67-66-3	Chloroform	Not Detected	67		50
74-87-3	Chloromethane	Not Detected	330		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	67		50
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	67		50
110-82-7	Cyclohexane	Not Detected	330		50

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Sample Number: AB73280 SS-12

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
124-48-1	Dibromochloromethane	Not Detected	67		50
74-95-3	Dibromomethane	Not Detected	67		50
75-71-8	Dichlorodifluoromethane	Not Detected	330		50
60-29-7	Diethyl ether	Not Detected	270		50
108-20-3	Diisopropyl Ether	Not Detected	330		50
100-41-4	Ethylbenzene	Not Detected	67		50
637-92-3	Ethyltertiarybutylether	Not Detected	330		50
67-72-1	Hexachloroethane	Not Detected	330	7	50
98-82-8	Isopropylbenzene	Not Detected	67		50
108383,106423	m & p - Xylene	Not Detected	130		50
74-88-4	Methyl iodide	Not Detected	67		50
75-09-2	Methylene chloride	Not Detected	130		50
1634-04-4	Methyltertiarybutylether	Not Detected	67		50
91-20-3	Naphthalene	Not Detected	330	X	50
104-51-8	n-Butylbenzene	Not Detected	67		50
103-65-1	n-Propylbenzene	Not Detected	67		50
95-47-6	o-Xylene	Not Detected	67		50
99-87-6	p-Isopropyl toluene	Not Detected	67		50
135-98-8	sec-Butylbenzene	Not Detected	67		50
100-42-5	Styrene	Not Detected	67		50
98-06-6	tert-Butylbenzene	Not Detected	67		50
75-65-0	tertiary Butyl Alcohol	Not Detected	3300		50
994-05-8	tertiaryAmylmethylether	Not Detected	330		50
127-18-4	Tetrachloroethylene	Not Detected	67		50
109-99-9	Tetrahydrofuran	Not Detected	330		50
108-88-3	Toluene	Not Detected	67		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	67		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	67		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	330	7Z	50
79-01-6	Trichloroethylene	Not Detected	67		50
75-69-4	Trichlorofluoromethane	Not Detected	67		50
75-01-4	Vinyl chloride	Not Detected	67	Z	50

CAS# .: Chemical Abstract Service Registry Number
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ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73280 SS-12

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	ND	mg/Kg dry	0.1		05/11/2011	ASTM D 751	MB
	Cyanide-Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	0.32	mg/Kg dry	0.3		05/21/2011	6020	KS
7440-38-2	Arsenic - Sediment	4.7	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	30	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	0.32	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-43-9	Cadmium - Sediment	0.25	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	33	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	5.0	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	14	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/20/2011	3050	WN
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	16000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	22	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	720	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	1.0	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	14	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	0.24	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	20	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	58	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	84.4	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC-Analy	Completed				05/11/2011	3640	DT

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ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73281 SS-13

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/12/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	47.8			
SURROGATE	#Tetrachloro-m-xylene#	77.0			
72-54-8	4,4'-DDD	Not Detected	25		1.0
72-55-9	4,4'-DDE	Not Detected	25		1.0
50-29-3	4,4'-DDT	Not Detected	25		1.0
319-84-6	a-BHC	Not Detected	12		1.0
5103-71-9	a-Chlordane	Not Detected	25		1.0
309-00-2	Aldrin	Not Detected	25		1.0
12674-11-2	Aroclor 1016	Not Detected	120		1.0
11104-28-2	Aroclor 1221	Not Detected	120		1.0
11141-16-5	Aroclor 1232	Not Detected	120		1.0
53469-21-9	Aroclor 1242	Not Detected	120		1.0
12672-29-6	Aroclor 1248	Not Detected	120		1.0
11097-69-1	Aroclor 1254	Not Detected	120		1.0
11096-82-5	Aroclor 1260	Not Detected	120		1.0
37324-23-5	Aroclor 1262	Not Detected	120		1.0
11100-14-4	Aroclor 1268	Not Detected	120		1.0
319-85-7	b-BHC	Not Detected	25		1.0
319-86-8	d-BHC	Not Detected	25		1.0
60-57-1	Dieldrin	Not Detected	25		1.0
959-98-8	Endosulfan I	Not Detected	25		1.0
33213-65-9	Endosulfan II	Not Detected	25		1.0
1031-07-8	Endosulfan sulfate	Not Detected	25		1.0
72-20-8	Endrin	Not Detected	25		1.0
7421-93-4	Endrin aldehyde	Not Detected	25		1.0
53494-70-5	Endrin ketone	Not Detected	25		1.0
58-89-9	g-BHC (Lindane)	Not Detected	25		1.0
5103-74-2	g-Chlordane	Not Detected	25		1.0
76-44-8	Heptachlor	Not Detected	25		1.0
1024-57-3	Heptachlor epoxide	Not Detected	25		1.0
87-82-1	Hexabromobenzene	Not Detected	120		1.0
72-43-5	Methoxychlor	Not Detected	62		1.0
2385-85-5	Mirex	Not Detected	62		1.0
59080-40-9	PBB (BP-6)	Not Detected	310		1.0
8001-35-2	Toxaphene	Not Detected	210		1.0

CAS# : Chemical Abstract Service Registry Number
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ND : Not Detected

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mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73281 SS-13

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/15/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/09/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2-Fluorobiphenyl#	78.5			
SURROGATE	#2,4,6-Tribromophenol#	75.0			
SURROGATE	#2-Fluorophenol#	72.2			
SURROGATE	#Nitrobenzene - D5#	71.5			
SURROGATE	#Phenol - D6#	80.3			
SURROGATE	#p-Terphenyl-d14#	103			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	490		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	810		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	810		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	810		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	810		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	4200	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	620		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	620		2.0
91-58-7	2-Chloronaphthalene	Not Detected	490		2.0
95-57-8	2-Chlorophenol	Not Detected	810		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	4200	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	620		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	810		2.0
88-74-4	2-Nitroaniline	Not Detected	1200		2.0
88-75-5	2-Nitrophenol	Not Detected	810		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	1600		2.0
99-09-2	3-Nitroaniline	Not Detected	1200	3	2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	490		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	490		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	250		2.0
100-01-6	4-Nitroaniline	Not Detected	1200		2.0
100-02-7	4-Nitrophenol	Not Detected	4200	Z	2.0
83-32-9	Acenaphthene	Not Detected	250		2.0
208-96-8	Acenaphthylene	Not Detected	250		2.0
120-12-7	Anthracene	Not Detected	250		2.0
103-33-3	Azobenzene	Not Detected	490		2.0
56-55-3	Benzo[a]anthracene	Not Detected	250		2.0
50-32-8	Benzo[a]pyrene	Not Detected	490		2.0
205-99-2	Benzo[b]fluoranthene	Not Detected	490		2.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	490		2.0
207-08-9	Benzo[k]fluoranthene	Not Detected	490		2.0
100-51-6	Benzyl Alcohol	Not Detected	6200		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	490		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	250		2.0

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
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Sample Number: AB73281 SS-13

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/15/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/09/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	250		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	620		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	620		2.0
86-74-8	Carbazole	Not Detected	620		2.0
218-01-9	Chrysene	Not Detected	250		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	490		2.0
132-64-9	Dibenzofuran	Not Detected	620		2.0
84-66-2	Diethylphthalate	Not Detected	620		2.0
131-11-3	Dimethyl phthalate	Not Detected	620		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	620		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	620		2.0
206-44-0	Fluoranthene	Not Detected	250		2.0
86-73-7	Fluorene	Not Detected	250		2.0
118-74-1	Hexachlorobenzene	Not Detected	490		2.0
87-68-3	Hexachlorobutadiene	Not Detected	250	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	2500	Z	2.0
67-72-1	Hexachloroethane	Not Detected	250		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	490		2.0
78-59-1	Isophorone	Not Detected	250		2.0
91-20-3	Naphthalene	Not Detected	250		2.0
98-95-3	Nitrobenzene	Not Detected	490		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	620		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	490		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	490		2.0
87-86-5	Pentachlorophenol	Not Detected	4200	Z-800	2.0
85-01-8	Phenanthrene	Not Detected	250		2.0
108-95-2	Phenol	Not Detected	810		2.0
129-00-0	Pyrene	Not Detected	250		2.0

RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	9.87			
SURROGATE	#Bromofluorobenzene#	136			
SURROGATE	#Dibromofluoromethane#	155			
SURROGATE	#Toluene-d8#	154			

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Sample Number: AB73281 SS-13

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	74		50
71-55-6	1,1,1-Trichloroethane	Not Detected	74		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	74		50
79-00-5	1,1,2-Trichloroethane	Not Detected	74		50
75-34-3	1,1-Dichloroethane	Not Detected	74		50
75-35-4	1,1-Dichloroethylene	Not Detected	74		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	370		50
96-18-4	1,2,3-Trichloropropane	Not Detected	74		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	74		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	370		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	74		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	370		50
106-93-4	1,2-Dibromoethane	Not Detected	74	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	74		50
107-06-2	1,2-Dichloroethane	Not Detected	74		50
78-87-5	1,2-Dichloropropane	Not Detected	74		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	74		50
541-73-1	1,3-Dichlorobenzene	Not Detected	74		50
106-46-7	1,4-Dichlorobenzene	Not Detected	74		50
78-93-3	2-Butanone (MEK)	Not Detected	370	5	50
591-78-6	2-Hexanone	Not Detected	370		50
91-57-6	2-Methylnaphthalene	Not Detected	370	X	50
67-64-1	2-Propanone (acetone)	Not Detected	1500	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	370		50
107-13-1	Acrylonitrile	Not Detected	370	Z	50
71-43-2	Benzene	Not Detected	74		50
108-86-1	Bromobenzene	Not Detected	74		50
74-97-5	Bromochloromethane	Not Detected	74		50
75-27-4	Bromodichloromethane	Not Detected	74		50
75-25-2	Bromoform	Not Detected	74		50
74-83-9	Bromomethane	Not Detected	300		50
75-15-0	Carbon disulfide	Not Detected	74		50
56-23-5	Carbon tetrachloride	Not Detected	74		50
108-90-7	Chlorobenzene	Not Detected	74		50
75-00-3	Chloroethane	Not Detected	370		50
67-66-3	Chloroform	Not Detected	74		50
74-87-3	Chloromethane	Not Detected	370		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	74		50
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	74		50
110-82-7	Cyclohexane	Not Detected	370		50

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Sample Number: AB73281 SS-13

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
124-48-1	Dibromochloromethane	Not Detected	74		50
74-95-3	Dibromomethane	Not Detected	74		50
75-71-8	Dichlorodifluoromethane	Not Detected	370		50
60-29-7	Diethyl ether	Not Detected	300		50
108-20-3	Diisopropyl Ether	Not Detected	370		50
100-41-4	Ethylbenzene	Not Detected	74		50
637-92-3	Ethyltertiarybutylether	Not Detected	370		50
67-72-1	Hexachloroethane	Not Detected	370	7	50
98-82-8	Isopropylbenzene	Not Detected	74		50
108383,106423	m & p - Xylene	Not Detected	150		50
74-88-4	Methyl iodide	Not Detected	74		50
75-09-2	Methylene chloride	Not Detected	150		50
1634-04-4	Methyltertiarybutylether	Not Detected	74		50
91-20-3	Naphthalene	Not Detected	370	X	50
104-51-8	n-Butylbenzene	Not Detected	74		50
103-65-1	n-Propylbenzene	Not Detected	74		50
95-47-6	o-Xylene	Not Detected	74		50
99-87-6	p-Isopropyl toluene	Not Detected	74		50
135-98-8	sec-Butylbenzene	Not Detected	74		50
100-42-5	Styrene	Not Detected	74		50
98-06-6	tert-Butylbenzene	Not Detected	74		50
75-65-0	tertiary Butyl Alcohol	Not Detected	3700		50
994-05-8	tertiaryAmylmethylether	Not Detected	370		50
127-18-4	Tetrachloroethylene	Not Detected	74		50
109-99-9	Tetrahydrofuran	Not Detected	370		50
108-88-3	Toluene	Not Detected	74		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	74		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	74		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	370	7Z	50
79-01-6	Trichloroethylene	Not Detected	74		50
75-69-4	Trichlorofluoromethane	Not Detected	74		50
75-01-4	Vinyl chloride	Not Detected	74	Z	50

CAS# : Chemical Abstract Service Registry Number
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Sample Number: AB73281 SS-13

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	ND	mg/Kg dry	0.1		05/11/2011	ASTM D 751	MB
	Cyanide Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	0.37	mg/Kg dry	0.3		05/21/2011	6020	KS
7440-38-2	Arsenic - Sediment	5.1	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	36	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	0.38	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-43-9	Cadmium - Sediment	0.26	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	21	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	5.3	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	12	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/20/2011	3050	WN
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	17000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	17	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	440	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	1.0	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	12	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	0.24	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	22	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	62	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	81.1	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73282 SS-14

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/13/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	38.5			
SURROGATE	#Tetrachloro-m-xylene#	77.2			
72-54-8	4,4'-DDD	Not Detected	120	K	5.0
72-55-9	4,4'-DDE	36	23		1.0
50-29-3	4,4'-DDT	140	120		5.0
319-84-6	a-BHC	Not Detected	12		1.0
5103-71-9	a-Chlordane	Not Detected	23		1.0
309-00-2	Aldrin	Not Detected	23		1.0
12674-11-2	Aroclor 1016	Not Detected	120		1.0
11104-28-2	Aroclor 1221	Not Detected	120		1.0
11141-16-5	Aroclor 1232	Not Detected	120		1.0
53469-21-9	Aroclor 1242	Not Detected	120		1.0
12672-29-6	Aroclor 1248	Not Detected	120		1.0
11097-69-1	Aroclor 1254	Not Detected	120		1.0
11096-82-5	Aroclor 1260	Not Detected	120		1.0
37324-23-5	Aroclor 1262	Not Detected	120		1.0
11100-14-4	Aroclor 1268	Not Detected	120		1.0
319-85-7	b-BHC	Not Detected	23		1.0
319-86-8	d-BHC	Not Detected	23		1.0
60-57-1	Dieldrin	Not Detected	23		1.0
959-98-8	Endosulfan I	Not Detected	23		1.0
33213-65-9	Endosulfan II	Not Detected	23		1.0
1031-07-8	Endosulfan sulfate	Not Detected	23		1.0
72-20-8	Endrin	Not Detected	23		1.0
7421-93-4	Endrin aldehyde	Not Detected	23		1.0
53494-70-5	Endrin ketone	Not Detected	23		1.0
58-89-9	g-BHC (Lindane)	Not Detected	23		1.0
5103-74-2	g-Chlordane	Not Detected	23		1.0
76-44-8	Heptachlor	Not Detected	23		1.0
1024-57-3	Heptachlor epoxide	Not Detected	23		1.0
87-82-1	Hexabromobenzene	Not Detected	120		1.0
72-43-5	Methoxychlor	Not Detected	290	K	5.0
2385-85-5	Mirex	Not Detected	59		1.0
59080-40-9	PBB (BP-6)	Not Detected	290		1.0
8001-35-2	Toxaphene	Not Detected	200		1.0

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Sample Number: AB73282 SS-14

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2-Fluorobiphenyl#	72.4			
SURROGATE	#2,4,6-Tribromophenol#	60.2			
SURROGATE	#2-Fluorophenol#	57.7			
SURROGATE	#Nitrobenzene - D5#	56.0			
SURROGATE	#Phenol - D6#	66.1			
SURROGATE	#p-Terphenyl-d14#	75.5			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	470		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	770		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	770		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	770		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	770		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	4000	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	590		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	590		2.0
91-58-7	2-Chloronaphthalene	Not Detected	470		2.0
95-57-8	2-Chlorophenol	Not Detected	770		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	4000	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	590		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	770		2.0
88-74-4	2-Nitroaniline	Not Detected	1200		2.0
88-75-5	2-Nitrophenol	Not Detected	770		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	1500		2.0
99-09-2	3-Nitroaniline	Not Detected	1200		2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	470		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	470		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	230		2.0
100-01-6	4-Nitroaniline	Not Detected	1200		2.0
100-02-7	4-Nitrophenol	Not Detected	4000	Z	2.0
83-32-9	Acenaphthene	Not Detected	230		2.0
208-96-8	Acenaphthylene	Not Detected	230		2.0
120-12-7	Anthracene	520	230		2.0
103-33-3	Azobenzene	Not Detected	470		2.0
56-55-3	Benzo[a]anthracene	1700	230		2.0
50-32-8	Benzo[a]pyrene	1500	470		2.0
205-99-2	Benzo[b]fluoranthene	2100	470		2.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	470	5	2.0
207-08-9	Benzo[k]fluoranthene	700	470		2.0
100-51-6	Benzyl Alcohol	Not Detected	5900		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	470		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	230		2.0

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Sample Number: AB73282 SS-14

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	230		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	590		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	590		2.0
86-74-8	Carbazole	Not Detected	590		2.0
218-01-9	Chrysene	1700	230		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	470	5	2.0
132-64-9	Dibenzofuran	Not Detected	590		2.0
84-66-2	Diethylphthalate	Not Detected	590		2.0
131-11-3	Dimethyl phthalate	Not Detected	590		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	590		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	590		2.0
206-44-0	Fluoranthene	3200	230		2.0
86-73-7	Fluorene	270	230		2.0
118-74-1	Hexachlorobenzene	Not Detected	470		2.0
87-68-3	Hexachlorobutadiene	Not Detected	230	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	2300	Z	2.0
67-72-1	Hexachloroethane	Not Detected	230		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	640	470	5	2.0
78-59-1	Isophorone	Not Detected	230		2.0
91-20-3	Naphthalene	Not Detected	230		2.0
98-95-3	Nitrobenzene	Not Detected	470		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	590		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	470		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	470		2.0
87-86-5	Pentachlorophenol	Not Detected	4000	Z=800	2.0
85-01-8	Phenanthrene	2100	230		2.0
108-95-2	Phenol	Not Detected	770		2.0
129-00-0	Pyrene	3200	230		2.0

Sample was originally extracted within USEPA holding time. Due to instrument failure, sample was re-extracted outside USEPA maximum allowable hold time. Data is estimated.
RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	8.86			
SURROGATE	#Bromofluorobenzene#	144			

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

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Sample Number: AB73282 SS-14

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Dibromofluoromethane#	156			
SURROGATE	#Toluene-d8#	152			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	75		50
71-55-6	1,1,1-Trichloroethane	Not Detected	75		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	75		50
79-00-5	1,1,2-Trichloroethane	Not Detected	75		50
75-34-3	1,1-Dichloroethane	Not Detected	75		50
75-35-4	1,1-Dichloroethylene	Not Detected	75		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	370		50
96-18-4	1,2,3-Trichloropropane	Not Detected	75		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	75		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	370		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	75		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	370		50
106-93-4	1,2-Dibromoethane	Not Detected	75	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	75		50
107-06-2	1,2-Dichloroethane	Not Detected	75		50
78-87-5	1,2-Dichloropropane	Not Detected	75		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	75		50
541-73-1	1,3-Dichlorobenzene	Not Detected	75		50
106-46-7	1,4-Dichlorobenzene	Not Detected	75		50
78-93-3	2-Butanone (MEK)	Not Detected	370	5	50
591-78-6	2-Hexanone	Not Detected	370		50
91-57-6	2-Methylnaphthalene	Not Detected	370	X	50
67-64-1	2-Propanone (acetone)	Not Detected	1500	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	370		50
107-13-1	Acrylonitrile	Not Detected	370	Z	50
71-43-2	Benzene	Not Detected	75		50
108-86-1	Bromobenzene	Not Detected	75		50
74-97-5	Bromochloromethane	Not Detected	75		50
75-27-4	Bromodichloromethane	Not Detected	75		50
75-25-2	Bromoform	Not Detected	75		50
74-83-9	Bromomethane	Not Detected	300		50
75-15-0	Carbon disulfide	Not Detected	75		50
56-23-5	Carbon tetrachloride	Not Detected	75		50
108-90-7	Chlorobenzene	Not Detected	75		50
75-00-3	Chloroethane	Not Detected	370		50
67-66-3	Chloroform	Not Detected	75		50
74-87-3	Chloromethane	Not Detected	370		50
156-59-2	cis-1-2-Dichloroethylene	Not Detected	75		50

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Sample Number: AB73282 SS-14

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	75		50
110-82-7	Cyclohexane	Not Detected	370		50
124-48-1	Dibromochloromethane	Not Detected	75		50
74-95-3	Dibromomethane	Not Detected	75		50
75-71-8	Dichlorodifluoromethane	Not Detected	370		50
60-29-7	Diethyl ether	Not Detected	300		50
108-20-3	Diisopropyl Ether	Not Detected	370		50
100-41-4	Ethylbenzene	Not Detected	75		50
637-92-3	Ethyltertiarybutylether	Not Detected	370		50
67-72-1	Hexachloroethane	Not Detected	370	7	50
98-82-8	Isopropylbenzene	Not Detected	75		50
108383,106423	m & p - Xylene	Not Detected	150		50
74-88-4	Methyl iodide	Not Detected	75		50
75-09-2	Methylene chloride	Not Detected	150		50
1634-04-4	Methyltertiarybutylether	Not Detected	75		50
91-20-3	Naphthalene	Not Detected	370	X	50
104-51-8	n-Butylbenzene	Not Detected	75		50
103-65-1	n-Propylbenzene	Not Detected	75		50
95-47-6	o-Xylene	Not Detected	75		50
99-87-6	p-Isopropyl toluene	Not Detected	75		50
135-98-8	sec-Butylbenzene	Not Detected	75		50
100-42-5	Styrene	Not Detected	75		50
98-06-6	tert-Butylbenzene	Not Detected	75		50
75-65-0	tertiary Butyl Alcohol	Not Detected	3700		50
994-05-8	tertiaryAmylmethylether	Not Detected	370		50
127-18-4	Tetrachloroethylene	Not Detected	75		50
109-99-9	Tetrahydrofuran	Not Detected	370		50
108-88-3	Toluene	Not Detected	75		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	75		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	75		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	370	7Z	50
79-01-6	Trichloroethylene	Not Detected	75		50
75-69-4	Trichlorofluoromethane	Not Detected	75		50
75-01-4	Vinyl chloride	Not Detected	75	Z	50

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Sample Number: AB73282 SS-14

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	ND	mg/Kg dry	0.1		05/11/2011	ASTM D 751	MB
	Cyanide-Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	0.69	mg/Kg dry	0.3		05/21/2011	6020	KS
7440-38-2	Arsenic - Sediment	4.9	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	47	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	0.42	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-43-9	Cadmium - Sediment	0.33	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	86	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	4.9	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	13	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/20/2011	3050	WN
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	30000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	50	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	1600	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	1.2	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	13	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	ND	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	83	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	68	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	85.2	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

CAS# : Chemical Abstract Service Registry Number
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Sample Number: AB73283 SS-15

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/13/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	42.9			
SURROGATE	#Tetrachloro-m-xylene#	79.0			
72-54-8	4,4'-DDD	Not Detected	25		1.0
72-55-9	4,4'-DDE	31	25		1.0
50-29-3	4,4'-DDT	79	25		1.0
319-84-6	a-BHC	Not Detected	12		1.0
5103-71-9	a-Chlordane	Not Detected	25		1.0
309-00-2	Aldrin	Not Detected	25		1.0
12674-11-2	Aroclor 1016	Not Detected	120		1.0
11104-28-2	Aroclor 1221	Not Detected	120		1.0
11141-16-5	Aroclor 1232	Not Detected	120		1.0
53469-21-9	Aroclor 1242	Not Detected	120		1.0
12672-29-6	Aroclor 1248	Not Detected	120		1.0
11097-69-1	Aroclor 1254	Not Detected	120		1.0
11096-82-5	Aroclor 1260	Not Detected	120		1.0
37324-23-5	Aroclor 1262	Not Detected	120		1.0
11100-14-4	Aroclor 1268	Not Detected	120		1.0
319-85-7	b-BHC	Not Detected	25		1.0
319-86-8	d-BHC	Not Detected	25		1.0
60-57-1	Dieldrin	Not Detected	25		1.0
959-98-8	Endosulfan I	Not Detected	25		1.0
33213-65-9	Endosulfan II	Not Detected	25		1.0
1031-07-8	Endosulfan sulfate	Not Detected	25		1.0
72-20-8	Endrin	Not Detected	25		1.0
7421-93-4	Endrin aldehyde	Not Detected	25		1.0
53494-70-5	Endrin ketone	Not Detected	25		1.0
58-89-9	g-BHC (Lindane)	Not Detected	25		1.0
5103-74-2	g-Chlordane	Not Detected	25		1.0
76-44-8	Heptachlor	Not Detected	25		1.0
1024-57-3	Heptachlor epoxide	Not Detected	25		1.0
87-82-1	Hexabromobenzene	Not Detected	120		1.0
72-43-5	Methoxychlor	Not Detected	61		1.0
2385-85-5	Mirex	Not Detected	61		1.0
59080-40-9	PBB (BP-6)	Not Detected	310		1.0
8001-35-2	Toxaphene	Not Detected	210		1.0

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Sample Number: AB73283 SS-15

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	63.6			
SURROGATE	#2,4,6-Tribromophenol#	55.9			
SURROGATE	#2-Fluorophenol#	37.6			
SURROGATE	#Nitrobenzene - D5#	48.9			
SURROGATE	#Phenol - D6#	36.6			
SURROGATE	#p-Terphenyl-d14#	68.0			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	490		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	810		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	810		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	810		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	810		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	4200	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	610		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	610		2.0
91-58-7	2-Chloronaphthalene	Not Detected	490		2.0
95-57-8	2-Chlorophenol	Not Detected	810		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	4200	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	610		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	810		2.0
88-74-4	2-Nitroaniline	Not Detected	1200		2.0
88-75-5	2-Nitrophenol	Not Detected	810		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	1600		2.0
99-09-2	3-Nitroaniline	Not Detected	1200		2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	490		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	490		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	250		2.0
100-01-6	4-Nitroaniline	Not Detected	1200		2.0
100-02-7	4-Nitrophenol	Not Detected	4200	Z	2.0
83-32-9	Acenaphthene	Not Detected	250		2.0
208-96-8	Acenaphthylene	Not Detected	250		2.0
120-12-7	Anthracene	Not Detected	250		2.0
103-33-3	Azobenzene	Not Detected	490		2.0
56-55-3	Benzo[a]anthracene	580	250		2.0
50-32-8	Benzo[a]pyrene	530	490		2.0
205-99-2	Benzo[b]fluoranthene	740	490		2.0
191-24-2	Benzo[ghi]perylene	Not Detected	490	5	2.0
207-08-9	Benzo[k]fluoranthene	Not Detected	490		2.0
100-51-6	Benzyl Alcohol	Not Detected	6100		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	490		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	250		2.0

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Sample Number: AB73283 SS-15

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	250		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	610		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	610		2.0
86-74-8	Carbazole	Not Detected	610		2.0
218-01-9	Chrysene	640	250		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	490	5	2.0
132-64-9	Dibenzofuran	Not Detected	610		2.0
84-66-2	Diethylphthalate	Not Detected	610		2.0
131-11-3	Dimethyl phthalate	Not Detected	610		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	610		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	610		2.0
206-44-0	Fluoranthene	1300	250		2.0
86-73-7	Fluorene	Not Detected	250		2.0
118-74-1	Hexachlorobenzene	Not Detected	490		2.0
87-68-3	Hexachlorobutadiene	Not Detected	250	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	2500	Z	2.0
67-72-1	Hexachloroethane	Not Detected	250		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	490	5	2.0
78-59-1	Isophorone	Not Detected	250		2.0
91-20-3	Naphthalene	Not Detected	250		2.0
98-95-3	Nitrobenzene	Not Detected	490		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	610		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	490		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	490		2.0
87-86-5	Pentachlorophenol	Not Detected	4200	Z=800	2.0
85-01-8	Phenanthrene	1200	250		2.0
108-95-2	Phenol	Not Detected	810		2.0
129-00-0	Pyrene	1400	250		2.0

Sample was originally extracted within USEPA holding time. Due to instrument failure, sample was re-extracted outside USEPA maximum allowable hold time. Data is estimated.
RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	13.62			
SURROGATE	#Bromofluorobenzene#	138			

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Sample Number: AB73283 SS-15

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Dibromofluoromethane#	157			
SURROGATE	#Toluene-d8#	158			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	75		50
71-55-6	1,1,1-Trichloroethane	Not Detected	75		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	75		50
79-00-5	1,1,2-Trichloroethane	Not Detected	75		50
75-34-3	1,1-Dichloroethane	Not Detected	75		50
75-35-4	1,1-Dichloroethylene	Not Detected	75		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	370		50
96-18-4	1,2,3-Trichloropropane	Not Detected	75		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	75		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	370		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	75		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	370		50
106-93-4	1,2-Dibromoethane	Not Detected	75	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	75		50
107-06-2	1,2-Dichloroethane	Not Detected	75		50
78-87-5	1,2-Dichloropropane	Not Detected	75		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	75		50
541-73-1	1,3-Dichlorobenzene	Not Detected	75		50
106-46-7	1,4-Dichlorobenzene	Not Detected	75		50
78-93-3	2-Butanone (MEK)	Not Detected	370	5	50
591-78-6	2-Hexanone	Not Detected	370		50
91-57-6	2-Methylnaphthalene	Not Detected	370	X	50
67-64-1	2-Propanone (acetone)	Not Detected	1500	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	370		50
107-13-1	Acrylonitrile	Not Detected	370	Z	50
71-43-2	Benzene	Not Detected	75		50
108-86-1	Bromobenzene	Not Detected	75		50
74-97-5	Bromochloromethane	Not Detected	75		50
75-27-4	Bromodichloromethane	Not Detected	75		50
75-25-2	Bromoform	Not Detected	75		50
74-83-9	Bromomethane	Not Detected	300		50
75-15-0	Carbon disulfide	Not Detected	75		50
56-23-5	Carbon tetrachloride	Not Detected	75		50
108-90-7	Chlorobenzene	Not Detected	75		50
75-00-3	Chloroethane	Not Detected	370		50
67-66-3	Chloroform	Not Detected	75		50
74-87-3	Chloromethane	Not Detected	370		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	75		50

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Sample Number: AB73283 SS-15

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	75		50
110-82-7	Cyclohexane	Not Detected	370		50
124-48-1	Dibromochloromethane	Not Detected	75		50
74-95-3	Dibromomethane	Not Detected	75		50
75-71-8	Dichlorodifluoromethane	Not Detected	370		50
60-29-7	Diethyl ether	Not Detected	300		50
108-20-3	Diisopropyl Ether	Not Detected	370		50
100-41-4	Ethylbenzene	Not Detected	75		50
637-92-3	Ethyltertiarybutylether	Not Detected	370		50
67-72-1	Hexachloroethane	Not Detected	370	7	50
98-82-8	Isopropylbenzene	Not Detected	75		50
108383,106423	m & p - Xylene	Not Detected	150		50
74-88-4	Methyl iodide	Not Detected	75		50
75-09-2	Methylene chloride	Not Detected	150		50
1634-04-4	Methyltertiarybutylether	Not Detected	75		50
91-20-3	Naphthalene	Not Detected	370	X	50
104-51-8	n-Butylbenzene	Not Detected	75		50
103-65-1	n-Propylbenzene	Not Detected	75		50
95-47-6	o-Xylene	Not Detected	75		50
99-87-6	p-Isopropyl toluene	Not Detected	75		50
135-98-8	sec-Butylbenzene	Not Detected	75		50
100-42-5	Styrene	Not Detected	75		50
98-06-6	tert-Butylbenzene	Not Detected	75		50
75-65-0	tertiary Butyl Alcohol	Not Detected	3700		50
994-05-8	tertiaryAmylmethylether	Not Detected	370		50
127-18-4	Tetrachloroethylene	Not Detected	75		50
109-99-9	Tetrahydrofuran	Not Detected	370		50
108-88-3	Toluene	Not Detected	75		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	75		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	75		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	370	7Z	50
79-01-6	Trichloroethylene	Not Detected	75		50
75-69-4	Trichlorofluoromethane	Not Detected	75		50
75-01-4	Vinyl chloride	Not Detected	75	Z	50

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Sample Number: AB73283 SS-15

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	ND	mg/Kg dry	0.1		05/11/2011	ASTM D 751	MB
	Cyanide Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	0.37	mg/Kg dry	0.3		05/21/2011	6020	KS
7440-38-2	Arsenic - Sediment	5.6	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	42	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	0.44	mg/Kg dry	0.2		05/19/2011	6020	KS
7440-43-9	Cadmium - Sediment	0.26	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	34	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	6.3	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	15	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/20/2011	3050	WN
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	24000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	33	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	720	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	1.6	mg/Kg dry	1		05/19/2011	6020	KS
7440-02-0	Nickel - Sediment	16	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	0.27	mg/Kg dry	0.2		05/19/2011	6020	KS
	Result is estimated due to inter-replicate sample analysis RSD >10%							
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	36	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	75	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	81.4	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

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Qualifier Code	Qualifier Description
1	Result(s) and RL(s) are estimated due to low surrogate recovery.
2	Result is estimated due to high surrogate recovery.
3	Result(s) and RL(s) are estimated due to low matrix spike recovery.
4	Result is estimated due to high matrix spike recovery.
5	Result and RL are estimated due to low continuing calibration standard criteria failure.
6	Result is estimated due to high continuing calibration standard criteria failure.
7	Result(s) and RL(s) are estimated due to poor precision.
8	Result(s) and RL(s) are estimated due to low recovery of batch QC.
9	Result outside QC acceptance criteria.
A	Value reported is the mean of two or more determinations.
C	Value calculated from other independent parameters.
D	Analyte value quantified from a dilution(s); reporting limit (RL) raised.
E	Result is estimated due to high recovery of batch QC.
F	Amenable cyanide was not analyzed due to low level of total cyanide.
G	Result and RL are estimated due to initial calibration standard criteria failure.
H	Recommended laboratory holding time was exceeded.
I	Dilution required due to matrix interference; reporting limit (RL) raised.
J	Analyte was positively identified. Value is an estimate.
JA	Result is estimated due to multiple Aroclors present.
JC	Result is estimated since confirmation analysis did not meet acceptance criteria
JD	Due to severe degradation, specific Aroclor identification is difficult and quantitation is estimated.
K	RL(s) raised due to matrix interferences.
KR	RL(s) raised due to low sample volume submitted.
KS	RL(s) raised due to low total solids.
KW	RL(s) raised due to light sample weight.
LB	Reported library search compounds are tentative identifications with estimated concentrations.
M	The level of the method preparation blank (MPB) is reported in the qualifier column.
N	Non-homogeneous sample made analysis of sample questionable.
O	Result and RL estimated due to analysis from an open vial.
P	Recommended sample collection/preservation technique not used; reported result(s) is an estimate.
Q	Quantity of sample insufficient to perform analyses requested.
R	Result confirmed by re-extraction and analysis.
S	Supernatant analyzed.
T	Reported value is less than the reporting limit (RL). Result is estimated.
V	Value not available due to dilution.
W	Reported value is less than the method detection limit (MDL).
X	Methods 8260 & 624 are used to analyze volatile organics that have boiling points below 200°C. 2-Methylnaphthalene & naphthalene have boiling points above 200°C and are better suited to analysis by methods 8270 or 625 as semivolatile organics.
PI	Possible interference may have affected the accuracy of the laboratory result
Z	Result reported below the RL to meet the TDL in RRD Op Memo 2 (10/22/04) multiplied by applicable dilution factor.

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Division: RD
Report to: TERESA DUCSAY
MDEQ-RD-LANSING
CONSTITUTION HALL
525 W. ALLEGAN, LANSING, MI 48909

Total: $3,682.00

Lab Work Order # : 10400188
Work Site ID : LB041003
Site Name : TREE FARM
Received: 04/28/2011
Reported: 06/07/2011
Collected By: TERESA DUCSAY

Samples Received :

No:	Sample ID	Sample Description	Matrix:	Collection Date
01	AB73284	SD-01	SEDIMENT	04/27/2011
02	AB73285	SD-02	SEDIMENT	04/27/2011
03	AB73286	SD-03	SEDIMENT	04/27/2011
04	AB73287	SD-04	SEDIMENT	04/26/2011

I certify that the analysis performed by the MDEQ Environmental Laboratory are accurate and that the laboratory tests were conducted by methods approved by the U.S. Environmental Protection Agency and other appropriate regulatory agencies.

George L. Krisztian,
Acting Laboratory Director

MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT
ENVIRONMENTAL LABORATORY
P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
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Sample Number: AB73284 SD-01

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/12/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	51.5			
SURROGATE	#Tetrachloro-m-xylene#	78.7			
72-54-8	4,4'-DDD	Not Detected	26		1.0
72-55-9	4,4'-DDE	Not Detected	26		1.0
50-29-3	4,4'-DDT	Not Detected	26		1.0
319-84-6	a-BHC	Not Detected	13		1.0
5103-71-9	a-Chlordane	Not Detected	26		1.0
309-00-2	Aldrin	Not Detected	26		1.0
12674-11-2	Aroclor 1016	Not Detected	130		1.0
11104-28-2	Aroclor 1221	Not Detected	130		1.0
11141-16-5	Aroclor 1232	Not Detected	130		1.0
53469-21-9	Aroclor 1242	Not Detected	130		1.0
12672-29-6	Aroclor 1248	Not Detected	130		1.0
11097-69-1	Aroclor 1254	Not Detected	130		1.0
11096-82-5	Aroclor 1260	Not Detected	130		1.0
37324-23-5	Aroclor 1262	Not Detected	130		1.0
11100-14-4	Aroclor 1268	Not Detected	130		1.0
319-85-7	b-BHC	Not Detected	26		1.0
319-86-8	d-BHC	Not Detected	26		1.0
60-57-1	Dieldrin	Not Detected	26		1.0
959-98-8	Endosulfan I	Not Detected	26		1.0
33213-65-9	Endosulfan II	Not Detected	26		1.0
1031-07-8	Endosulfan sulfate	Not Detected	26		1.0
72-20-8	Endrin	Not Detected	26		1.0
7421-93-4	Endrin aldehyde	Not Detected	26		1.0
53494-70-5	Endrin ketone	Not Detected	26		1.0
58-89-9	g-BHC (Lindane)	Not Detected	26		1.0
5103-74-2	g-Chlordane	Not Detected	26		1.0
76-44-8	Heptachlor	Not Detected	26		1.0
1024-57-3	Heptachlor epoxide	Not Detected	26		1.0
87-82-1	Hexabromobenzene	Not Detected	130		1.0
72-43-5	Methoxychlor	Not Detected	66		1.0
2385-85-5	Mirex	Not Detected	66		1.0
59080-40-9	PBB (BP-6)	Not Detected	330		1.0
8001-35-2	Toxaphene	Not Detected	220		1.0

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Organic Unit Mgr: Carol Smith
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Sample Number: AB73284 SD-01

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2-Fluorobiphenyl#	81.3			
SURROGATE	#2,4,6-Tribromophenol#	74.5			
SURROGATE	#2-Fluorophenol#	58.1			
SURROGATE	#Nitrobenzene - D5#	63.4			
SURROGATE	#Phenol- D6#	66.6			
SURROGATE	#p-Terphenyl-d14#	83.9			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	530		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	870		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	870		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	870		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	870		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	4500	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	660		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	660		2.0
91-58-7	2-Chloronaphthalene	Not Detected	530		2.0
95-57-8	2-Chlorophenol	Not Detected	870		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	4500	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	660		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	870		2.0
88-74-4	2-Nitroaniline	Not Detected	1300		2.0
88-75-5	2-Nitrophenol	Not Detected	870		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	1700		2.0
99-09-2	3-Nitroaniline	Not Detected	1300		2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	530		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	530		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	260		2.0
100-01-6	4-Nitroaniline	Not Detected	1300		2.0
100-02-7	4-Nitrophenol	Not Detected	4500	Z	2.0
83-32-9	Acenaphthene	Not Detected	260		2.0
208-96-8	Acenaphthylene	Not Detected	260		2.0
120-12-7	Anthracene	Not Detected	260		2.0
103-33-3	Azobenzene	Not Detected	530		2.0
56-55-3	Benzo[a]anthracene	Not Detected	260		2.0
50-32-8	Benzo[a]pyrene	Not Detected	530		2.0
205-99-2	Benzo[b]fluoranthene	Not Detected	530		2.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	530	5	2.0
207-08-9	Benzo[k]fluoranthene	Not Detected	530		2.0
100-51-6	Benzyl Alcohol	Not Detected	6600		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	530		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	260		2.0

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73284 SD-01

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	260		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	660		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	660		2.0
86-74-8	Carbazole	Not Detected	660		2.0
218-01-9	Chrysene	Not Detected	260		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	530	5	2.0
132-64-9	Dibenzofuran	Not Detected	660		2.0
84-66-2	Diethylphthalate	Not Detected	660		2.0
131-11-3	Dimethyl phthalate	Not Detected	660		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	660		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	660		2.0
206-44-0	Fluoranthene	Not Detected	260		2.0
86-73-7	Fluorene	Not Detected	260		2.0
118-74-1	Hexachlorobenzene	Not Detected	530		2.0
87-68-3	Hexachlorobutadiene	Not Detected	260	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	2600	Z	2.0
67-72-1	Hexachloroethane	Not Detected	260		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	530	5	2.0
78-59-1	Isophorone	Not Detected	260		2.0
91-20-3	Naphthalene	Not Detected	260		2.0
98-95-3	Nitrobenzene	Not Detected	530		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	660		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	530		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	530		2.0
87-86-5	Pentachlorophenol	Not Detected	4500	Z=800	2.0
85-01-8	Phenanthrene	Not Detected	260		2.0
108-95-2	Phenol	Not Detected	870		2.0
129-00-0	Pyrene	Not Detected	260		2.0

Sample was originally extracted within USEPA holding time. Due to instrument failure, sample was re-extracted outside USEPA maximum allowable hold time. Data is estimated.
RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	10.13			
SURROGATE	#Bromofluorobenzene#	121			

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73284 SD-01

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Dibromofluoromethane#	142			
SURROGATE	#Toluene-d8#	138			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	81		50
71-55-6	1,1,1-Trichloroethane	Not Detected	81		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	81		50
79-00-5	1,1,2-Trichloroethane	Not Detected	81		50
75-34-3	1,1-Dichloroethane	Not Detected	81		50
75-35-4	1,1-Dichloroethylene	Not Detected	81		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	410		50
96-18-4	1,2,3-Trichloropropane	Not Detected	81		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	81		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	410		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	81		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	410		50
106-93-4	1,2-Dibromoethane	Not Detected	81	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	81		50
107-06-2	1,2-Dichloroethane	Not Detected	81		50
78-87-5	1,2-Dichloropropane	Not Detected	81		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	81		50
541-73-1	1,3-Dichlorobenzene	Not Detected	81		50
106-46-7	1,4-Dichlorobenzene	Not Detected	81		50
78-93-3	2-Butanone (MEK)	Not Detected	410		50
591-78-6	2-Hexanone	Not Detected	410		50
91-57-6	2-Methylnaphthalene	Not Detected	410	X,7	50
67-64-1	2-Propanone (acetone)	Not Detected	1600	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	410		50
107-13-1	Acrylonitrile	Not Detected	410	Z	50
71-43-2	Benzene	Not Detected	81		50
108-86-1	Bromobenzene	Not Detected	81		50
74-97-5	Bromochloromethane	Not Detected	81		50
75-27-4	Bromodichloromethane	Not Detected	81		50
75-25-2	Bromoform	Not Detected	81		50
74-83-9	Bromomethane	Not Detected	320		50
75-15-0	Carbon disulfide	Not Detected	81		50
56-23-5	Carbon tetrachloride	Not Detected	81		50
108-90-7	Chlorobenzene	Not Detected	81		50
75-00-3	Chloroethane	Not Detected	410		50
67-66-3	Chloroform	Not Detected	81		50
74-87-3	Chloromethane	Not Detected	410		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	81		50

CAS# : Chemical Abstract Service Registry Number
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ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73284 SD-01

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	81		50
110-82-7	Cyclohexane	Not Detected	410		50
124-48-1	Dibromochloromethane	Not Detected	81		50
74-95-3	Dibromomethane	Not Detected	81		50
75-71-8	Dichlorodifluoromethane	Not Detected	410		50
60-29-7	Diethyl ether	Not Detected	320		50
108-20-3	Diisopropyl Ether	Not Detected	410		50
100-41-4	Ethylbenzene	Not Detected	81		50
637-92-3	Ethyltertiarybutylether	Not Detected	410		50
67-72-1	Hexachloroethane	Not Detected	410		50
98-82-8	Isopropylbenzene	Not Detected	81		50
108383,106423	m & p - Xylene	Not Detected	160		50
74-88-4	Methyl iodide	Not Detected	81		50
75-09-2	Methylene chloride	Not Detected	160		50
1634-04-4	Methyltertiarybutylether	Not Detected	81		50
91-20-3	Naphthalene	Not Detected	410	X	50
104-51-8	n-Butylbenzene	Not Detected	81		50
103-65-1	n-Propylbenzene	Not Detected	81		50
95-47-6	o-Xylene	Not Detected	81		50
99-87-6	p-Isopropyl toluene	Not Detected	81		50
135-98-8	sec-Butylbenzene	Not Detected	81		50
100-42-5	Styrene	Not Detected	81		50
98-06-6	tert-Butylbenzene	Not Detected	81		50
75-65-0	tertiary Butyl Alcohol	Not Detected	4100		50
994-05-8	tertiary Amylmethylether	Not Detected	410		50
127-18-4	Tetrachloroethylene	Not Detected	81		50
109-99-9	Tetrahydrofuran	Not Detected	410		50
108-88-3	Toluene	Not Detected	81		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	81		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	81		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	410	Z	50
79-01-6	Trichloroethylene	Not Detected	81		50
75-69-4	Trichlorofluoromethane	Not Detected	81		50
75-01-4	Vinyl chloride	Not Detected	81	Z	50

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ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73284 SD-01

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	0.2	mg/Kg dry	0.1		05/17/2011	ASTM D 751	MB
	Cyanide-Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	ND	mg/Kg dry	0.3		05/21/2011	6020	KS
7440-38-2	Arsenic - Sediment	2.2	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	11	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	ND	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-43-9	Cadmium - Sediment	ND	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	5.2	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	2.0	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	4.4	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/20/2011	3050	WN
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	5800	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	3.9	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	160	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	ND	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	4.4	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	ND	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	6.9	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	22	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	75.8	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

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Sample Number: AB73285 SD-02

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/12/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	54.8			
SURROGATE	#Tetrachloro-m-xylene#	82.0			
72-54-8	4,4'-DDD	Not Detected	23		1.0
72-55-9	4,4'-DDE	Not Detected	23		1.0
50-29-3	4,4'-DDT	Not Detected	23		1.0
319-84-6	a-BHC	Not Detected	11		1.0
5103-71-9	a-Chlordane	Not Detected	23		1.0
309-00-2	Aldrin	Not Detected	23		1.0
12674-11-2	Aroclor 1016	Not Detected	110		1.0
11104-28-2	Aroclor 1221	Not Detected	110		1.0
11141-16-5	Aroclor 1232	Not Detected	110		1.0
53469-21-9	Aroclor 1242	Not Detected	110		1.0
12672-29-6	Aroclor 1248	Not Detected	110		1.0
11097-69-1	Aroclor 1254	Not Detected	110		1.0
11096-82-5	Aroclor 1260	Not Detected	110		1.0
37324-23-5	Aroclor 1262	Not Detected	110		1.0
11100-14-4	Aroclor 1268	Not Detected	110		1.0
319-85-7	b-BHC	Not Detected	23		1.0
319-86-8	d-BHC	Not Detected	23		1.0
60-57-1	Dieldrin	Not Detected	23		1.0
959-98-8	Endosulfan I	Not Detected	23		1.0
33213-65-9	Endosulfan II	Not Detected	23		1.0
1031-07-8	Endosulfan sulfate	Not Detected	23		1.0
72-20-8	Endrin	Not Detected	23		1.0
7421-93-4	Endrin aldehyde	Not Detected	23		1.0
53494-70-5	Endrin ketone	Not Detected	23		1.0
58-89-9	g-BHC (Lindane)	Not Detected	23		1.0
5103-74-2	g-Chlordane	Not Detected	23		1.0
76-44-8	Heptachlor	Not Detected	23		1.0
1024-57-3	Heptachlor epoxide	Not Detected	23		1.0
87-82-1	Hexabromobenzene	Not Detected	110		1.0
72-43-5	Methoxychlor	Not Detected	57		1.0
2385-85-5	Mirex	Not Detected	57		1.0
59080-40-9	PBB (BP-6)	Not Detected	280		1.0
8001-35-2	Toxaphene	Not Detected	190		1.0

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Organic Unit Mgr: Carol Smith
Systems Mgmt Unit: George Krisztian

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Sample Number: AB73285 SD-02

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	68.3			
SURROGATE	#2,4,6-Tribromophenol#	51.1			
SURROGATE	#2-Fluorophenol#	58.5			
SURROGATE	#Nitrobenzene - D5#	57.0			
SURROGATE	#Phenol - D6#	67.4			
SURROGATE	#p-Terphenyl-d14#	64.3			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	460		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	750		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	750		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	750		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	750		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	3900	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	570		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	570		2.0
91-58-7	2-Chloronaphthalene	Not Detected	460		2.0
95-57-8	2-Chlorophenol	Not Detected	750		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	3900	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	570		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	750		2.0
88-74-4	2-Nitroaniline	Not Detected	1100		2.0
88-75-5	2-Nitrophenol	Not Detected	750		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	1500		2.0
99-09-2	3-Nitroaniline	Not Detected	1100		2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	460		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	460		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	230		2.0
100-01-6	4-Nitroaniline	Not Detected	1100		2.0
100-02-7	4-Nitrophenol	Not Detected	3900	Z	2.0
83-32-9	Acenaphthene	Not Detected	230		2.0
208-96-8	Acenaphthylene	Not Detected	230		2.0
120-12-7	Anthracene	Not Detected	230		2.0
103-33-3	Azobenzene	Not Detected	460		2.0
56-55-3	Benzo[a]anthracene	Not Detected	230		2.0
50-32-8	Benzo[a]pyrene	Not Detected	460		2.0
205-99-2	Benzo[b]fluoranthene	Not Detected	460		2.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	460	5	2.0
207-08-9	Benzo[k]fluoranthene	Not Detected	460		2.0
100-51-6	Benzyl Alcohol	Not Detected	5700		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	460		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	230		2.0

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73285 SD-02

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	230		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	570		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	570		2.0
86-74-8	Carbazole	Not Detected	570		2.0
218-01-9	Chrysene	Not Detected	230		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	460	5	2.0
132-64-9	Dibenzofuran	Not Detected	570		2.0
84-66-2	Diethylphthalate	Not Detected	570		2.0
131-11-3	Dimethyl phthalate	Not Detected	570		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	570		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	570		2.0
206-44-0	Fluoranthene	Not Detected	230		2.0
86-73-7	Fluorene	Not Detected	230		2.0
118-74-1	Hexachlorobenzene	Not Detected	460		2.0
87-68-3	Hexachlorobutadiene	Not Detected	230	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	2300	Z	2.0
67-72-1	Hexachloroethane	Not Detected	230		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	460	5	2.0
78-59-1	Isophorone	Not Detected	230		2.0
91-20-3	Naphthalene	Not Detected	230		2.0
98-95-3	Nitrobenzene	Not Detected	460		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	570		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	460		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	460		2.0
87-86-5	Pentachlorophenol	Not Detected	3900	Z=800	2.0
85-01-8	Phenanthrene	Not Detected	230		2.0
108-95-2	Phenol	Not Detected	750		2.0
129-00-0	Pyrene	Not Detected	230		2.0

Sample was originally extracted within USEPA holding time. Due to instrument failure, sample was re-extracted outside USEPA maximum allowable hold time. Data is estimated.
RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	8.92			
SURROGATE	#Bromofluorobenzene#	121			

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73285 SD-02

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Dibromofluoromethane#	135			
SURROGATE	#Toluene-d8#	139			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	71		50
71-55-6	1,1,1-Trichloroethane	Not Detected	71		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	71		50
79-00-5	1,1,2-Trichloroethane	Not Detected	71		50
75-34-3	1,1-Dichloroethane	Not Detected	71		50
75-35-4	1,1-Dichloroethylene	Not Detected	71		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	350		50
96-18-4	1,2,3-Trichloropropane	Not Detected	71		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	71		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	350		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	71		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	350		50
106-93-4	1,2-Dibromoethane	Not Detected	71	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	71		50
107-06-2	1,2-Dichloroethane	Not Detected	71		50
78-87-5	1,2-Dichloropropane	Not Detected	71		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	71		50
541-73-1	1,3-Dichlorobenzene	Not Detected	71		50
106-46-7	1,4-Dichlorobenzene	Not Detected	71		50
78-93-3	2-Butanone (MEK)	Not Detected	350		50
591-78-6	2-Hexanone	Not Detected	350		50
91-57-6	2-Methylnaphthalene	Not Detected	350	X7	50
67-64-1	2-Propanone (acetone)	Not Detected	1400	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	350		50
107-13-1	Acrylonitrile	Not Detected	350	Z	50
71-43-2	Benzene	Not Detected	71		50
108-86-1	Bromobenzene	Not Detected	71		50
74-97-5	Bromochloromethane	Not Detected	71		50
75-27-4	Bromodichloromethane	Not Detected	71		50
75-25-2	Bromoform	Not Detected	71		50
74-83-9	Bromomethane	Not Detected	280		50
75-15-0	Carbon disulfide	Not Detected	71		50
56-23-5	Carbon tetrachloride	Not Detected	71		50
108-90-7	Chlorobenzene	Not Detected	71		50
75-00-3	Chloroethane	Not Detected	350		50
67-66-3	Chloroform	Not Detected	71		50
74-87-3	Chloromethane	Not Detected	350		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	71		50

CAS# : Chemical Abstract Service Registry Number
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ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
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Sample Number: AB73285 SD-02

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	71		50
110-82-7	Cyclohexane	Not Detected	350		50
124-48-1	Dibromochloromethane	Not Detected	71		50
74-95-3	Dibromomethane	Not Detected	71		50
75-71-8	Dichlorodifluoromethane	Not Detected	350		50
60-29-7	Diethyl ether	Not Detected	280		50
108-20-3	Diisopropyl Ether	Not Detected	350		50
100-41-4	Ethylbenzene	Not Detected	71		50
637-92-3	Ethyltertiarybutylether	Not Detected	350		50
67-72-1	Hexachloroethane	Not Detected	350		50
98-82-8	Isopropylbenzene	Not Detected	71		50
108383,106423	m & p - Xylene	Not Detected	140		50
74-88-4	Methyl iodide	Not Detected	71		50
75-09-2	Methylene chloride	Not Detected	140		50
1634-04-4	Methyltertiarybutylether	Not Detected	71		50
91-20-3	Naphthalene	Not Detected	350	X	50
104-51-8	n-Butylbenzene	Not Detected	71		50
103-65-1	n-Propylbenzene	Not Detected	71		50
95-47-6	o-Xylene	Not Detected	71		50
99-87-6	p-Isopropyl toluene	Not Detected	71		50
135-98-8	sec-Butylbenzene	Not Detected	71		50
100-42-5	Styrene	Not Detected	71		50
98-06-6	tert-Butylbenzene	Not Detected	71		50
75-65-0	tertiary Butyl Alcohol	Not Detected	3500		50
994-05-8	tertiaryAmylmethylether	Not Detected	350		50
127-18-4	Tetrachloroethylene	Not Detected	71		50
109-99-9	Tetrahydrofuran	Not Detected	350		50
108-88-3	Toluene	Not Detected	71		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	71		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	71		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	350	Z	50
79-01-6	Trichloroethylene	Not Detected	71		50
75-69-4	Trichlorofluoromethane	Not Detected	71		50
75-01-4	Vinyl chloride	Not Detected	71	Z	50

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73285 SD-02

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	0.2	mg/Kg dry	0.1		05/11/2011	ASTM D 751	MB
	Cyanide-Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	0.39	mg/Kg dry	0.3		05/24/2011	6020	KS
7440-38-2	Arsenic - Sediment	6.6	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	63	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	ND	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-43-9	Cadmium - Sediment	0.22	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	4.8	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	2.5	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	6.3	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/23/2011	3050	KS
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	25000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	10	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	450	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	ND	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	4.1	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	0.29	mg/Kg dry	0.2		05/19/2011	6020	KS
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	8.6	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	54	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	87.8	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

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ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73286 SD-03

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/12/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	47.0			
SURROGATE	#Tetrachloro-m-xylene#	73.0			
72-54-8	4,4'-DDD	Not Detected	26		1.0
72-55-9	4,4'-DDE	Not Detected	26		1.0
50-29-3	4,4'-DDT	Not Detected	26		1.0
319-84-6	a-BHC	Not Detected	13		1.0
5103-71-9	a-Chlordane	Not Detected	26		1.0
309-00-2	Aldrin	Not Detected	26		1.0
12674-11-2	Aroclor 1016	Not Detected	130		1.0
11104-28-2	Aroclor 1221	Not Detected	130		1.0
11141-16-5	Aroclor 1232	Not Detected	130		1.0
53469-21-9	Aroclor 1242	Not Detected	130		1.0
12672-29-6	Aroclor 1248	Not Detected	130		1.0
11097-69-1	Aroclor 1254	Not Detected	130		1.0
11096-82-5	Aroclor 1260	Not Detected	130		1.0
37324-23-5	Aroclor 1262	Not Detected	130		1.0
11100-14-4	Aroclor 1268	Not Detected	130		1.0
319-85-7	b-BHC	Not Detected	26		1.0
319-86-8	d-BHC	Not Detected	26		1.0
60-57-1	Dieldrin	Not Detected	26		1.0
959-98-8	Endosulfan I	Not Detected	26		1.0
33213-65-9	Endosulfan II	Not Detected	26		1.0
1031-07-8	Endosulfan sulfate	Not Detected	26		1.0
72-20-8	Endrin	Not Detected	26		1.0
7421-93-4	Endrin aldehyde	Not Detected	26		1.0
53494-70-5	Endrin ketone	Not Detected	26		1.0
58-89-9	g-BHC (Lindane)	Not Detected	26		1.0
5103-74-2	g-Chlordane	Not Detected	26		1.0
76-44-8	Heptachlor	Not Detected	26		1.0
1024-57-3	Heptachlor epoxide	Not Detected	26		1.0
87-82-1	Hexabromobenzene	Not Detected	130		1.0
72-43-5	Methoxychlor	Not Detected	66		1.0
2385-85-5	Mirex	Not Detected	66		1.0
59080-40-9	PBB (BP-6)	Not Detected	330		1.0
8001-35-2	Toxaphene	Not Detected	220		1.0

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73286 SD-03

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	77.6			
SURROGATE	#2,4,6-Tribromophenol#	73.0			
SURROGATE	#2-Fluorophenol#	49.2			
SURROGATE	#Nitrobenzene - D5#	53.9			
SURROGATE	#Phenol - D6#	50.6			
SURROGATE	#p-Terphenyl-d14#	82.6			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	530		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	870		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	870		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	870		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	870		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	4500	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	660		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	660		2.0
91-58-7	2-Chloronaphthalene	Not Detected	530		2.0
95-57-8	2-Chlorophenol	Not Detected	870		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	4500	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	660		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	870		2.0
88-74-4	2-Nitroaniline	Not Detected	1300		2.0
88-75-5	2-Nitrophenol	Not Detected	870		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	1700		2.0
99-09-2	3-Nitroaniline	Not Detected	1300		2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	530		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	530		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	260		2.0
100-01-6	4-Nitroaniline	Not Detected	1300		2.0
100-02-7	4-Nitrophenol	Not Detected	4500	Z	2.0
83-32-9	Acenaphthene	Not Detected	260		2.0
208-96-8	Acenaphthylene	Not Detected	260		2.0
120-12-7	Anthracene	Not Detected	260		2.0
103-33-3	Azobenzene	Not Detected	530		2.0
56-55-3	Benzo[a]anthracene	Not Detected	260		2.0
50-32-8	Benzo[a]pyrene	Not Detected	530		2.0
205-99-2	Benzo[b]fluoranthene	Not Detected	530		2.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	530	5	2.0
207-08-9	Benzo[k]fluoranthene	Not Detected	530		2.0
100-51-6	Benzyl Alcohol	Not Detected	6600		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	530		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	260		2.0

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73286 SD-03

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	260		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	660		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	660		2.0
86-74-8	Carbazole	Not Detected	660		2.0
218-01-9	Chrysene	Not Detected	260		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	530	5	2.0
132-64-9	Dibenzofuran	Not Detected	660		2.0
84-66-2	Diethylphthalate	Not Detected	660		2.0
131-11-3	Dimethyl phthalate	Not Detected	660		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	660		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	660		2.0
206-44-0	Fluoranthene	Not Detected	260		2.0
86-73-7	Fluorene	Not Detected	260		2.0
118-74-1	Hexachlorobenzene	Not Detected	530		2.0
87-68-3	Hexachlorobutadiene	Not Detected	260	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	2600	Z	2.0
67-72-1	Hexachloroethane	Not Detected	260		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	530	5	2.0
78-59-1	Isophorone	Not Detected	260		2.0
91-20-3	Naphthalene	Not Detected	260		2.0
98-95-3	Nitrobenzene	Not Detected	530		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	660		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	530		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	530		2.0
87-86-5	Pentachlorophenol	Not Detected	4500	Z=800	2.0
85-01-8	Phenanthrene	Not Detected	260		2.0
108-95-2	Phenol	Not Detected	870		2.0
129-00-0	Pyrene	Not Detected	260		2.0

Sample was originally extracted within USEPA holding time. Due to instrument failure, sample was re-extracted outside USEPA maximum allowable hold time. Data is estimated.
RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	11.02			
SURROGATE	#Bromofluorobenzene#	128			

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

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mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73286 SD-03

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Dibromofluoromethane#	148			
SURROGATE	#Toluene-d8#	137			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	82		50
71-55-6	1,1,1-Trichloroethane	Not Detected	82		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	82		50
79-00-5	1,1,2-Trichloroethane	Not Detected	82		50
75-34-3	1,1-Dichloroethane	Not Detected	82		50
75-35-4	1,1-Dichloroethylene	Not Detected	82		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	410		50
96-18-4	1,2,3-Trichloropropane	Not Detected	82		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	82		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	410		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	82		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	410		50
106-93-4	1,2-Dibromoethane	Not Detected	82	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	82		50
107-06-2	1,2-Dichloroethane	Not Detected	82		50
78-87-5	1,2-Dichloropropane	Not Detected	82		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	82		50
541-73-1	1,3-Dichlorobenzene	Not Detected	82		50
106-46-7	1,4-Dichlorobenzene	Not Detected	82		50
78-93-3	2-Butanone (MEK)	Not Detected	410		50
591-78-6	2-Hexanone	Not Detected	410		50
91-57-6	2-Methylnaphthalene	Not Detected	410	X-7	50
67-64-1	2-Propanone (acetone)	Not Detected	1600	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	410		50
107-13-1	Acrylonitrile	Not Detected	410	Z	50
71-43-2	Benzene	Not Detected	82		50
108-86-1	Bromobenzene	Not Detected	82		50
74-97-5	Bromochloromethane	Not Detected	82		50
75-27-4	Bromodichloromethane	Not Detected	82		50
75-25-2	Bromoform	Not Detected	82		50
74-83-9	Bromomethane	Not Detected	330		50
75-15-0	Carbon disulfide	Not Detected	82		50
56-23-5	Carbon tetrachloride	Not Detected	82		50
108-90-7	Chlorobenzene	Not Detected	82		50
75-00-3	Chloroethane	Not Detected	410		50
67-66-3	Chloroform	Not Detected	82		50
74-87-3	Chloromethane	Not Detected	410		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	82		50

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Sample Number: AB73286 SD-03

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	82		50
110-82-7	Cyclohexane	Not Detected	410		50
124-48-1	Dibromochloromethane	Not Detected	82		50
74-95-3	Dibromomethane	Not Detected	82		50
75-71-8	Dichlorodifluoromethane	Not Detected	410		50
60-29-7	Diethyl ether	Not Detected	330		50
108-20-3	Diisopropyl Ether	Not Detected	410		50
100-41-4	Ethylbenzene	Not Detected	82		50
637-92-3	Ethyltertiarybutylether	Not Detected	410		50
67-72-1	Hexachloroethane	Not Detected	410		50
98-82-8	Isopropylbenzene	Not Detected	82		50
108383,106423	m & p - Xylene	Not Detected	160		50
74-88-4	Methyl iodide	Not Detected	82		50
75-09-2	Methylene chloride	Not Detected	160		50
1634-04-4	Methyltertiarybutylether	Not Detected	82		50
91-20-3	Naphthalene	Not Detected	410	X	50
104-51-8	n-Butylbenzene	Not Detected	82		50
103-65-1	n-Propylbenzene	Not Detected	82		50
95-47-6	o-Xylene	Not Detected	82		50
99-87-6	p-Isopropyl toluene	Not Detected	82		50
135-98-8	sec-Butylbenzene	Not Detected	82		50
100-42-5	Styrene	Not Detected	82		50
98-06-6	tert-Butylbenzene	Not Detected	82		50
75-65-0	tertiary Butyl Alcohol	Not Detected	4100		50
994-05-8	tertiaryAmylmethylether	Not Detected	410		50
127-18-4	Tetrachloroethylene	Not Detected	82		50
109-99-9	Tetrahydrofuran	Not Detected	410		50
108-88-3	Toluene	Not Detected	82		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	82		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	82		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	410	Z	50
79-01-6	Trichloroethylene	Not Detected	82		50
75-69-4	Trichlorofluoromethane	Not Detected	82		50
75-01-4	Vinyl chloride	Not Detected	82	Z	50

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Sample Number: AB73286 SD-03

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	0.2	mg/Kg dry	0.1		05/17/2011	ASTM D 751	MB
	Cyanide Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	ND	mg/Kg dry	0.3		05/24/2011	6020	KS
7440-38-2	Arsenic - Sediment	2.3	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	13	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	ND	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-43-9	Cadmium - Sediment	ND	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	5.4	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	2.3	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	5.4	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/23/2011	3050	KS
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	6000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	5.3	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	140	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	ND	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	5.1	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	ND	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	8.4	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	25	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	75.9	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

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Sample Number: AB73287 SD-04

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/12/2011 **Analyst:** MF
Extraction Method: 3545 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	49.6			
SURROGATE	#Tetrachloro-m-xylene#	84.2			
72-54-8	4,4'-DDD	49	32		1.0
72-55-9	4,4'-DDE	56	32		1.0
50-29-3	4,4'-DDT	Not Detected	32		1.0
319-84-6	a-BHC	Not Detected	16		1.0
5103-71-9	a-Chlordane	Not Detected	32		1.0
309-00-2	Aldrin	Not Detected	32		1.0
12674-11-2	Aroclor 1016	Not Detected	160		1.0
11104-28-2	Aroclor 1221	Not Detected	160		1.0
11141-16-5	Aroclor 1232	Not Detected	160		1.0
53469-21-9	Aroclor 1242	Not Detected	160		1.0
12672-29-6	Aroclor 1248	Not Detected	160		1.0
11097-69-1	Aroclor 1254	Not Detected	160		1.0
11096-82-5	Aroclor 1260	Not Detected	160		1.0
37324-23-5	Aroclor 1262	Not Detected	160		1.0
11100-14-4	Aroclor 1268	Not Detected	160		1.0
319-85-7	b-BHC	Not Detected	32		1.0
319-86-8	d-BHC	Not Detected	32		1.0
60-57-1	Dieldrin	Not Detected	32		1.0
959-98-8	Endosulfan I	Not Detected	32		1.0
33213-65-9	Endosulfan II	Not Detected	32		1.0
1031-07-8	Endosulfan sulfate	Not Detected	32		1.0
72-20-8	Endrin	Not Detected	32		1.0
7421-93-4	Endrin aldehyde	Not Detected	32		1.0
53494-70-5	Endrin ketone	Not Detected	32		1.0
58-89-9	g-BHC (Lindane)	Not Detected	32		1.0
5103-74-2	g-Chlordane	Not Detected	32		1.0
76-44-8	Heptachlor	Not Detected	32		1.0
1024-57-3	Heptachlor epoxide	Not Detected	32		1.0
87-82-1	Hexabromobenzene	Not Detected	160		1.0
72-43-5	Methoxychlor	Not Detected	81		1.0
2385-85-5	Mirex	Not Detected	81		1.0
59080-40-9	PBB (BP-6)	Not Detected	410		1.0
8001-35-2	Toxaphene	Not Detected	280		1.0

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Sample Number: AB73287 SD-04

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	70.8			
SURROGATE	#2,4,6-Tribromophenol#	65.2			
SURROGATE	#2-Fluorophenol#	42.0			
SURROGATE	#Nitrobenzene - D5#	50.4			
SURROGATE	#Phenol - D6#	46.7			
SURROGATE	#p-Terphenyl-d14#	75.8			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	650		2.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	1100		2.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	1100		2.0
120-83-2	2,4-Dichlorophenol	Not Detected	1100		2.0
105-67-9	2,4-Dimethylphenol	Not Detected	1100		2.0
51-28-5	2,4-Dinitrophenol	Not Detected	5500	Z	2.0
121-14-2	2,4-Dinitrotoluene	Not Detected	810		2.0
606-20-2	2,6-Dinitrotoluene	Not Detected	810		2.0
91-58-7	2-Chloronaphthalene	Not Detected	650		2.0
95-57-8	2-Chlorophenol	Not Detected	1100		2.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	5500	Z	2.0
91-57-6	2-Methylnaphthalene	Not Detected	810		2.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	1100		2.0
88-74-4	2-Nitroaniline	Not Detected	1600		2.0
88-75-5	2-Nitrophenol	Not Detected	1100		2.0
108394,106445	3 & 4-Methylphenol	Not Detected	2100		2.0
99-09-2	3-Nitroaniline	Not Detected	1600		2.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	650		2.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	650		2.0
7005-72-3	4-Chlorodiphenylether	Not Detected	320		2.0
100-01-6	4-Nitroaniline	Not Detected	1600		2.0
100-02-7	4-Nitrophenol	Not Detected	5500	Z	2.0
83-32-9	Acenaphthene	Not Detected	320		2.0
208-96-8	Acenaphthylene	Not Detected	320		2.0
120-12-7	Anthracene	Not Detected	320		2.0
103-33-3	Azobenzene	Not Detected	650		2.0
56-55-3	Benzo[a]anthracene	Not Detected	320		2.0
50-32-8	Benzo[a]pyrene	Not Detected	650		2.0
205-99-2	Benzo[b]fluoranthene	Not Detected	650		2.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	650		2.0
207-08-9	Benzo[k]fluoranthene	Not Detected	650		2.0
100-51-6	Benzyl Alcohol	Not Detected	8100		2.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	650		2.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	320		2.0

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Sample Number: AB73287 SD-04

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/26/2011 **Analyst:** SMH
Extraction Method: 3545 **Extraction Date:** 05/16/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	320		2.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	810		2.0
85-68-7	Butyl benzyl phthalate	Not Detected	810		2.0
86-74-8	Carbazole	Not Detected	810		2.0
218-01-9	Chrysene	Not Detected	320		2.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	650	5	2.0
132-64-9	Dibenzofuran	Not Detected	810		2.0
84-66-2	Diethylphthalate	Not Detected	810		2.0
131-11-3	Dimethyl phthalate	Not Detected	810		2.0
84-74-2	Di-n-butyl phthalate	Not Detected	810		2.0
117-84-0	Di-n-octyl phthalate	Not Detected	810		2.0
206-44-0	Fluoranthene	Not Detected	320		2.0
86-73-7	Fluorene	Not Detected	320		2.0
118-74-1	Hexachlorobenzene	Not Detected	650		2.0
87-68-3	Hexachlorobutadiene	Not Detected	320	Z	2.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	3200	Z	2.0
67-72-1	Hexachloroethane	Not Detected	320		2.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	650	5	2.0
78-59-1	Isophorone	Not Detected	320		2.0
91-20-3	Naphthalene	Not Detected	320		2.0
98-95-3	Nitrobenzene	Not Detected	650		2.0
67-75-9	N-Nitrosodimethylamine	Not Detected	810		2.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	650		2.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	650		2.0
87-86-5	Pentachlorophenol	Not Detected	5500	Z=800	2.0
85-01-8	Phenanthrene	Not Detected	320		2.0
108-95-2	Phenol	Not Detected	1100		2.0
129-00-0	Pyrene	Not Detected	320		2.0

Sample was originally extracted within USEPA holding time. Due to instrument failure, sample was re-extracted outside USEPA maximum allowable hold time. Data is estimated.
RLs raised due to matrix.

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
	##Weight of sample(grams)	9.87			
SURROGATE	#Bromofluorobenzene#	160			

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

Laboratory Contacts
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Organic Unit Mgr: Carol Smith
Systems Mgmt Unit: George Krisztian

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TEL: (517) 335-9800
FAX: (517) 335-9600

Sample Number: AB73287 SD-04

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
SURROGATE	#Dibromofluoromethane#	186			
SURROGATE	#Toluene-d8#	174			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	110		50
71-55-6	1,1,1-Trichloroethane	Not Detected	110		50
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	110		50
79-00-5	1,1,2-Trichloroethane	Not Detected	110		50
75-34-3	1,1-Dichloroethane	Not Detected	110		50
75-35-4	1,1-Dichloroethylene	Not Detected	110		50
87-61-6	1,2,3-Trichlorobenzene	Not Detected	570		50
96-18-4	1,2,3-Trichloropropane	Not Detected	110		50
526-73-8	1,2,3-Trimethylbenzene	Not Detected	110		50
120-82-1	1,2,4-Trichlorobenzene	Not Detected	570		50
95-63-6	1,2,4-Trimethylbenzene	Not Detected	110		50
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	570		50
106-93-4	1,2-Dibromoethane	Not Detected	110	Z	50
95-50-1	1,2-Dichlorobenzene	Not Detected	110		50
107-06-2	1,2-Dichloroethane	Not Detected	110		50
78-87-5	1,2-Dichloropropane	Not Detected	110		50
108-67-8	1,3,5-Trimethylbenzene	Not Detected	110		50
541-73-1	1,3-Dichlorobenzene	Not Detected	110		50
106-46-7	1,4-Dichlorobenzene	Not Detected	110		50
78-93-3	2-Butanone (MEK)	Not Detected	570	5	50
591-78-6	2-Hexanone	Not Detected	570		50
91-57-6	2-Methylnaphthalene	Not Detected	570	X	50
67-64-1	2-Propanone (acetone)	Not Detected	2300	5	50
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	570		50
107-13-1	Acrylonitrile	Not Detected	570	Z	50
71-43-2	Benzene	Not Detected	110		50
108-86-1	Bromobenzene	Not Detected	110		50
74-97-5	Bromochloromethane	Not Detected	110		50
75-27-4	Bromodichloromethane	Not Detected	110		50
75-25-2	Bromoform	Not Detected	110		50
74-83-9	Bromomethane	Not Detected	450		50
75-15-0	Carbon disulfide	Not Detected	110		50
56-23-5	Carbon tetrachloride	Not Detected	110		50
108-90-7	Chlorobenzene	Not Detected	110		50
75-00-3	Chloroethane	Not Detected	570		50
67-66-3	Chloroform	Not Detected	110		50
74-87-3	Chloromethane	Not Detected	570		50
156-59-2	cis-1,2-Dichloroethylene	Not Detected	110		50

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Sample Number: AB73287 SD-04

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/07/2011 **Analyst:** SJR
Extraction Method: 5035 **Extraction Date:** 05/06/2011 **Qualifier:**

CAS #	Compound	Result ug/Kg dry	RL	Qualifier	Dilution Factor
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	110		50
110-82-7	Cyclohexane	Not Detected	570		50
124-48-1	Dibromochloromethane	Not Detected	110		50
74-95-3	Dibromomethane	Not Detected	110		50
75-71-8	Dichlorodifluoromethane	Not Detected	570		50
60-29-7	Diethyl ether	Not Detected	450		50
108-20-3	Diisopropyl Ether	Not Detected	570		50
100-41-4	Ethylbenzene	Not Detected	110		50
637-92-3	Ethyltertiarybutylether	Not Detected	570		50
67-72-1	Hexachloroethane	Not Detected	570	7	50
98-82-8	Isopropylbenzene	Not Detected	110		50
108383,106423	m & p - Xylene	Not Detected	230		50
74-88-4	Methyl iodide	Not Detected	110		50
75-09-2	Methylene chloride	Not Detected	230		50
1634-04-4	Methyltertiarybutylether	Not Detected	110		50
91-20-3	Naphthalene	Not Detected	570	X	50
104-51-8	n-Butylbenzene	Not Detected	110		50
103-65-1	n-Propylbenzene	Not Detected	110		50
95-47-6	o-Xylene	Not Detected	110		50
99-87-6	p-Isopropyl toluene	Not Detected	110		50
135-98-8	sec-Butylbenzene	Not Detected	110		50
100-42-5	Styrene	Not Detected	110		50
98-06-6	tert-Butylbenzene	Not Detected	110		50
75-65-0	tertiary Butyl Alcohol	Not Detected	5700		50
994-05-8	tertiaryAmylmethylether	Not Detected	570		50
127-18-4	Tetrachloroethylene	Not Detected	110		50
109-99-9	Tetrahydrofuran	Not Detected	570		50
108-88-3	Toluene	Not Detected	110		50
156-60-5	trans-1,2-Dichloroethylene	Not Detected	110		50
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	110		50
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	570	7Z	50
79-01-6	Trichloroethylene	Not Detected	110		50
75-69-4	Trichlorofluoromethane	Not Detected	110		50
75-01-4	Vinyl chloride	Not Detected	110	Z	50

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Sample Number: AB73287 SD-04

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
57-12-5	Cyanide - Sediment	0.2	mg/Kg dry	0.1		05/17/2011	ASTM D 751	MB
	Cyanide Extraction	Completed				05/10/2011	9013	MB
	Digest Mercury - Sediment	Completed				05/11/2011	7471	TS
7439-97-6	Mercury - Sediment	ND	mg/Kg dry	0.05		05/12/2011	7471	TS
7440-36-0	Antimony - Sediment	0.38	mg/Kg dry	0.3		05/24/2011	6020	KS
7440-38-2	Arsenic - Sediment	11	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-39-3	Barium - Sediment	55	mg/Kg dry	1		05/18/2011	6020	KS
7440-41-7	Beryllium - Sediment	0.36	mg/Kg dry	0.2		05/19/2011	6020	KS
7440-43-9	Cadmium - Sediment	0.30	mg/Kg dry	0.2		05/18/2011	6020	KS
7440-47-3	Chromium - Sediment	15	mg/Kg dry	2		05/18/2011	6020	KS
7440-48-4	Cobalt - Sediment	6.2	mg/Kg dry	.5		05/18/2011	6020	KS
7440-50-8	Copper - Sediment	16	mg/Kg dry	1		05/18/2011	6020	KS
	Digest Antimony - Sediment	Completed				05/23/2011	3050	KS
	Digest Metals - Sediment	Completed				05/17/2011	3050	WN
7439-89-6	Iron - Sediment	22000	mg/Kg dry	50	D	05/25/2011	6010	WN
7439-92-1	Lead - Sediment	23	mg/Kg dry	1		05/18/2011	6020	KS
7439-96-5	Manganese - Sediment	510	mg/Kg dry	1		05/18/2011	6020	KS
7439-98-7	Molybdenum - Sediment	ND	mg/Kg dry	1		05/18/2011	6020	KS
7440-02-0	Nickel - Sediment	15	mg/Kg dry	1		05/18/2011	6020	KS
7782-49-2	Selenium - Sediment	0.44	mg/Kg dry	0.2		05/19/2011	6020	KS
7440-22-4	Silver - Sediment	ND	mg/Kg dry	0.1		05/18/2011	6020	KS
7440-28-0	Thallium - Sediment	ND	mg/Kg dry	0.5		05/18/2011	6020	KS
7440-62-2	Vanadium - Sediment	18	mg/Kg dry	1		05/18/2011	6020	KS
7440-66-6	Zinc - Sediment	67	mg/Kg dry	1		05/18/2011	6020	KS
	% Total Solids	61.6	%	0.1		05/14/2011	2540B SM	KS
	Drying and Grinding - Sediment	COMPLETE				05/14/2011		KS
	Gel Permeation Cleanup-Pesticide/PCI	Completed				05/10/2011	3640	DT
	Gel Permeation Cleanup-SVOC Analy	Completed				05/11/2011	3640	DT

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Qualifier Code	Qualifier Description
1	Result(s) and RL(s) are estimated due to low surrogate recovery.
2	Result is estimated due to high surrogate recovery.
3	Result(s) and RL(s) are estimated due to low matrix spike recovery.
4	Result is estimated due to high matrix spike recovery.
5	Result and RL are estimated due to low continuing calibration standard criteria failure.
6	Result is estimated due to high continuing calibration standard criteria failure.
7	Result(s) and RL(s) are estimated due to poor precision.
8	Result(s) and RL(s) are estimated due to low recovery of batch QC.
9	Result outside QC acceptance criteria.
A	Value reported is the mean of two or more determinations.
C	Value calculated from other independent parameters.
D	Analyte value quantified from a dilution(s); reporting limit (RL) raised.
E	Result is estimated due to high recovery of batch QC.
F	Amenable cyanide was not analyzed due to low level of total cyanide.
G	Result and RL are estimated due to initial calibration standard criteria failure.
H	Recommended laboratory holding time was exceeded.
I	Dilution required due to matrix interference; reporting limit (RL) raised.
J	Analyte was positively identified. Value is an estimate.
JA	Result is estimated due to multiple Aroclors present.
JC	Result is estimated since confirmation analysis did not meet acceptance criteria
JD	Due to severe degradation, specific Aroclor identification is difficult and quantitation is estimated.
K	RL(s) raised due to matrix interferences.
KR	RL(s) raised due to low sample volume submitted.
KS	RL(s) raised due to low total solids.
KW	RL(s) raised due to light sample weight.
LB	Reported library search compounds are tentative identifications with estimated concentrations.
M	The level of the method preparation blank (MPB) is reported in the qualifier column.
N	Non-homogeneous sample made analysis of sample questionable.
O	Result and RL estimated due to analysis from an open vial.
P	Recommended sample collection/preservation technique not used; reported result(s) is an estimate.
Q	Quantity of sample insufficient to perform analyses requested.
R	Result confirmed by re-extraction and analysis.
S	Supernatant analyzed.
T	Reported value is less than the reporting limit (RL). Result is estimated.
V	Value not available due to dilution.
W	Reported value is less than the method detection limit (MDL).
X	Methods 8260 & 624 are used to analyze volatile organics that have boiling points below 200°C. 2-Methylnaphthalene & naphthalene have boiling points above 200°C and are better suited to analysis by methods 8270 or 625 as semivolatile organics.
PI	Possible interference may have affected the accuracy of the laboratory result
Z	Result reported below the RL to meet the TDL in RRD Op Memo 2 (10/22/04) multiplied by applicable dilution factor.

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Division: RD
Report to: TERESA DUCSAY
MDEQ-RD-LANSING
CONSTITUTION HALL
525 W. ALLEGAN, LANSING, MI 48909

Total: $5,621.00

Lab Work Order # : 10400189
Work Site ID : LB041003
Site Name : TREE FARM
Received: 04/28/2011
Reported: 06/03/2011
Collected By: TERESA DUCASY

Samples Received :

No:	Sample ID	Sample Description	Matrix:	Collection Date
01	AB73288	SW-01	WATER	04/27/2011
02	AB73289	SW-02	WATER	04/27/2011
03	AB73290	SW-02-DUP	WATER	04/27/2011
04	AB73291	SW-03	WATER	04/27/2011
05	AB73292	SW-03-MS	WATER	04/27/2011
06	AB73293	SW-03-MSD	WATER	04/27/2011
07	AB73294	SW-04	WATER	04/26/2011

I certify that the analysis performed by the MDEQ Environmental Laboratory are accurate and that the laboratory tests were conducted by methods approved by the U.S. Environmental Protection Agency and other appropriate regulatory agencies.

George L. Krisztian,
Acting Laboratory Director

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Sample Number: AB73288 SW-01

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/05/2011 **Analyst:** MF
Extraction Method: 3510 **Extraction Date:** 05/03/2011 **Qualifier:** **Volume:** 950

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	48.1			
SURROGATE	#Tetrachloro-m-xylene#	40.1			
72-54-8	4,4'-DDD	Not Detected	0.02		1.0
72-55-9	4,4'-DDE	Not Detected	0.02		1.0
50-29-3	4,4'-DDT	Not Detected	0.02		1.0
319-84-6	a-BHC	Not Detected	0.02		1.0
5103-71-9	a-Chlordane	Not Detected	0.01		1.0
309-00-2	Aldrin	Not Detected	0.01		1.0
12674-11-2	Aroclor 1016	Not Detected	0.11		1.0
11104-28-2	Aroclor 1221	Not Detected	0.11		1.0
11141-16-5	Aroclor 1232	Not Detected	0.11		1.0
53469-21-9	Aroclor 1242	Not Detected	0.11		1.0
12672-29-6	Aroclor 1248	Not Detected	0.11		1.0
11097-69-1	Aroclor 1254	Not Detected	0.11		1.0
11096-82-5	Aroclor 1260	Not Detected	0.11		1.0
37324-23-5	Aroclor 1262	Not Detected	0.11		1.0
11100-14-4	Aroclor 1268	Not Detected	0.11		1.0
319-85-7	b-BHC	Not Detected	0.02		1.0
319-86-8	d-BHC	Not Detected	0.02		1.0
60-57-1	Dieldrin	Not Detected	0.02		1.0
959-98-8	Endosulfan I	Not Detected	0.02		1.0
33213-65-9	Endosulfan II	Not Detected	0.03		1.0
1031-07-8	Endosulfan sulfate	Not Detected	0.05		1.0
72-20-8	Endrin	Not Detected	0.02		1.0
7421-93-4	Endrin aldehyde	Not Detected	0.02		1.0
53494-70-5	Endrin ketone	Not Detected	0.02		1.0
58-89-9	g-BHC (Lindane)	Not Detected	0.02		1.0
5103-74-2	g-Chlordane	Not Detected	0.01		1.0
76-44-8	Heptachlor	Not Detected	0.01		1.0
1024-57-3	Heptachlor epoxide	Not Detected	0.01		1.0
87-82-1	Hexabromobenzene	Not Detected	0.02		1.0
72-43-5	Methoxychlor	Not Detected	0.05		1.0
2385-85-5	Mirex	Not Detected	0.02		1.0
59080-40-9	PBB (BP-6)	Not Detected	0.05		1.0
8001-35-2	Toxaphene	Not Detected	0.11		1.0

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Sample Number: AB73288 SW-01

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Bromofluorobenzene#	99.4			
SURROGATE	#Dibromofluoromethane#	95.1			
SURROGATE	#Toluene-d8#	101			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	1.0		1.0
71-55-6	1,1,1-Trichloroethane	Not Detected	1.0		1.0
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	1.0		1.0
79-00-5	1,1,2-Trichloroethane	Not Detected	1.0		1.0
75-34-3	1,1-Dichloroethane	Not Detected	1.0		1.0
75-35-4	1,1-Dichloroethylene	Not Detected	1.0		1.0
87-61-6	1,2,3-Trichlorobenzene	Not Detected	5.0		1.0
96-18-4	1,2,3-Trichloropropane	Not Detected	1.0		1.0
526-73-8	1,2,3-Trimethylbenzene	Not Detected	1.0		1.0
120-82-1	1,2,4-Trichlorobenzene	Not Detected	5.0		1.0
95-63-6	1,2,4-Trimethylbenzene	Not Detected	1.0		1.0
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	5.0		1.0
106-93-4	1,2-Dibromoethane	Not Detected	1.0		1.0
95-50-1	1,2-Dichlorobenzene	Not Detected	1.0		1.0
107-06-2	1,2-Dichloroethane	Not Detected	1.0		1.0
78-87-5	1,2-Dichloropropane	Not Detected	1.0		1.0
108-67-8	1,3,5-Trimethylbenzene	Not Detected	1.0		1.0
541-73-1	1,3-Dichlorobenzene	Not Detected	1.0		1.0
106-46-7	1,4-Dichlorobenzene	Not Detected	1.0		1.0
78-93-3	2-Butanone (MEK)	Not Detected	5.0		1.0
591-78-6	2-Hexanone	Not Detected	5.0		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.0	X	1.0
67-64-1	2-Propanone (acetone)	Not Detected	20		1.0
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	5.0		1.0
107-13-1	Acrylonitrile	Not Detected	5.0	Z	1.0
71-43-2	Benzene	Not Detected	1.0		1.0
108-86-1	Bromobenzene	Not Detected	1.0		1.0
74-97-5	Bromochloromethane	Not Detected	1.0		1.0
75-27-4	Bromodichloromethane	Not Detected	1.0		1.0
75-25-2	Bromoform	Not Detected	1.0		1.0
74-83-9	Bromomethane	Not Detected	5.0		1.0
75-15-0	Carbon disulfide	Not Detected	1.0		1.0
56-23-5	Carbon tetrachloride	Not Detected	1.0		1.0
108-90-7	Chlorobenzene	Not Detected	1.0		1.0
75-00-3	Chloroethane	Not Detected	5.0		1.0
67-66-3	Chloroform	Not Detected	1.0		1.0
74-87-3	Chloromethane	Not Detected	5.0		1.0

CAS# : Chemical Abstract Service Registry Number
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ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73288 SW-01

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
156-59-2	cis-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-82-7	Cyclohexane	Not Detected	5.0		1.0
124-48-1	Dibromochloromethane	Not Detected	1.0		1.0
74-95-3	Dibromomethane	Not Detected	1.0		1.0
75-71-8	Dichlorodifluoromethane	Not Detected	5.0		1.0
60-29-7	Diethyl ether	Not Detected	5.0		1.0
108-20-3	Diisopropyl Ether	Not Detected	5.0		1.0
100-41-4	Ethylbenzene	Not Detected	1.0		1.0
637-92-3	Ethyltertiarybutylether	Not Detected	5.0		1.0
67-72-1	Hexachloroethane	Not Detected	5.0		1.0
98-82-8	Isopropylbenzene	Not Detected	1.0		1.0
108383 106423	m & p - Xylene	Not Detected	2.0		1.0
74-88-4	Methyl iodide	Not Detected	1.0		1.0
75-09-2	Methylene chloride	Not Detected	5.0		1.0
1634-04-4	Methyltertiarybutylether	Not Detected	1.0		1.0
91-20-3	Naphthalene	Not Detected	5.0	X	1.0
104-51-8	n-Butylbenzene	Not Detected	1.0		1.0
103-65-1	n-Propylbenzene	Not Detected	1.0		1.0
95-47-6	o-Xylene	Not Detected	1.0		1.0
99-87-6	p-Isopropyl toluene	Not Detected	1.0		1.0
135-98-8	sec-Butylbenzene	Not Detected	1.0		1.0
100-42-5	Styrene	Not Detected	1.0		1.0
98-06-6	tert-Butylbenzene	Not Detected	1.0		1.0
75-65-0	tertiary Butyl Alcohol	Not Detected	50		1.0
994-05-8	tertiaryAmylmethylether	Not Detected	5.0		1.0
127-18-4	Tetrachloroethylene	Not Detected	1.0		1.0
109-99-9	Tetrahydrofuran	Not Detected	5.0		1.0
108-88-3	Toluene	Not Detected	1.0		1.0
156-60-5	trans-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	5.0	Z	1.0
79-01-6	Trichloroethylene	Not Detected	1.0		1.0
75-69-4	Trichlorofluoromethane	Not Detected	1.0		1.0
75-01-4	Vinyl chloride	Not Detected	1.0		1.0

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Sample Number: AB73288 SW-01

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 940

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	54.2			
SURROGATE	#2,4,6-Tribromophenol#	77.0			
SURROGATE	#2-Fluorophenol#	21.4			
SURROGATE	#Nitrobenzene - D5#	40.6			
SURROGATE	#Phenol - D6#	13.3			
SURROGATE	#p-Terphenyl-D14#	82.5			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	2.1		1.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	5.3		1.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	4.3		1.0
120-83-2	2,4-Dichlorophenol	Not Detected	11		1.0
105-67-9	2,4-Dimethylphenol	Not Detected	5.3		1.0
51-28-5	2,4-Dinitrophenol	Not Detected	27		1.0
121-14-2	2,4-Dinitrotoluene	Not Detected	5.3		1.0
606-20-2	2,6-Dinitrotoluene	Not Detected	5.3		1.0
95-51-2	2-Chloroaniline	Not Detected	5.3		1.0
91-58-7	2-Chloronaphthalene	Not Detected	2.1		1.0
95-57-8	2-Chlorophenol	Not Detected	11		1.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	21		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.3		1.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	1.1		1.0
88-74-4	2-Nitroaniline	Not Detected	21		1.0
88-75-5	2-Nitrophenol	Not Detected	5.3		1.0
108394,106445	3 & 4-Methylphenol	Not Detected	21		1.0
99-09-2	3-Nitroaniline	Not Detected	21		1.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	2.1		1.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	5.3		1.0
106-47-8	4-Chloroaniline	Not Detected	11		1.0
7005-72-3	4-Chlorodiphenylether	Not Detected	1.1		1.0
100-01-6	4-Nitroaniline	Not Detected	21		1.0
100-02-7	4-Nitrophenol	Not Detected	27		1.0
83-32-9	Acenaphthene	Not Detected	1.1		1.0
208-96-8	Acenaphthylene	Not Detected	1.1		1.0
62-53-3	Aniline	Not Detected	4.3		1.0
120-12-7	Anthracene	Not Detected	1.1		1.0
103-33-3	Azobenzene	Not Detected	2.1	5	1.0
56-55-3	Benzo[a]anthracene	Not Detected	1.1		1.0
50-32-8	Benzo[a]pyrene	Not Detected	1.1		1.0
205-99-2	Benzo[b]fluoranthene	Not Detected	1.1		1.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	1.1		1.0
207-08-9	Benzo[k]fluoranthene	Not Detected	1.1		1.0

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Sample Number: AB73288 SW-01

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 940

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
100-51-6	Benzyl Alcohol	Not Detected	53		1.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	2.1		1.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	1.1		1.0
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	1.1	5	1.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	5.3		1.0
85-68-7	Butyl benzyl phthalate	Not Detected	5.3		1.0
86-74-8	Carbazole	Not Detected	5.3		1.0
218-01-9	Chrysene	Not Detected	1.1		1.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	2.1		1.0
132-64-9	Dibenzofuran	Not Detected	4.3		1.0
84-66-2	Diethylphthalate	Not Detected	5.3		1.0
131-11-3	Dimethyl phthalate	Not Detected	5.3		1.0
84-74-2	Di-n-butyl phthalate	Not Detected	5.3		1.0
117-84-0	Di-n-octyl phthalate	Not Detected	5.3		1.0
206-44-0	Fluoranthene	Not Detected	1.1		1.0
86-73-7	Fluorene	Not Detected	1.1		1.0
118-74-1	Hexachlorobenzene	Not Detected	1.1		1.0
87-68-3	Hexachlorobutadiene	Not Detected	1.1		1.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	11	Z	1.0
67-72-1	Hexachloroethane	Not Detected	1.1		1.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	2.1		1.0
78-59-1	Isophorone	Not Detected	1.1		1.0
121-69-7	N,N-dimethylaniline	Not Detected	5.3		1.0
91-20-3	Naphthalene	Not Detected	1.1		1.0
98-95-3	Nitrobenzene	Not Detected	2.1		1.0
100-61-8	N-methylaniline	Not Detected	1.1		1.0
67-75-9	N-Nitrosodimethylamine	Not Detected	5.3	5	1.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	2.1	5	1.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	2.1		1.0
87-86-5	Pentachlorophenol	Not Detected	21		1.0
85-01-8	Phenanthrene	Not Detected	1.1		1.0
108-95-2	Phenol	Not Detected	5.3		1.0
129-00-0	Pyrene	Not Detected	1.1		1.0
110-86-1	Pyridine	Not Detected	21	5	1.0
632-22-4	Tetramethylurea	Not Detected	1.1	5	1.0

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Sample Number: AB73288 SW-01

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
CN_TOTAL	Cyanide	ND	mg/L	0.005		05/05/2011	ASTM D 751	MB
	Digestion Metals Water	Completed				05/03/2011	3010/200	WN
	Digestion Mercury Water	Completed				05/05/2011	7470/245.1	TS
7439-97-6	Mercury - Total	ND	µg/L	0.2		05/06/2011	7470/245.1	TS
7440-36-0	Antimony - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-38-2	Arsenic - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-39-3	Barium - Total	32	µg/L	5		05/05/2011	6020/200.8	KS
7440-41-7	Beryllium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-43-9	Cadmium - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-47-3	Chromium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-48-4	Cobalt - Total	ND	µg/L	15		05/05/2011	6020/200.8	KS
7440-50-8	Copper - Total	2.9	µg/L	1		05/05/2011	6020/200.8	KS
7439-92-1	Lead - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7439-96-5	Manganese - Total	42	µg/L	5		05/05/2011	6020/200.8	KS
7439-98-7	Molybdenum - Total	ND	µg/L	25		05/05/2011	6020/200.8	KS
7440-02-0	Nickel - Total	2.1	µg/L	2.0		05/05/2011	6020/200.8	KS
7782-49-2	Selenium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-22-4	Silver - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-28-0	Thallium - Total	ND	µg/L	2		05/05/2011	6020/200.8	KS
7440-62-2	Vanadium - Total	ND	µg/L	2		05/05/2011	6020/200.8	KS
7440-66-6	Zinc - Total	ND	µg/L	10		05/05/2011	6020/200.8	KS
7439-89-6	Iron - Total	386	µg/L	20		05/11/2011	6010/200.7	WN
	Florisil Cleanup	Completed				05/03/2011	3620	DT
	Mercury Cleanup	Completed				05/04/2011	3600	ME

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ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73289 SW-02

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/05/2011 **Analyst:** MF
Extraction Method: 3510 **Extraction Date:** 05/03/2011 **Qualifier:** **Volume:** 980

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	53.9			
SURROGATE	#Tetrachloro-m-xylene#	45.2			
72-54-8	4,4'-DDD	Not Detected	0.02		1.0
72-55-9	4,4'-DDE	Not Detected	0.02		1.0
50-29-3	4,4'-DDT	Not Detected	0.02		1.0
319-84-6	a-BHC	Not Detected	0.02		1.0
5103-71-9	a-Chlordane	Not Detected	0.01		1.0
309-00-2	Aldrin	Not Detected	0.01		1.0
12674-11-2	Aroclor 1016	Not Detected	0.10		1.0
11104-28-2	Aroclor 1221	Not Detected	0.10		1.0
11141-16-5	Aroclor 1232	Not Detected	0.10		1.0
53469-21-9	Aroclor 1242	Not Detected	0.10		1.0
12672-29-6	Aroclor 1248	Not Detected	0.10		1.0
11097-69-1	Aroclor 1254	Not Detected	0.10		1.0
11096-82-5	Aroclor 1260	Not Detected	0.10		1.0
37324-23-5	Aroclor 1262	Not Detected	0.10		1.0
11100-14-4	Aroclor 1268	Not Detected	0.10		1.0
319-85-7	b-BHC	Not Detected	0.02		1.0
319-86-8	d-BHC	Not Detected	0.02		1.0
60-57-1	Dieldrin	Not Detected	0.02		1.0
959-98-8	Endosulfan I	Not Detected	0.02		1.0
33213-65-9	Endosulfan II	Not Detected	0.03		1.0
1031-07-8	Endosulfan sulfate	Not Detected	0.05		1.0
72-20-8	Endrin	Not Detected	0.02		1.0
7421-93-4	Endrin aldehyde	Not Detected	0.02		1.0
53494-70-5	Endrin ketone	Not Detected	0.02		1.0
58-89-9	g-BHC (Lindane)	Not Detected	0.02		1.0
5103-74-2	g-Chlordane	Not Detected	0.01		1.0
76-44-8	Heptachlor	Not Detected	0.01		1.0
1024-57-3	Heptachlor epoxide	Not Detected	0.01		1.0
87-82-1	Hexabromobenzene	Not Detected	0.02		1.0
72-43-5	Methoxychlor	Not Detected	0.05		1.0
2385-85-5	Mirex	Not Detected	0.02		1.0
59080-40-9	PBB (BP-6)	Not Detected	0.05		1.0
8001-35-2	Toxaphene	Not Detected	0.10		1.0

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Sample Number: AB73289 SW-02

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Bromofluorobenzene#	94.3			
SURROGATE	#Dibromofluoromethane#	99.7			
SURROGATE	#Toluene-d8#	100			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	1.0		1.0
71-55-6	1,1,1-Trichloroethane	Not Detected	1.0		1.0
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	1.0		1.0
79-00-5	1,1,2-Trichloroethane	Not Detected	1.0		1.0
75-34-3	1,1-Dichloroethane	Not Detected	1.0		1.0
75-35-4	1,1-Dichloroethylene	Not Detected	1.0		1.0
87-61-6	1,2,3-Trichlorobenzene	Not Detected	5.0		1.0
96-18-4	1,2,3-Trichloropropane	Not Detected	1.0		1.0
526-73-8	1,2,3-Trimethylbenzene	Not Detected	1.0		1.0
120-82-1	1,2,4-Trichlorobenzene	Not Detected	5.0		1.0
95-63-6	1,2,4-Trimethylbenzene	Not Detected	1.0		1.0
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	5.0		1.0
106-93-4	1,2-Dibromoethane	Not Detected	1.0		1.0
95-50-1	1,2-Dichlorobenzene	Not Detected	1.0		1.0
107-06-2	1,2-Dichloroethane	Not Detected	1.0		1.0
78-87-5	1,2-Dichloropropane	Not Detected	1.0		1.0
108-67-8	1,3,5-Trimethylbenzene	Not Detected	1.0		1.0
541-73-1	1,3-Dichlorobenzene	Not Detected	1.0		1.0
106-46-7	1,4-Dichlorobenzene	Not Detected	1.0		1.0
78-93-3	2-Butanone (MEK)	Not Detected	5.0		1.0
591-78-6	2-Hexanone	Not Detected	5.0		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.0	X	1.0
67-64-1	2-Propanone (acetone)	Not Detected	20		1.0
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	5.0		1.0
107-13-1	Acrylonitrile	Not Detected	5.0	Z	1.0
71-43-2	Benzene	Not Detected	1.0		1.0
108-86-1	Bromobenzene	Not Detected	1.0		1.0
74-97-5	Bromochloromethane	Not Detected	1.0		1.0
75-27-4	Bromodichloromethane	Not Detected	1.0		1.0
75-25-2	Bromoform	Not Detected	1.0		1.0
74-83-9	Bromomethane	Not Detected	5.0		1.0
75-15-0	Carbon disulfide	Not Detected	1.0		1.0
56-23-5	Carbon tetrachloride	Not Detected	1.0		1.0
108-90-7	Chlorobenzene	Not Detected	1.0		1.0
75-00-3	Chloroethane	Not Detected	5.0		1.0
67-66-3	Chloroform	Not Detected	1.0		1.0
74-87-3	Chloromethane	Not Detected	5.0		1.0

CAS# : Chemical Abstract Service Registry Number
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Sample Number: AB73289 SW-02

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
156-59-2	cis-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-82-7	Cyclohexane	Not Detected	5.0		1.0
124-48-1	Dibromochloromethane	Not Detected	1.0		1.0
74-95-3	Dibromomethane	Not Detected	1.0		1.0
75-71-8	Dichlorodifluoromethane	Not Detected	5.0		1.0
60-29-7	Diethyl ether	Not Detected	5.0		1.0
108-20-3	Diisopropyl Ether	Not Detected	5.0		1.0
100-41-4	Ethylbenzene	Not Detected	1.0		1.0
637-92-3	Ethyltertiarybutylether	Not Detected	5.0		1.0
67-72-1	Hexachloroethane	Not Detected	5.0		1.0
98-82-8	Isopropylbenzene	Not Detected	1.0		1.0
108383,106423	m & p - Xylene	Not Detected	2.0		1.0
74-88-4	Methyl iodide	Not Detected	1.0		1.0
75-09-2	Methylene chloride	Not Detected	5.0		1.0
1634-04-4	Methyltertiarybutylether	Not Detected	1.0		1.0
91-20-3	Naphthalene	Not Detected	5.0	X	1.0
104-51-8	n-Butylbenzene	Not Detected	1.0		1.0
103-65-1	n-Propylbenzene	Not Detected	1.0		1.0
95-47-6	o-Xylene	Not Detected	1.0		1.0
99-87-6	p-Isopropyl toluene	Not Detected	1.0		1.0
135-98-8	sec-Butylbenzene	Not Detected	1.0		1.0
100-42-5	Styrene	Not Detected	1.0		1.0
98-06-6	tert-Butylbenzene	Not Detected	1.0		1.0
75-65-0	tertiary Butyl Alcohol	Not Detected	50		1.0
994-05-8	tertiary Amylmethylether	Not Detected	5.0		1.0
127-18-4	Tetrachloroethylene	Not Detected	1.0		1.0
109-99-9	Tetrahydrofuran	Not Detected	5.0		1.0
108-88-3	Toluene	Not Detected	1.0		1.0
156-60-5	trans-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	5.0	Z	1.0
79-01-6	Trichloroethylene	Not Detected	1.0		1.0
75-69-4	Trichlorofluoromethane	Not Detected	1.0		1.0
75-01-4	Vinyl chloride	Not Detected	1.0		1.0

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Sample Number: AB73289 SW-02

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 970

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	53.4			
SURROGATE	#2,4,6-Tribromophenol#	81.9			
SURROGATE	#2-Fluorophenol#	20.6			
SURROGATE	#Nitrobenzene - D5#	40.0			
SURROGATE	#Phenol - D6#	12.8			
SURROGATE	#p-Terphenyl-D14#	83.6			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	2.1		1.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	5.2		1.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	4.1		1.0
120-83-2	2,4-Dichlorophenol	Not Detected	10		1.0
105-67-9	2,4-Dimethylphenol	Not Detected	5.2		1.0
51-28-5	2,4-Dinitrophenol	Not Detected	26		1.0
121-14-2	2,4-Dinitrotoluene	Not Detected	5.2		1.0
606-20-2	2,6-Dinitrotoluene	Not Detected	5.2		1.0
95-51-2	2-Chloroaniline	Not Detected	5.2		1.0
91-58-7	2-Chloronaphthalene	Not Detected	2.1		1.0
95-57-8	2-Chlorophenol	Not Detected	10		1.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	21		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.2		1.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	10		1.0
88-74-4	2-Nitroaniline	Not Detected	21		1.0
88-75-5	2-Nitrophenol	Not Detected	5.2		1.0
108394,106445	3 & 4-Methylphenol	Not Detected	21		1.0
99-09-2	3-Nitroaniline	Not Detected	21		1.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	2.1		1.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	5.2		1.0
106-47-8	4-Chloroaniline	Not Detected	10		1.0
7005-72-3	4-Chlorodiphenylether	Not Detected	1.0		1.0
100-01-6	4-Nitroaniline	Not Detected	21		1.0
100-02-7	4-Nitrophenol	Not Detected	26		1.0
83-32-9	Acenaphthene	Not Detected	1.0		1.0
208-96-8	Acenaphthylene	Not Detected	1.0		1.0
62-53-3	Aniline	Not Detected	4.1		1.0
120-12-7	Anthracene	Not Detected	1.0		1.0
103-33-3	Azobenzene	Not Detected	2.1	5	1.0
56-55-3	Benzo[a]anthracene	Not Detected	1.0		1.0
50-32-8	Benzo[a]pyrene	Not Detected	1.0		1.0
205-99-2	Benzo[b]fluoranthene	Not Detected	1.0		1.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	1.0		1.0
207-08-9	Benzo[k]fluoranthene	Not Detected	1.0		1.0

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Sample Number: AB73289 SW-02

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 970

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
100-51-6	Benzyl Alcohol	Not Detected	52		1.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	2.1		1.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	1.0		1.0
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	1.0	5	1.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	5.2		1.0
85-68-7	Butyl benzyl phthalate	Not Detected	5.2		1.0
86-74-8	Carbazole	Not Detected	5.2		1.0
218-01-9	Chrysene	Not Detected	1.0		1.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	2.1		1.0
132-64-9	Dibenzofuran	Not Detected	4.1		1.0
84-66-2	Diethylphthalate	Not Detected	5.2		1.0
131-11-3	Dimethyl phthalate	Not Detected	5.2		1.0
84-74-2	Di-n-butyl phthalate	Not Detected	5.2		1.0
117-84-0	Di-n-octyl phthalate	Not Detected	5.2		1.0
206-44-0	Fluoranthene	Not Detected	1.0		1.0
86-73-7	Fluorene	Not Detected	1.0		1.0
118-74-1	Hexachlorobenzene	Not Detected	1.0		1.0
87-68-3	Hexachlorobutadiene	Not Detected	1.0		1.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	10	Z	1.0
67-72-1	Hexachloroethane	Not Detected	1.0		1.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	2.1		1.0
78-59-1	Isophorone	Not Detected	1.0		1.0
121-69-7	N,N-dimethylaniline	Not Detected	5.2		1.0
91-20-3	Naphthalene	Not Detected	1.0		1.0
98-95-3	Nitrobenzene	Not Detected	2.1		1.0
100-61-8	N-methylaniline	Not Detected	1.0		1.0
67-75-9	N-Nitrosodimethylamine	Not Detected	5.2	5	1.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	2.1	5	1.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	2.1		1.0
87-86-5	Pentachlorophenol	Not Detected	21		1.0
85-01-8	Phenanthrene	Not Detected	1.0		1.0
108-95-2	Phenol	Not Detected	5.2		1.0
129-00-0	Pyrene	Not Detected	1.0		1.0
110-86-1	Pyridine	Not Detected	21	5	1.0
632-22-4	Tetramethylurea	Not Detected	1.0	5	1.0

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Sample Number: AB73289 SW-02

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
CN_TOTAL	Cyanide	ND	mg/L	0.005		05/05/2011	ASTM D 751	MB
	Digestion Metals Water	Completed				05/03/2011	3010/200	WN
	Digestion Mercury Water	Completed				05/05/2011	7470/245.1	TS
7439-97-6	Mercury - Total	ND	µg/L	0.2		05/06/2011	7470/245.1	TS
7440-36-0	Antimony - Total	1.0	µg/L	1		05/05/2011	6020/200.8	KS
7440-38-2	Arsenic - Total	1.7	µg/L	1		05/05/2011	6020/200.8	KS
7440-39-3	Barium - Total	84	µg/L	5		05/05/2011	6020/200.8	KS
7440-41-7	Beryllium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-43-9	Cadmium - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-47-3	Chromium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-48-4	Cobalt - Total	ND	µg/L	15		05/05/2011	6020/200.8	KS
7440-50-8	Copper - Total	6.0	µg/L	1		05/05/2011	6020/200.8	KS
7439-92-1	Lead - Total	1.7	µg/L	1		05/05/2011	6020/200.8	KS
7439-96-5	Manganese - Total	200	µg/L	5		05/05/2011	6020/200.8	KS
7439-98-7	Molybdenum - Total	ND	µg/L	25		05/05/2011	6020/200.8	KS
7440-02-0	Nickel - Total	4.7	µg/L	2.0		05/05/2011	6020/200.8	KS
7782-49-2	Selenium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-22-4	Silver - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-28-0	Thallium - Total	ND	µg/L	2		05/05/2011	6020/200.8	KS
7440-62-2	Vanadium - Total	2.6	µg/L	2		05/05/2011	6020/200.8	KS
7440-66-6	Zinc - Total	45	µg/L	10		05/05/2011	6020/200.8	KS
7439-89-6	Iron - Total	2600	µg/L	20		05/11/2011	6010/200.7	WN
	Florisil Cleanup	Completed				05/03/2011	3620	DT
	Mercury Cleanup	Completed				05/04/2011	3600	ME

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ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73290 SW-02-DUP

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/05/2011 **Analyst:** MF
Extraction Method: 3510 **Extraction Date:** 05/03/2011 **Qualifier:** **Volume:** 990

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	48.6			
SURROGATE	#Tetrachloro-m-xylene#	41.6			
72-54-8	4,4'-DDD	Not Detected	0.02		1.0
72-55-9	4,4'-DDE	Not Detected	0.02		1.0
50-29-3	4,4'-DDT	Not Detected	0.02		1.0
319-84-6	a-BHC	Not Detected	0.02		1.0
5103-71-9	a-Chlordane	Not Detected	0.01		1.0
309-00-2	Aldrin	Not Detected	0.01		1.0
12674-11-2	Aroclor 1016	Not Detected	0.10		1.0
11104-28-2	Aroclor 1221	Not Detected	0.10		1.0
11141-16-5	Aroclor 1232	Not Detected	0.10		1.0
53469-21-9	Aroclor 1242	Not Detected	0.10		1.0
12672-29-6	Aroclor 1248	Not Detected	0.10		1.0
11097-69-1	Aroclor 1254	Not Detected	0.10		1.0
11096-82-5	Aroclor 1260	Not Detected	0.10		1.0
37324-23-5	Aroclor 1262	Not Detected	0.10		1.0
11100-14-4	Aroclor 1268	Not Detected	0.10		1.0
319-85-7	b-BHC	Not Detected	0.02		1.0
319-86-8	d-BHC	Not Detected	0.02		1.0
60-57-1	Dieldrin	Not Detected	0.02		1.0
959-98-8	Endosulfan I	Not Detected	0.02		1.0
33213-65-9	Endosulfan II	Not Detected	0.03		1.0
1031-07-8	Endosulfan sulfate	Not Detected	0.05		1.0
72-20-8	Endrin	Not Detected	0.02		1.0
7421-93-4	Endrin aldehyde	Not Detected	0.02		1.0
53494-70-5	Endrin ketone	Not Detected	0.02		1.0
58-89-9	g-BHC (Lindane)	Not Detected	0.02		1.0
5103-74-2	g-Chlordane	Not Detected	0.01		1.0
76-44-8	Heptachlor	Not Detected	0.01		1.0
1024-57-3	Heptachlor epoxide	Not Detected	0.01		1.0
87-82-1	Hexabromobenzene	Not Detected	0.02		1.0
72-43-5	Methoxychlor	Not Detected	0.05		1.0
2385-85-5	Mirex	Not Detected	0.02		1.0
59080-40-9	PBB (BP-6)	Not Detected	0.05		1.0
8001-35-2	Toxaphene	Not Detected	0.10		1.0

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Sample Number: AB73290 SW-02-DUP

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Bromofluorobenzene#	96.4			
SURROGATE	#Dibromofluoromethane#	95.4			
SURROGATE	#Toluene-d8#	99.5			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	1.0		1.0
71-55-6	1,1,1-Trichloroethane	Not Detected	1.0		1.0
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	1.0		1.0
79-00-5	1,1,2-Trichloroethane	Not Detected	1.0		1.0
75-34-3	1,1-Dichloroethane	Not Detected	1.0		1.0
75-35-4	1,1-Dichloroethylene	Not Detected	1.0		1.0
87-61-6	1,2,3-Trichlorobenzene	Not Detected	5.0		1.0
96-18-4	1,2,3-Trichloropropane	Not Detected	1.0		1.0
526-73-8	1,2,3-Trimethylbenzene	Not Detected	1.0		1.0
120-82-1	1,2,4-Trichlorobenzene	Not Detected	5.0		1.0
95-63-6	1,2,4-Trimethylbenzene	Not Detected	1.0		1.0
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	5.0		1.0
106-93-4	1,2-Dibromoethane	Not Detected	1.0		1.0
95-50-1	1,2-Dichlorobenzene	Not Detected	1.0		1.0
107-06-2	1,2-Dichloroethane	Not Detected	1.0		1.0
78-87-5	1,2-Dichloropropane	Not Detected	1.0		1.0
108-67-8	1,3,5-Trimethylbenzene	Not Detected	1.0		1.0
541-73-1	1,3-Dichlorobenzene	Not Detected	1.0		1.0
106-46-7	1,4-Dichlorobenzene	Not Detected	1.0		1.0
78-93-3	2-Butanone (MEK)	Not Detected	5.0		1.0
591-78-6	2-Hexanone	Not Detected	5.0		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.0	X	1.0
67-64-1	2-Propanone (acetone)	Not Detected	20		1.0
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	5.0		1.0
107-13-1	Acrylonitrile	Not Detected	5.0	Z	1.0
71-43-2	Benzene	Not Detected	1.0		1.0
108-86-1	Bromobenzene	Not Detected	1.0		1.0
74-97-5	Bromochloromethane	Not Detected	1.0		1.0
75-27-4	Bromodichloromethane	Not Detected	1.0		1.0
75-25-2	Bromoform	Not Detected	1.0		1.0
74-83-9	Bromomethane	Not Detected	5.0		1.0
75-15-0	Carbon disulfide	Not Detected	1.0		1.0
56-23-5	Carbon tetrachloride	Not Detected	1.0		1.0
108-90-7	Chlorobenzene	Not Detected	1.0		1.0
75-00-3	Chloroethane	Not Detected	5.0		1.0
67-66-3	Chloroform	Not Detected	1.0		1.0
74-87-3	Chloromethane	Not Detected	5.0		1.0

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Sample Number: AB73290 SW-02-DUP

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
156-59-2	cis-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-82-7	Cyclohexane	Not Detected	5.0		1.0
124-48-1	Dibromochloromethane	Not Detected	1.0		1.0
74-95-3	Dibromomethane	Not Detected	1.0		1.0
75-71-8	Dichlorodifluoromethane	Not Detected	5.0		1.0
60-29-7	Diethyl ether	Not Detected	5.0		1.0
108-20-3	Diisopropyl Ether	Not Detected	5.0		1.0
100-41-4	Ethylbenzene	Not Detected	1.0		1.0
637-92-3	Ethyltertiarybutylether	Not Detected	5.0		1.0
67-72-1	Hexachloroethane	Not Detected	5.0		1.0
98-82-8	Isopropylbenzene	Not Detected	1.0		1.0
108383,106423	m & p - Xylene	Not Detected	2.0		1.0
74-88-4	Methyl iodide	Not Detected	1.0		1.0
75-09-2	Methylene chloride	Not Detected	5.0		1.0
1634-04-4	Methyltertiarybutylether	Not Detected	1.0		1.0
91-20-3	Naphthalene	Not Detected	5.0	X	1.0
104-51-8	n-Butylbenzene	Not Detected	1.0		1.0
103-65-1	n-Propylbenzene	Not Detected	1.0		1.0
95-47-6	o-Xylene	Not Detected	1.0		1.0
99-87-6	p-Isopropyl toluene	Not Detected	1.0		1.0
135-98-8	sec-Butylbenzene	Not Detected	1.0		1.0
100-42-5	Styrene	Not Detected	1.0		1.0
98-06-6	tert-Butylbenzene	Not Detected	1.0		1.0
75-65-0	tertiary Butyl Alcohol	Not Detected	50		1.0
994-05-8	tertiaryAmylmethylether	Not Detected	5.0		1.0
127-18-4	Tetrachloroethylene	Not Detected	1.0		1.0
109-99-9	Tetrahydrofuran	Not Detected	5.0		1.0
108-88-3	Toluene	Not Detected	1.0		1.0
156-60-5	trans-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	5.0	Z	1.0
79-01-6	Trichloroethylene	Not Detected	1.0		1.0
75-69-4	Trichlorofluoromethane	Not Detected	1.0		1.0
75-01-4	Vinyl chloride	Not Detected	1.0		1.0

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
mg / Kg : milligram / kilogram (ppm)

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Sample Number: AB73290 SW-02-DUP

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/03/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 980

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	57.7			
SURROGATE	#2,4,6-Tribromophenol#	85.5			
SURROGATE	#2-Fluorophenol#	22.1			
SURROGATE	#Nitrobenzene- D5#	42.4			
SURROGATE	#Phenol - D6#	13.7			
SURROGATE	#p-Terphenyl-D14#	91.4			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	2.0		1.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	5.1		1.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	4.1		1.0
120-83-2	2,4-Dichlorophenol	Not Detected	10		1.0
105-67-9	2,4-Dimethylphenol	Not Detected	5.1		1.0
51-28-5	2,4-Dinitrophenol	Not Detected	26		1.0
121-14-2	2,4-Dinitrotoluene	Not Detected	5.1		1.0
606-20-2	2,6-Dinitrotoluene	Not Detected	5.1		1.0
95-51-2	2-Chloroaniline	Not Detected	5.1		1.0
91-58-7	2-Chloronaphthalene	Not Detected	2.0		1.0
95-57-8	2-Chlorophenol	Not Detected	10		1.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	20		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.1		1.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	10		1.0
88-74-4	2-Nitroaniline	Not Detected	20		1.0
88-75-5	2-Nitrophenol	Not Detected	5.1		1.0
108394,106445	3 & 4-Methylphenol	Not Detected	20		1.0
99-09-2	3-Nitroaniline	Not Detected	20		1.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	2.0		1.0
59-50-7	4-Chloro-3-methyl phenol	Not Detected	5.1		1.0
106-47-8	4-Chloroaniline	Not Detected	10		1.0
7005-72-3	4-Chlorodiphenylether	Not Detected	1.0		1.0
100-01-6	4-Nitroaniline	Not Detected	20		1.0
100-02-7	4-Nitrophenol	Not Detected	26	5	1.0
83-32-9	Acenaphthene	Not Detected	1.0		1.0
208-96-8	Acenaphthylene	Not Detected	1.0		1.0
62-53-3	Aniline	Not Detected	4.1		1.0
120-12-7	Anthracene	Not Detected	1.0		1.0
103-33-3	Azobenzene	Not Detected	2.0	5	1.0
56-55-3	Benzo[a]anthracene	Not Detected	1.0		1.0
50-32-8	Benzo[a]pyrene	Not Detected	1.0		1.0
205-99-2	Benzo[b]fluoranthene	Not Detected	1.0		1.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	1.0		1.0
207-08-9	Benzo[k]fluoranthene	Not Detected	1.0		1.0

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Sample Number: AB73290 SW-02-DUP

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/03/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 980

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
100-51-6	Benzyl Alcohol	Not Detected	51		1.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	2.0		1.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	1.0		1.0
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	1.0	5	1.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	5.1		1.0
85-68-7	Butyl benzyl phthalate	Not Detected	5.1		1.0
86-74-8	Carbazole	Not Detected	5.1		1.0
218-01-9	Chrysene	Not Detected	1.0		1.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	2.0		1.0
132-64-9	Dibenzofuran	Not Detected	4.1		1.0
84-66-2	Diethylphthalate	Not Detected	5.1		1.0
131-11-3	Dimethyl phthalate	Not Detected	5.1		1.0
84-74-2	Di-n-butyl phthalate	Not Detected	5.1		1.0
117-84-0	Di-n-octyl phthalate	Not Detected	5.1		1.0
206-44-0	Fluoranthene	Not Detected	1.0		1.0
86-73-7	Fluorene	Not Detected	1.0		1.0
118-74-1	Hexachlorobenzene	Not Detected	1.0		1.0
87-68-3	Hexachlorobutadiene	Not Detected	1.0		1.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	10	Z	1.0
67-72-1	Hexachloroethane	Not Detected	1.0		1.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	2.0		1.0
78-59-1	Isophorone	Not Detected	1.0		1.0
121-69-7	N,N-dimethylaniline	Not Detected	5.1		1.0
91-20-3	Naphthalene	Not Detected	1.0		1.0
98-95-3	Nitrobenzene	Not Detected	2.0		1.0
100-61-8	N-methylaniline	Not Detected	1.0		1.0
67-75-9	N-Nitrosodimethylamine	Not Detected	5.1	5	1.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	2.0	5	1.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	2.0		1.0
87-86-5	Pentachlorophenol	Not Detected	20		1.0
85-01-8	Phenanthrene	Not Detected	1.0		1.0
108-95-2	Phenol	Not Detected	5.1		1.0
129-00-0	Pyrene	Not Detected	1.0		1.0
110-86-1	Pyridine	Not Detected	20	5	1.0
632-22-4	Tetramethylurea	Not Detected	1.0	5	1.0

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Sample Number: AB73290 SW-02-DUP

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
CN_TOTAL	Cyanide	ND	mg/L	0.005		05/05/2011	ASTM D 751	MB
	Digestion Metals Water	Completed				05/03/2011	3010/200	WN
	Digestion Mercury Water	Completed				05/05/2011	7470/245.1	TS
7439-97-6	Mercury - Total	ND	µg/L	0.2		05/06/2011	7470/245.1	TS
7440-36-0	Antimony - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-38-2	Arsenic - Total	1.7	µg/L	1		05/05/2011	6020/200.8	KS
7440-39-3	Barium - Total	84	µg/L	5		05/05/2011	6020/200.8	KS
7440-41-7	Beryllium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-43-9	Cadmium - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-47-3	Chromium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-48-4	Cobalt - Total	ND	µg/L	15		05/05/2011	6020/200.8	KS
7440-50-8	Copper - Total	5.9	µg/L	1		05/05/2011	6020/200.8	KS
7439-92-1	Lead - Total	1.7	µg/L	1		05/05/2011	6020/200.8	KS
7439-96-5	Manganese - Total	200	µg/L	5		05/05/2011	6020/200.8	KS
7439-98-7	Molybdenum - Total	ND	µg/L	25		05/05/2011	6020/200.8	KS
7440-02-0	Nickel - Total	4.6	µg/L	2.0		05/05/2011	6020/200.8	KS
7782-49-2	Selenium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-22-4	Silver - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-28-0	Thallium - Total	ND	µg/L	2		05/05/2011	6020/200.8	KS
7440-62-2	Vanadium - Total	2.5	µg/L	2		05/05/2011	6020/200.8	KS
7440-66-6	Zinc - Total	43	µg/L	10		05/05/2011	6020/200.8	KS
7439-89-6	Iron - Total	2600	µg/L	20		05/11/2011	6010/200.7	WN
	Florisil Cleanup	Completed				05/03/2011	3620	DT
	Mercury Cleanup	Completed				05/04/2011	3600	ME

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ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73291 SW-03

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/05/2011 **Analyst:** MF
Extraction Method: 3510 **Extraction Date:** 05/03/2011 **Qualifier:** **Volume:** 980

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	43.4			
SURROGATE	#Tetrachloro-m-xylene#	39.7			
72-54-8	4,4'-DDD	Not Detected	0.02		1.0
72-55-9	4,4'-DDE	Not Detected	0.02		1.0
50-29-3	4,4'-DDT	Not Detected	0.02		1.0
319-84-6	a-BHC	Not Detected	0.02		1.0
5103-71-9	a-Chlordane	Not Detected	0.01		1.0
309-00-2	Aldrin	Not Detected	0.01		1.0
12674-11-2	Aroclor 1016	Not Detected	0.10		1.0
11104-28-2	Aroclor 1221	Not Detected	0.10		1.0
11141-16-5	Aroclor 1232	Not Detected	0.10		1.0
53469-21-9	Aroclor 1242	Not Detected	0.10		1.0
12672-29-6	Aroclor 1248	Not Detected	0.10		1.0
11097-69-1	Aroclor 1254	Not Detected	0.10		1.0
11096-82-5	Aroclor 1260	Not Detected	0.10		1.0
37324-23-5	Aroclor 1262	Not Detected	0.10		1.0
11100-14-4	Aroclor 1268	Not Detected	0.10		1.0
319-85-7	b-BHC	Not Detected	0.02		1.0
319-86-8	d-BHC	Not Detected	0.02		1.0
60-57-1	Dieldrin	Not Detected	0.02		1.0
959-98-8	Endosulfan I	Not Detected	0.02		1.0
33213-65-9	Endosulfan II	Not Detected	0.03		1.0
1031-07-8	Endosulfan sulfate	Not Detected	0.05		1.0
72-20-8	Endrin	Not Detected	0.02		1.0
7421-93-4	Endrin aldehyde	Not Detected	0.02		1.0
53494-70-5	Endrin ketone	Not Detected	0.02		1.0
58-89-9	g-BHC (Lindane)	Not Detected	0.02		1.0
5103-74-2	g-Chlordane	Not Detected	0.01		1.0
76-44-8	Heptachlor	Not Detected	0.01		1.0
1024-57-3	Heptachlor epoxide	Not Detected	0.01		1.0
87-82-1	Hexabromobenzene	Not Detected	0.02		1.0
72-43-5	Methoxychlor	Not Detected	0.05		1.0
2385-85-5	Mirex	Not Detected	0.02		1.0
59080-40-9	PBB (BP-6)	Not Detected	0.05		1.0
8001-35-2	Toxaphene	Not Detected	0.10		1.0

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Sample Number: AB73291 SW-03

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Bromofluorobenzene#	96.6			
SURROGATE	#Dibromofluoromethane#	98.2			
SURROGATE	#Toluene-d8#	101			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	1.0		1.0
71-55-6	1,1,1-Trichloroethane	Not Detected	1.0		1.0
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	1.0		1.0
79-00-5	1,1,2-Trichloroethane	Not Detected	1.0		1.0
75-34-3	1,1-Dichloroethane	Not Detected	1.0		1.0
75-35-4	1,1-Dichloroethylene	Not Detected	1.0		1.0
87-61-6	1,2,3-Trichlorobenzene	Not Detected	5.0		1.0
96-18-4	1,2,3-Trichloropropane	Not Detected	1.0		1.0
526-73-8	1,2,3-Trimethylbenzene	Not Detected	1.0		1.0
120-82-1	1,2,4-Trichlorobenzene	Not Detected	5.0		1.0
95-63-6	1,2,4-Trimethylbenzene	Not Detected	1.0		1.0
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	5.0		1.0
106-93-4	1,2-Dibromoethane	Not Detected	1.0		1.0
95-50-1	1,2-Dichlorobenzene	Not Detected	1.0		1.0
107-06-2	1,2-Dichloroethane	Not Detected	1.0		1.0
78-87-5	1,2-Dichloropropane	Not Detected	1.0		1.0
108-67-8	1,3,5-Trimethylbenzene	Not Detected	1.0		1.0
541-73-1	1,3-Dichlorobenzene	Not Detected	1.0		1.0
106-46-7	1,4-Dichlorobenzene	Not Detected	1.0		1.0
78-93-3	2-Butanone (MEK)	Not Detected	5.0		1.0
591-78-6	2-Hexanone	Not Detected	5.0		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.0	X	1.0
67-64-1	2-Propanone (acetone)	Not Detected	20		1.0
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	5.0		1.0
107-13-1	Acrylonitrile	Not Detected	5.0	Z	1.0
71-43-2	Benzene	Not Detected	1.0		1.0
108-86-1	Bromobenzene	Not Detected	1.0		1.0
74-97-5	Bromochloromethane	Not Detected	1.0		1.0
75-27-4	Bromodichloromethane	Not Detected	1.0		1.0
75-25-2	Bromoform	Not Detected	1.0		1.0
74-83-9	Bromomethane	Not Detected	5.0		1.0
75-15-0	Carbon disulfide	Not Detected	1.0		1.0
56-23-5	Carbon tetrachloride	Not Detected	1.0		1.0
108-90-7	Chlorobenzene	Not Detected	1.0		1.0
75-00-3	Chloroethane	Not Detected	5.0		1.0
67-66-3	Chloroform	Not Detected	1.0		1.0
74-87-3	Chloromethane	Not Detected	5.0		1.0

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Sample Number: AB73291 SW-03

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
156-59-2	cis-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-82-7	Cyclohexane	Not Detected	5.0		1.0
124-48-1	Dibromochloromethane	Not Detected	1.0		1.0
74-95-3	Dibromomethane	Not Detected	1.0		1.0
75-71-8	Dichlorodifluoromethane	Not Detected	5.0		1.0
60-29-7	Diethyl ether	Not Detected	5.0		1.0
108-20-3	Diisopropyl Ether	Not Detected	5.0		1.0
100-41-4	Ethylbenzene	Not Detected	1.0		1.0
637-92-3	Ethyltertiarybutylether	Not Detected	5.0		1.0
67-72-1	Hexachloroethane	Not Detected	5.0		1.0
98-82-8	Isopropylbenzene	Not Detected	1.0		1.0
108383,106423	m & p - Xylene	Not Detected	2.0		1.0
74-88-4	Methyl iodide	Not Detected	1.0		1.0
75-09-2	Methylene chloride	Not Detected	5.0		1.0
1634-04-4	Methyltertiarybutylether	Not Detected	1.0		1.0
91-20-3	Naphthalene	Not Detected	5.0	X	1.0
104-51-8	n-Butylbenzene	Not Detected	1.0		1.0
103-65-1	n-Propylbenzene	Not Detected	1.0		1.0
95-47-6	o-Xylene	Not Detected	1.0		1.0
99-87-6	p-Isopropyl toluene	Not Detected	1.0		1.0
135-98-8	sec-Butylbenzene	Not Detected	1.0		1.0
100-42-5	Styrene	Not Detected	1.0		1.0
98-06-6	tert-Butylbenzene	Not Detected	1.0		1.0
75-65-0	tertiary Butyl Alcohol	Not Detected	50		1.0
994-05-8	tertiaryAmylmethylether	Not Detected	5.0		1.0
127-18-4	Tetrachloroethylene	Not Detected	1.0		1.0
109-99-9	Tetrahydrofuran	Not Detected	5.0		1.0
108-88-3	Toluene	Not Detected	1.0		1.0
156-60-5	trans-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	5.0	Z	1.0
79-01-6	Trichloroethylene	Not Detected	1.0		1.0
75-69-4	Trichlorofluoromethane	Not Detected	1.0		1.0
75-01-4	Vinyl chloride	Not Detected	1.0		1.0

CAS# : Chemical Abstract Service Registry Number
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Sample Number: AB73291 SW-03

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 1000

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	56.2			
SURROGATE	#2,4,6-Tribromophenol#	84.5			
SURROGATE	#2-Fluorophenol#	19.4			
SURROGATE	#Nitrobenzene - D5#	38.9			
SURROGATE	#Phenol - D6#	12.4			
SURROGATE	#p-Terphenyl-D14#	75.3			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	2.0		1.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	5.0		1.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	4.0		1.0
120-83-2	2,4-Dichlorophenol	Not Detected	10		1.0
105-67-9	2,4-Dimethylphenol	Not Detected	5.0		1.0
51-28-5	2,4-Dinitrophenol	Not Detected	25		1.0
121-14-2	2,4-Dinitrotoluene	Not Detected	5.0		1.0
606-20-2	2,6-Dinitrotoluene	Not Detected	5.0		1.0
95-51-2	2-Chloroaniline	Not Detected	5.0		1.0
91-58-7	2-Chloronaphthalene	Not Detected	2.0		1.0
95-57-8	2-Chlorophenol	Not Detected	10		1.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	20		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.0		1.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	10		1.0
88-74-4	2-Nitroaniline	Not Detected	20		1.0
88-75-5	2-Nitrophenol	Not Detected	5.0		1.0
108394,106445	3 & 4-Methylphenol	Not Detected	20		1.0
99-09-2	3-Nitroaniline	Not Detected	20		1.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	2.0		1.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	5.0		1.0
106-47-8	4-Chloroaniline	Not Detected	10		1.0
7005-72-3	4-Chlorodiphenylether	Not Detected	1.0		1.0
100-01-6	4-Nitroaniline	Not Detected	20		1.0
100-02-7	4-Nitrophenol	Not Detected	25		1.0
83-32-9	Acenaphthene	Not Detected	1.0		1.0
208-96-8	Acenaphthylene	Not Detected	1.0		1.0
62-53-3	Aniline	Not Detected	4.0		1.0
120-12-7	Anthracene	Not Detected	1.0		1.0
103-33-3	Azobenzene	Not Detected	2.0	5	1.0
56-55-3	Benzo[a]anthracene	Not Detected	1.0		1.0
50-32-8	Benzo[a]pyrene	Not Detected	1.0		1.0
205-99-2	Benzo[b]fluoranthene	Not Detected	1.0		1.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	1.0		1.0
207-08-9	Benzo[k]fluoranthene	Not Detected	1.0		1.0

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ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73291 SW-03

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 1000

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
100-51-6	Benzyl Alcohol	Not Detected	50		1.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	2.0		1.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	1.0		1.0
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	1.0	5	1.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	5.0		1.0
85-68-7	Butyl benzyl phthalate	Not Detected	5.0		1.0
86-74-8	Carbazole	Not Detected	5.0		1.0
218-01-9	Chrysene	Not Detected	1.0		1.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	2.0		1.0
132-64-9	Dibenzofuran	Not Detected	4.0		1.0
84-66-2	Diethylphthalate	Not Detected	5.0		1.0
131-11-3	Dimethyl phthalate	Not Detected	5.0		1.0
84-74-2	Di-n-butyl phthalate	Not Detected	5.0		1.0
117-84-0	Di-n-octyl phthalate	Not Detected	5.0		1.0
206-44-0	Fluoranthene	Not Detected	1.0		1.0
86-73-7	Fluorene	Not Detected	1.0		1.0
118-74-1	Hexachlorobenzene	Not Detected	1.0		1.0
87-68-3	Hexachlorobutadiene	Not Detected	1.0		1.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	10	Z	1.0
67-72-1	Hexachloroethane	Not Detected	1.0		1.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	2.0		1.0
78-59-1	Isophorone	Not Detected	1.0		1.0
121-69-7	N,N-dimethylaniline	Not Detected	5.0		1.0
91-20-3	Naphthalene	Not Detected	1.0		1.0
98-95-3	Nitrobenzene	Not Detected	2.0		1.0
100-61-8	N-methylaniline	Not Detected	1.0		1.0
67-75-9	N-Nitrosodimethylamine	Not Detected	5.0	5	1.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	2.0	5	1.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	2.0		1.0
87-86-5	Pentachlorophenol	Not Detected	20		1.0
85-01-8	Phenanthrene	Not Detected	1.0		1.0
108-95-2	Phenol	Not Detected	5.0		1.0
129-00-0	Pyrene	Not Detected	1.0		1.0
110-86-1	Pyridine	Not Detected	20	5	1.0
632-22-4	Tetramethylurea	Not Detected	1.0	5	1.0

Unidentified peaks present in sample.

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Sample Number: AB73291 SW-03

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
CN_TOTAL	Cyanide	ND	mg/L	0.005		05/05/2011	ASTM D 751	MB
	Digestion Metals Water	Completed				05/03/2011	3010/200	WN
	Digestion Mercury Water	Completed				05/05/2011	7470/245.1	TS
7439-97-6	Mercury - Total	ND	µg/L	0.2		05/06/2011	7470/245.1	TS
7440-36-0	Antimony - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-38-2	Arsenic - Total	1.0	µg/L	1		05/05/2011	6020/200.8	KS
7440-39-3	Barium - Total	32	µg/L	5		05/05/2011	6020/200.8	KS
7440-41-7	Beryllium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-43-9	Cadmium - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-47-3	Chromium - Total	1.6	µg/L	1		05/05/2011	6020/200.8	KS
7440-48-4	Cobalt - Total	ND	µg/L	15		05/05/2011	6020/200.8	KS
7440-50-8	Copper - Total	3.8	µg/L	1		05/05/2011	6020/200.8	KS
7439-92-1	Lead - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7439-96-5	Manganese - Total	64	µg/L	5		05/05/2011	6020/200.8	KS
7439-98-7	Molybdenum - Total	ND	µg/L	25		05/05/2011	6020/200.8	KS
7440-02-0	Nickel - Total	2.5	µg/L	2.0		05/05/2011	6020/200.8	KS
7782-49-2	Selenium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-22-4	Silver - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-28-0	Thallium - Total	ND	µg/L	2		05/05/2011	6020/200.8	KS
7440-62-2	Vanadium - Total	ND	µg/L	2		05/05/2011	6020/200.8	KS
7440-66-6	Zinc - Total	ND	µg/L	10		05/05/2011	6020/200.8	KS
7439-89-6	Iron - Total	730	µg/L	20		05/11/2011	6010/200.7	WN
	Florisil Cleanup	Completed				05/03/2011	3620	DT
	Mercury Cleanup	Completed				05/04/2011	3600	ME

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Sample Number: AB73292 SW-03-MS

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/05/2011 **Analyst:** MF
Extraction Method: 3510 **Extraction Date:** 05/03/2011 **Qualifier:** **Volume:** 960

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	43.4			
SURROGATE	#Tetrachloro-m-xylene#	37.7			
72-54-8	4,4'-DDD	0.084	0.02		1.0
72-55-9	4,4'-DDE	0.071	0.02		1.0
50-29-3	4,4'-DDT	0.068	0.02		1.0
319-84-6	a-BHC	0.069	0.02		1.0
5103-71-9	a-Chlordane	0.078	0.01		1.0
309-00-2	Aldrin	0.044	0.01		1.0
12674-11-2	Aroclor 1016	Not Detected	0.10		1.0
11104-28-2	Aroclor 1221	Not Detected	0.10		1.0
11141-16-5	Aroclor 1232	Not Detected	0.10		1.0
53469-21-9	Aroclor 1242	Not Detected	0.10		1.0
12672-29-6	Aroclor 1248	Not Detected	0.10		1.0
11097-69-1	Aroclor 1254	Not Detected	0.10		1.0
11096-82-5	Aroclor 1260	Not Detected	0.10		1.0
37324-23-5	Aroclor 1262	Not Detected	0.10		1.0
11100-14-4	Aroclor 1268	Not Detected	0.10		1.0
319-85-7	b-BHC	0.082	0.02		1.0
319-86-8	d-BHC	0.083	0.02		1.0
60-57-1	Dieldrin	0.082	0.02		1.0
959-98-8	Endosulfan I	0.082	0.02		1.0
33213-65-9	Endosulfan II	0.085	0.03		1.0
1031-07-8	Endosulfan sulfate	0.084	0.05		1.0
72-20-8	Endrin	0.088	0.02		1.0
7421-93-4	Endrin aldehyde	0.043	0.02		1.0
53494-70-5	Endrin ketone	0.084	0.02		1.0
58-89-9	g-BHC (Lindane)	0.073	0.02		1.0
5103-74-2	g-Chlordane	0.078	0.01		1.0
76-44-8	Heptachlor	0.055	0.01		1.0
1024-57-3	Heptachlor epoxide	0.090	0.01		1.0
87-82-1	Hexabromobenzene	0.069	0.02		1.0
72-43-5	Methoxychlor	0.081	0.05		1.0
2385-85-5	Mirex	0.058	0.02		1.0
59080-40-9	PBB (BP-6)	Not Detected	0.05		1.0
8001-35-2	Toxaphene	Not Detected	0.10		1.0

Sample is a matrix spike.
Pesticides are spiked at 0.1 ug/L. bp-6 and toxaphene not spiked.

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Sample Number: AB73292 SW-03-MS

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Bromofluorobenzene#	96.7			
SURROGATE	#Dibromofluoromethane#	96.1			
SURROGATE	#Toluene-d8#	98.5			
630-20-6	1,1,1,2-Tetrachloroethane	49	1.0		1.0
71-55-6	1,1,1-Trichloroethane	46	1.0		1.0
79-34-5	1,1,2,2-Tetrachloroethane	49	1.0		1.0
79-00-5	1,1,2-Trichloroethane	51	1.0		1.0
75-34-3	1,1-Dichloroethane	52	1.0		1.0
75-35-4	1,1-Dichloroethylene	52	1.0		1.0
87-61-6	1,2,3-Trichlorobenzene	41	5.0		1.0
96-18-4	1,2,3-Trichloropropane	47	1.0		1.0
526-73-8	1,2,3-Trimethylbenzene	47	1.0		1.0
120-82-1	1,2,4-Trichlorobenzene	41	5.0		1.0
95-63-6	1,2,4-Trimethylbenzene	47	1.0		1.0
96-12-8	1,2-Dibromo-3-chloropropane	42	5.0		1.0
106-93-4	1,2-Dibromoethane	47	1.0		1.0
95-50-1	1,2-Dichlorobenzene	47	1.0		1.0
107-06-2	1,2-Dichloroethane	50	1.0		1.0
78-87-5	1,2-Dichloropropane	50	1.0		1.0
108-67-8	1,3,5-Trimethylbenzene	45	1.0		1.0
541-73-1	1,3-Dichlorobenzene	46	1.0		1.0
106-46-7	1,4-Dichlorobenzene	46	1.0		1.0
78-93-3	2-Butanone (MEK)	43	5.0		1.0
591-78-6	2-Hexanone	40	5.0		1.0
91-57-6	2-Methylnaphthalene	28	5.0	X	1.0
67-64-1	2-Propanone (acetone)	29	20		1.0
108-10-1	4-Methyl-2-pentanone (MIBK)	45	5.0		1.0
107-13-1	Acrylonitrile	50	5.0	Z	1.0
71-43-2	Benzene	50	1.0		1.0
108-86-1	Bromobenzene	46	1.0		1.0
74-97-5	Bromochloromethane	53	1.0		1.0
75-27-4	Bromodichloromethane	48	1.0		1.0
75-25-2	Bromoform	38	1.0		1.0
74-83-9	Bromomethane	48	5.0		1.0
75-15-0	Carbon disulfide	48	1.0		1.0
56-23-5	Carbon tetrachloride	47	1.0		1.0
108-90-7	Chlorobenzene	47	1.0		1.0
75-00-3	Chloroethane	54	5.0		1.0
67-66-3	Chloroform	50	1.0		1.0
74-87-3	Chloromethane	50	5.0		1.0

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Sample Number: AB73292 SW-03-MS

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
156-59-2	cis-1,2-Dichloroethylene	48	1.0		1.0
10061-01-5	cis-1,3-Dichloropropylene	53	1.0		1.0
110-82-7	Cyclohexane	50	5.0		1.0
124-48-1	Dibromochloromethane	48	1.0		1.0
74-95-3	Dibromomethane	49	1.0		1.0
75-71-8	Dichlorodifluoromethane	53	5.0	6	1.0
60-29-7	Diethyl ether	51	5.0		1.0
108-20-3	Diisopropyl Ether	51	5.0		1.0
100-41-4	Ethylbenzene	51	1.0		1.0
637-92-3	Ethyltertiarybutylether	41	5.0		1.0
67-72-1	Hexachloroethane	41	5.0		1.0
98-82-8	Isopropylbenzene	47	1.0		1.0
108383,106423	m & p - Xylene	99	2.0		1.0
74-88-4	Methyl iodide	39	1.0		1.0
75-09-2	Methylene chloride	50	5.0		1.0
1634-04-4	Methyltertiarybutylether	52	1.0		1.0
91-20-3	Naphthalene	45	5.0	X	1.0
104-51-8	n-Butylbenzene	46	1.0		1.0
103-65-1	n-Propylbenzene	49	1.0		1.0
95-47-6	o-Xylene	50	1.0		1.0
99-87-6	p-Isopropyl toluene	45	1.0		1.0
135-98-8	sec-Butylbenzene	46	1.0		1.0
100-42-5	Styrene	42	1.0		1.0
98-06-6	tert-Butylbenzene	46	1.0		1.0
75-65-0	tertiary Butyl Alcohol	230	50		1.0
994-05-8	tertiaryAmylmethylether	38	5.0		1.0
127-18-4	Tetrachloroethylene	44	1.0		1.0
109-99-9	Tetrahydrofuran	46	5.0		1.0
108-88-3	Toluene	55	1.0		1.0
156-60-5	trans-1,2-Dichloroethylene	61	1.0		1.0
10061-02-6	trans-1,3-Dichloropropylene	51	1.0		1.0
110-57-6	trans-1,4-Dichloro-2-butene	36	5.0	Z	1.0
79-01-6	Trichloroethylene	51	1.0		1.0
75-69-4	Trichlorofluoromethane	49	1.0		1.0
75-01-4	Vinyl chloride	52	1.0		1.0

Sample is a matrix spike.
Compounds spiked at 50 ug/L, except tertiary butyl alcohol spiked at 250 ug/L & m&p-xylene spiked at 100 ug/L.

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RL : Reporting Limit
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Sample Number: AB73292 SW-03-MS

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 970

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	63.6			
SURROGATE	#2,4,6-Tribromophenol#	88.0			
SURROGATE	#2-Fluorophenol#	20.9			
SURROGATE	#Nitrobenzene - D5#	43.7			
SURROGATE	#Phenol - D6#	13.6			
SURROGATE	#p-Terphenyl-D14#	65.5			
120-82-1	1,2,4-Trichlorobenzene	23	2.1		1.0
95-95-4	2,4,5-Trichlorophenol	91	5.2	6	1.0
88-06-2	2,4,6-Trichlorophenol	81	4.1		1.0
120-83-2	2,4-Dichlorophenol	70	10		1.0
105-67-9	2,4-Dimethylphenol	56	5.2		1.0
51-28-5	2,4-Dinitrophenol	91	26		1.0
121-14-2	2,4-Dinitrotoluene	46	5.2		1.0
606-20-2	2,6-Dinitrotoluene	48	5.2		1.0
95-51-2	2-Chloroaniline	34	5.2		1.0
91-58-7	2-Chloronaphthalene	31	2.1		1.0
95-57-8	2-Chlorophenol	46	10		1.0
534-52-1	2-Methyl-4,6-dinitrophenol	95	21		1.0
91-57-6	2-Methylnaphthalene	30	5.2		1.0
95-48-7	2-Methylphenol (o-Cresol)	39	10		1.0
88-74-4	2-Nitroaniline	41	21		1.0
88-75-5	2-Nitrophenol	66	5.2		1.0
108394,106445	3 & 4-Methylphenol	37	21		1.0
99-09-2	3-Nitroaniline	39	21		1.0
101-55-3	4-Bromophenyl phenyl ether	41	2.1		1.0
59-50-7	4-Chloro-3-methyl-phenol	69	5.2		1.0
106-47-8	4-Chloroaniline	36	10		1.0
7005-72-3	4-Chlorodiphenylether	36	1.0		1.0
100-01-6	4-Nitroaniline	38	21		1.0
100-02-7	4-Nitrophenol	16	26	T	1.0
83-32-9	Acenaphthene	34	1.0		1.0
208-96-8	Acenaphthylene	37	1.0		1.0
62-53-3	Aniline	22	4.1		1.0
120-12-7	Anthracene	43	1.0		1.0
103-33-3	Azobenzene	29	2.1	5	1.0
56-55-3	Benzo[a]anthracene	38	1.0		1.0
50-32-8	Benzo[a]pyrene	33	1.0		1.0
205-99-2	Benzo[b]fluoranthene	35	1.0		1.0
191-24-2	Benzo[g,h,i]perylene	28	1.0		1.0
207-08-9	Benzo[k]fluoranthene	33	1.0		1.0

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

ug / L : microgram / liter (ppb)
mg / L : milligram / liter (ppm)
ug / Kg : microgram / kilogram (ppb)
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Sample Number: AB73292 SW-03-MS

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 970

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
100-51-6	Benzyl Alcohol	41	52	T	1.0
111-91-1	Bis(2-chloroethoxy)methane	28	2.1		1.0
111-44-4	Bis(2-chloroethyl)ether	23	1.0		1.0
108-60-1	Bis(2-chloroisopropyl)ether	20	1.0	5	1.0
117-81-7	Bis(2-ethylhexyl)phthalate	29	5.2		1.0
85-68-7	Butyl benzyl phthalate	41	5.2		1.0
86-74-8	Carbazole	43	5.2		1.0
218-01-9	Chrysene	37	1.0		1.0
53-70-3	Dibenz[a,h]anthracene	29	2.1		1.0
132-64-9	Dibenzofuran	35	4.1		1.0
84-66-2	Diethylphthalate	44	5.2		1.0
131-11-3	Dimethyl phthalate	43	5.2		1.0
84-74-2	Di-n-butyl phthalate	43	5.2		1.0
117-84-0	Di-n-octyl phthalate	30	5.2		1.0
206-44-0	Fluoranthene	43	1.0		1.0
86-73-7	Fluorene	38	1.0		1.0
118-74-1	Hexachlorobenzene	39	1.0		1.0
87-68-3	Hexachlorobutadiene	24	1.0		1.0
77-47-4	Hexachlorocyclopentadiene	20	10	Z	1.0
67-72-1	Hexachloroethane	17	1.0		1.0
193-39-5	Indeno(1,2,3-c,d)pyrene	28	2.1		1.0
78-59-1	Isophorone	27	1.0		1.0
121-69-7	N,N-dimethylaniline	31	5.2		1.0
91-20-3	Naphthalene	26	1.0		1.0
98-95-3	Nitrobenzene	30	2.1		1.0
100-61-8	N-methylaniline	29	1.0		1.0
67-75-9	N-Nitrosodimethylamine	10	5.2	5	1.0
621-64-7	N-Nitrosodi-n-propylamine	23	2.1	5	1.0
86-30-6	N-Nitrosodiphenylamine	42	2.1		1.0
87-86-5	Pentachlorophenol	92	21		1.0
85-01-8	Phenanthrene	43	1.0		1.0
108-95-2	Phenol	15	5.2		1.0
129-00-0	Pyrene	42	1.0		1.0
110-86-1	Pyridine	10	21	T 5	1.0
632-22-4	Tetramethylurea	16	1.0	5	1.0

Sample is a matrix spike.
Phenol compounds are spiked at 100 ug/L.
Base Neutral compounds are spiked at 50 ug/L.

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Sample Number: AB73292 SW-03-MS

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
CN_TOTAL	Cyanide	0.101	mg/L	0.005		05/05/2011	ASTM D 751	MB
	Digestion Metals Water	Completed				05/03/2011	3010/200	WN
	Digestion Mercury Water	Completed				05/05/2011	7470/245.1	TS
7439-97-6	Mercury - Total	3.9	µg/L	0.2		05/06/2011	7470/245.1	TS
7440-36-0	Antimony - Total	53	µg/L	1		05/05/2011	6020/200.8	KS
7440-38-2	Arsenic - Total	44	µg/L	1		05/05/2011	6020/200.8	KS
7440-39-3	Barium - Total	87	µg/L	5		05/05/2011	6020/200.8	KS
7440-41-7	Beryllium - Total	53	µg/L	1		05/05/2011	6020/200.8	KS
7440-43-9	Cadmium - Total	48	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-47-3	Chromium - Total	56	µg/L	1		05/05/2011	6020/200.8	KS
7440-48-4	Cobalt - Total	49	µg/L	15		05/05/2011	6020/200.8	KS
7440-50-8	Copper - Total	51	µg/L	1		05/05/2011	6020/200.8	KS
7439-92-1	Lead - Total	47	µg/L	1		05/05/2011	6020/200.8	KS
7439-96-5	Manganese - Total	110	µg/L	5		05/05/2011	6020/200.8	KS
7439-98-7	Molybdenum - Total	57	µg/L	25		05/05/2011	6020/200.8	KS
7440-02-0	Nickel - Total	49	µg/L	2.0		05/05/2011	6020/200.8	KS
7782-49-2	Selenium - Total	40	µg/L	1		05/05/2011	6020/200.8	KS
7440-22-4	Silver - Total	46	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-28-0	Thallium - Total	47	µg/L	2		05/05/2011	6020/200.8	KS
7440-62-2	Vanadium - Total	60	µg/L	2		05/05/2011	6020/200.8	KS
7440-66-6	Zinc - Total	51	µg/L	10		05/05/2011	6020/200.8	KS
7439-89-6	Iron - Total	1300	µg/L	20		05/11/2011	6010/200.7	WN
	Florisil Cleanup	Completed				05/03/2011	3620	DT
	Mercury Cleanup	Completed				05/04/2011	3600	ME

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Sample Number: AB73293 SW-03-MSD

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/05/2011 **Analyst:** MF
Extraction Method: 3510 **Extraction Date:** 05/03/2011 **Qualifier:** **Volume:** 980

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	45.1			
SURROGATE	#Tetrachloro-m-xylene#	38.6			
72-54-8	4,4'-DDD	0.082	0.02		1.0
72-55-9	4,4'-DDE	0.071	0.02		1.0
50-29-3	4,4'-DDT	0.069	0.02		1.0
319-84-6	a-BHC	0.068	0.02		1.0
5103-71-9	a-Chlordane	0.074	0.01		1.0
309-00-2	Aldrin	0.044	0.01		1.0
12674-11-2	Aroclor 1016	Not Detected	0.10		1.0
11104-28-2	Aroclor 1221	Not Detected	0.10		1.0
11141-16-5	Aroclor 1232	Not Detected	0.10		1.0
53469-21-9	Aroclor 1242	Not Detected	0.10		1.0
12672-29-6	Aroclor 1248	Not Detected	0.10		1.0
11097-69-1	Aroclor 1254	Not Detected	0.10		1.0
11096-82-5	Aroclor 1260	Not Detected	0.10		1.0
37324-23-5	Aroclor 1262	Not Detected	0.10		1.0
11100-14-4	Aroclor 1268	Not Detected	0.10		1.0
319-85-7	b-BHC	0.080	0.02		1.0
319-86-8	d-BHC	0.080	0.02		1.0
60-57-1	Dieldrin	0.077	0.02		1.0
959-98-8	Endosulfan I	0.076	0.02		1.0
33213-65-9	Endosulfan II	0.082	0.03		1.0
1031-07-8	Endosulfan sulfate	0.077	0.05		1.0
72-20-8	Endrin	0.083	0.02		1.0
7421-93-4	Endrin aldehyde	0.040	0.02		1.0
53494-70-5	Endrin ketone	0.079	0.02		1.0
58-89-9	g-BHC (Lindane)	0.071	0.02		1.0
5103-74-2	g-Chlordane	0.074	0.01		1.0
76-44-8	Heptachlor	0.054	0.01		1.0
1024-57-3	Heptachlor epoxide	0.084	0.01		1.0
87-82-1	Hexabromobenzene	0.069	0.02		1.0
72-43-5	Methoxychlor	0.079	0.05		1.0
2385-85-5	Mirex	0.059	0.02		1.0
59080-40-9	PBB (BP-6)	Not Detected	0.05		1.0
8001-35-2	Toxaphene	Not Detected	0.10		1.0

Sample is a matrix spike.
Pesticides are spiked at 0.1 ug/L. bp-6 and toxaphene not spiked.

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mg / L : milligram / liter (ppm)
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Sample Number: AB73293 SW-03-MSD

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Bromofluorobenzene#	98.1			
SURROGATE	#Dibromofluoromethane#	99.6			
SURROGATE	#Toluene-d8#	102			
630-20-6	1,1,1,2-Tetrachloroethane	48	1.0		1.0
71-55-6	1,1,1-Trichloroethane	45	1.0		1.0
79-34-5	1,1,2,2-Tetrachloroethane	51	1.0		1.0
79-00-5	1,1,2-Trichloroethane	52	1.0		1.0
75-34-3	1,1-Dichloroethane	50	1.0		1.0
75-35-4	1,1-Dichloroethylene	48	1.0		1.0
87-61-6	1,2,3-Trichlorobenzene	45	5.0		1.0
96-18-4	1,2,3-Trichloropropane	51	1.0		1.0
526-73-8	1,2,3-Trimethylbenzene	46	1.0		1.0
120-82-1	1,2,4-Trichlorobenzene	42	5.0		1.0
95-63-6	1,2,4-Trimethylbenzene	45	1.0		1.0
96-12-8	1,2-Dibromo-3-chloropropane	48	5.0		1.0
106-93-4	1,2-Dibromoethane	49	1.0		1.0
95-50-1	1,2-Dichlorobenzene	48	1.0		1.0
107-06-2	1,2-Dichloroethane	50	1.0		1.0
78-87-5	1,2-Dichloropropane	48	1.0		1.0
108-67-8	1,3,5-Trimethylbenzene	44	1.0		1.0
541-73-1	1,3-Dichlorobenzene	47	1.0		1.0
106-46-7	1,4-Dichlorobenzene	46	1.0		1.0
78-93-3	2-Butanone (MEK)	41	5.0		1.0
591-78-6	2-Hexanone	42	5.0		1.0
91-57-6	2-Methylnaphthalene	34	5.0	X	1.0
67-64-1	2-Propanone (acetone)	34	20		1.0
108-10-1	4-Methyl-2-pentanone (MIBK)	50	5.0		1.0
107-13-1	Acrylonitrile	48	5.0	Z	1.0
71-43-2	Benzene	49	1.0		1.0
108-86-1	Bromobenzene	51	1.0		1.0
74-97-5	Bromochloromethane	51	1.0		1.0
75-27-4	Bromodichloromethane	46	1.0		1.0
75-25-2	Bromoform	40	1.0		1.0
74-83-9	Bromomethane	52	5.0		1.0
75-15-0	Carbon disulfide	45	1.0		1.0
56-23-5	Carbon tetrachloride	45	1.0		1.0
108-90-7	Chlorobenzene	44	1.0		1.0
75-00-3	Chloroethane	51	5.0		1.0
67-66-3	Chloroform	49	1.0		1.0
74-87-3	Chloromethane	54	5.0		1.0

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Sample Number: AB73293 SW-03-MSD

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
156-59-2	cis-1,2-Dichloroethylene	45	1.0		1.0
10061-01-5	cis-1,3-Dichloropropylene	51	1.0		1.0
110-82-7	Cyclohexane	46	5.0		1.0
124-48-1	Dibromochloromethane	49	1.0		1.0
74-95-3	Dibromomethane	48	1.0		1.0
75-71-8	Dichlorodifluoromethane	52	5.0	6	1.0
60-29-7	Diethyl ether	51	5.0		1.0
108-20-3	Diisopropyl Ether	49	5.0		1.0
100-41-4	Ethylbenzene	48	1.0		1.0
637-92-3	Ethyltertiarybutylether	41	5.0		1.0
67-72-1	Hexachloroethane	41	5.0		1.0
98-82-8	Isopropylbenzene	45	1.0		1.0
108383 106423	m & p - Xylene	90	2.0		1.0
74-88-4	Methyl iodide	44	1.0		1.0
75-09-2	Methylene chloride	47	5.0		1.0
1634-04-4	Methyltertiarybutylether	53	1.0		1.0
91-20-3	Naphthalene	49	5.0	X	1.0
104-51-8	n-Butylbenzene	44	1.0		1.0
103-65-1	n-Propylbenzene	46	1.0		1.0
95-47-6	o-Xylene	47	1.0		1.0
99-87-6	p-Isopropyl toluene	44	1.0		1.0
135-98-8	sec-Butylbenzene	45	1.0		1.0
100-42-5	Styrene	40	1.0		1.0
98-06-6	tert-Butylbenzene	46	1.0		1.0
75-65-0	tertiary Butyl Alcohol	230	50		1.0
994-05-8	tertiaryAmylmethylether	41	5.0		1.0
127-18-4	Tetrachloroethylene	41	1.0		1.0
109-99-9	Tetrahydrofuran	48	5.0		1.0
108-88-3	Toluene	49	1.0		1.0
156-60-5	trans-1,2-Dichloroethylene	58	1.0		1.0
10061-02-6	trans-1,3-Dichloropropylene	49	1.0		1.0
110-57-6	trans-1,4-Dichloro-2-butene	40	5.0	Z	1.0
79-01-6	Trichloroethylene	47	1.0		1.0
75-69-4	Trichlorofluoromethane	44	1.0		1.0
75-01-4	Vinyl chloride	45	1.0		1.0

Sample is a matrix spike.
Compounds spiked at 50 ug/L, except tertiary butyl alcohol spiked at 250 ug/L & m&p-xylene spiked at 100 ug/L.

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Sample Number: AB73293 SW-03-MSD

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 990

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	67.2			
SURROGATE	#2,4,6-Tribromophenol#	89.4			
SURROGATE	#2-Fluorophenol#	22.0			
SURROGATE	#Nitrobenzene - D5#	47.5			
SURROGATE	#Phenol - D6#	14.6			
SURROGATE	#p-Terphenyl-D14#	67.0			
120-82-1	1,2,4-Trichlorobenzene	26	2.0		1.0
95-95-4	2,4,5-Trichlorophenol	93	5.1	6	1.0
88-06-2	2,4,6-Trichlorophenol	84	4.0		1.0
120-83-2	2,4-Dichlorophenol	73	10		1.0
105-67-9	2,4-Dimethylphenol	60	5.1		1.0
51-28-5	2,4-Dinitrophenol	91	25		1.0
121-14-2	2,4-Dinitrotoluene	45	5.1		1.0
606-20-2	2,6-Dinitrotoluene	47	5.1		1.0
95-51-2	2-Chloroaniline	35	5.1		1.0
91-58-7	2-Chloronaphthalene	35	2.0		1.0
95-57-8	2-Chlorophenol	50	10		1.0
534-52-1	2-Methyl-4,6-dinitrophenol	95	20		1.0
91-57-6	2-Methylnaphthalene	31	5.1		1.0
95-48-7	2-Methylphenol (o-Cresol)	43	10		1.0
88-74-4	2-Nitroaniline	40	20		1.0
88-75-5	2-Nitrophenol	71	5.1		1.0
108394,106445	3 & 4-Methylphenol	39	20		1.0
99-09-2	3-Nitroaniline	37	20		1.0
101-55-3	4-Bromophenyl phenyl ether	42	2.0		1.0
59-50-7	4-Chloro-3-methyl-phenol	69	5.1		1.0
106-47-8	4-Chloroaniline	34	10		1.0
7005-72-3	4-Chlorodiphenylether	35	1.0		1.0
100-01-6	4-Nitroaniline	37	20		1.0
100-02-7	4-Nitrophenol	15	25	J	1.0
83-32-9	Acenaphthene	36	1.0		1.0
208-96-8	Acenaphthylene	39	1.0		1.0
62-53-3	Aniline	20	4.0		1.0
120-12-7	Anthracene	42	1.0		1.0
103-33-3	Azobenzene	29	2.0	5	1.0
56-55-3	Benzo[a]anthracene	38	1.0		1.0
50-32-8	Benzo[a]pyrene	35	1.0		1.0
205-99-2	Benzo[b]fluoranthene	35	1.0		1.0
191-24-2	Benzo[g,h,i]perylene	28	1.0		1.0
207-08-9	Benzo[k]fluoranthene	33	1.0		1.0

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Sample Number: AB73293 SW-03-MSD

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/02/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 990

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
100-51-6	Benzyl Alcohol	43	51	T	1.0
111-91-1	Bis(2-chloroethoxy)methane	29	2.0		1.0
111-44-4	Bis(2-chloroethyl)ether	24	1.0		1.0
108-60-1	Bis(2-chloroisopropyl)ether	22	1.0	5	1.0
117-81-7	Bis(2-ethylhexyl)phthalate	31	5.1		1.0
85-68-7	Butyl benzyl phthalate	42	5.1		1.0
86-74-8	Carbazole	42	5.1		1.0
218-01-9	Chrysene	38	1.0		1.0
53-70-3	Dibenz[a,h]anthracene	30	2.0		1.0
132-64-9	Dibenzofuran	36	4.0		1.0
84-66-2	Diethylphthalate	43	5.1		1.0
131-11-3	Dimethyl phthalate	43	5.1		1.0
84-74-2	Di-n-butyl phthalate	42	5.1		1.0
117-84-0	Di-n-octyl phthalate	31	5.1		1.0
206-44-0	Fluoranthene	41	1.0		1.0
86-73-7	Fluorene	38	1.0		1.0
118-74-1	Hexachlorobenzene	39	1.0		1.0
87-68-3	Hexachlorobutadiene	26	1.0		1.0
77-47-4	Hexachlorocyclopentadiene	21	10	Z	1.0
67-72-1	Hexachloroethane	20	1.0		1.0
193-39-5	Indeno(1,2,3-c,d)pyrene	30	2.0		1.0
78-59-1	Isophorone	28	1.0		1.0
121-69-7	N,N-dimethylaniline	29	5.1		1.0
91-20-3	Naphthalene	29	1.0		1.0
98-95-3	Nitrobenzene	31	2.0		1.0
100-61-8	N-methylaniline	30	1.0		1.0
67-75-9	N-Nitrosodimethylamine	10	5.1	5	1.0
621-64-7	N-Nitrosodi-n-propylamine	25	2.0	5	1.0
86-30-6	N-Nitrosodiphenylamine	42	2.0		1.0
87-86-5	Pentachlorophenol	97	20		1.0
85-01-8	Phenanthrene	42	1.0		1.0
108-95-2	Phenol	15	5.1		1.0
129-00-0	Pyrene	41	1.0		1.0
110-86-1	Pyridine	10	20	T 5	1.0
632-22-4	Tetramethylurea	17	1.0	5	1.0

Sample is a matrix spike.
Phenol compounds are spiked at 100 ug/L.
Base Neutral compounds are spiked at 50 ug/L.

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Sample Number: AB73293 SW-03-MSD

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
CN_TOTAL	Cyanide	0.104	mg/L	0.005		05/05/2011	ASTM D 751	MB
	Digestion Metals Water	Completed				05/03/2011	3010/200	WN
	Digestion Mercury Water	Completed				05/05/2011	7470/245.1	TS
7439-97-6	Mercury - Total	3.9	µg/L	0.2		05/06/2011	7470/245.1	TS
7440-36-0	Antimony - Total	53	µg/L	1		05/05/2011	6020/200.8	KS
7440-38-2	Arsenic - Total	45	µg/L	1		05/05/2011	6020/200.8	KS
7440-39-3	Barium - Total	88	µg/L	5		05/05/2011	6020/200.8	KS
7440-41-7	Beryllium - Total	53	µg/L	1		05/05/2011	6020/200.8	KS
7440-43-9	Cadmium - Total	48	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-47-3	Chromium - Total	57	µg/L	1		05/05/2011	6020/200.8	KS
7440-48-4	Cobalt - Total	49	µg/L	15		05/05/2011	6020/200.8	KS
7440-50-8	Copper - Total	53	µg/L	1		05/05/2011	6020/200.8	KS
7439-92-1	Lead - Total	48	µg/L	1		05/05/2011	6020/200.8	KS
7439-96-5	Manganese - Total	120	µg/L	5		05/05/2011	6020/200.8	KS
7439-98-7	Molybdenum - Total	58	µg/L	25		05/05/2011	6020/200.8	KS
7440-02-0	Nickel - Total	49	µg/L	2.0		05/05/2011	6020/200.8	KS
7782-49-2	Selenium - Total	41	µg/L	1		05/05/2011	6020/200.8	KS
7440-22-4	Silver - Total	47	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-28-0	Thallium - Total	47	µg/L	2		05/05/2011	6020/200.8	KS
7440-62-2	Vanadium - Total	60	µg/L	2		05/05/2011	6020/200.8	KS
7440-66-6	Zinc - Total	51	µg/L	10		05/05/2011	6020/200.8	KS
7439-89-6	Iron - Total	1400	µg/L	20		05/11/2011	6010/200.7	WN
	Florisil Cleanup	Completed				05/03/2011	3620	DT
	Mercury Cleanup	Completed				05/04/2011	3600	ME

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Sample Number: AB73294 SW-04

Pesticides and PCBs

Analytical Method: 8081,8082 **Date Tested:** 05/05/2011 **Analyst:** MF
Extraction Method: 3510 **Extraction Date:** 05/03/2011 **Qualifier:** **Volume:** 940

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Decachlorobiphenyl#	45.0			
SURROGATE	#Tetrachloro-m-xylene#	40.4			
72-54-8	4,4'-DDD	Not Detected	0.02		1.0
72-55-9	4,4'-DDE	Not Detected	0.02		1.0
50-29-3	4,4'-DDT	Not Detected	0.02		1.0
319-84-6	a-BHC	Not Detected	0.02		1.0
5103-71-9	a-Chlordane	Not Detected	0.01		1.0
309-00-2	Aldrin	Not Detected	0.01		1.0
12674-11-2	Aroclor 1016	Not Detected	0.11		1.0
11104-28-2	Aroclor 1221	Not Detected	0.11		1.0
11141-16-5	Aroclor 1232	Not Detected	0.11		1.0
53469-21-9	Aroclor 1242	Not Detected	0.11		1.0
12672-29-6	Aroclor 1248	Not Detected	0.11		1.0
11097-69-1	Aroclor 1254	Not Detected	0.11		1.0
11096-82-5	Aroclor 1260	Not Detected	0.11		1.0
37324-23-5	Aroclor 1262	Not Detected	0.11		1.0
11100-14-4	Aroclor 1268	Not Detected	0.11		1.0
319-85-7	b-BHC	Not Detected	0.02		1.0
319-86-8	d-BHC	Not Detected	0.02		1.0
60-57-1	Dieldrin	Not Detected	0.02		1.0
959-98-8	Endosulfan I	Not Detected	0.02		1.0
33213-65-9	Endosulfan II	Not Detected	0.03		1.0
1031-07-8	Endosulfan sulfate	Not Detected	0.05		1.0
72-20-8	Endrin	Not Detected	0.02		1.0
7421-93-4	Endrin aldehyde	Not Detected	0.02		1.0
53494-70-5	Endrin ketone	Not Detected	0.02		1.0
58-89-9	g-BHC (Lindane)	Not Detected	0.02		1.0
5103-74-2	g-Chlordane	Not Detected	0.01		1.0
76-44-8	Heptachlor	Not Detected	0.01		1.0
1024-57-3	Heptachlor epoxide	Not Detected	0.01		1.0
87-82-1	Hexabromobenzene	Not Detected	0.02		1.0
72-43-5	Methoxychlor	Not Detected	0.05		1.0
2385-85-5	Mirex	Not Detected	0.02		1.0
59080-40-9	PBB (BP-6)	Not Detected	0.05		1.0
8001-35-2	Toxaphene	Not Detected	0.11		1.0

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Sample Number: AB73294 SW-04

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#Bromofluorobenzene#	102			
SURROGATE	#Dibromofluoromethane#	95.7			
SURROGATE	#Toluene-d8#	103			
630-20-6	1,1,1,2-Tetrachloroethane	Not Detected	1.0		1.0
71-55-6	1,1,1-Trichloroethane	Not Detected	1.0		1.0
79-34-5	1,1,2,2-Tetrachloroethane	Not Detected	1.0		1.0
79-00-5	1,1,2-Trichloroethane	Not Detected	1.0		1.0
75-34-3	1,1-Dichloroethane	Not Detected	1.0		1.0
75-35-4	1,1-Dichloroethylene	Not Detected	1.0		1.0
87-61-6	1,2,3-Trichlorobenzene	Not Detected	5.0		1.0
96-18-4	1,2,3-Trichloropropane	Not Detected	1.0		1.0
526-73-8	1,2,3-Trimethylbenzene	Not Detected	1.0		1.0
120-82-1	1,2,4-Trichlorobenzene	Not Detected	5.0		1.0
95-63-6	1,2,4-Trimethylbenzene	Not Detected	1.0		1.0
96-12-8	1,2-Dibromo-3-chloropropane	Not Detected	5.0		1.0
106-93-4	1,2-Dibromoethane	Not Detected	1.0		1.0
95-50-1	1,2-Dichlorobenzene	Not Detected	1.0		1.0
107-06-2	1,2-Dichloroethane	Not Detected	1.0		1.0
78-87-5	1,2-Dichloropropane	Not Detected	1.0		1.0
108-67-8	1,3,5-Trimethylbenzene	Not Detected	1.0		1.0
541-73-1	1,3-Dichlorobenzene	Not Detected	1.0		1.0
106-46-7	1,4-Dichlorobenzene	Not Detected	1.0		1.0
78-93-3	2-Butanone (MEK)	Not Detected	5.0		1.0
591-78-6	2-Hexanone	Not Detected	5.0		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.0	X	1.0
67-64-1	2-Propanone (acetone)	Not Detected	20		1.0
108-10-1	4-Methyl-2-pentanone (MIBK)	Not Detected	5.0		1.0
107-13-1	Acrylonitrile	Not Detected	5.0	Z	1.0
71-43-2	Benzene	Not Detected	1.0		1.0
108-86-1	Bromobenzene	Not Detected	1.0		1.0
74-97-5	Bromochloromethane	Not Detected	1.0		1.0
75-27-4	Bromodichloromethane	Not Detected	1.0		1.0
75-25-2	Bromoform	Not Detected	1.0		1.0
74-83-9	Bromomethane	Not Detected	5.0		1.0
75-15-0	Carbon disulfide	Not Detected	1.0		1.0
56-23-5	Carbon tetrachloride	Not Detected	1.0		1.0
108-90-7	Chlorobenzene	Not Detected	1.0		1.0
75-00-3	Chloroethane	Not Detected	5.0		1.0
67-66-3	Chloroform	Not Detected	1.0		1.0
74-87-3	Chloromethane	Not Detected	5.0		1.0

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Sample Number: AB73294 SW-04

Volatile Compounds

Analytical Method: 8260 **Date Tested:** 05/05/2011 **Analyst:** KCL

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
156-59-2	cis-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-01-5	cis-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-82-7	Cyclohexane	Not Detected	5.0		1.0
124-48-1	Dibromochloromethane	Not Detected	1.0		1.0
74-95-3	Dibromomethane	Not Detected	1.0		1.0
75-71-8	Dichlorodifluoromethane	Not Detected	5.0		1.0
60-29-7	Diethyl ether	Not Detected	5.0		1.0
108-20-3	Diisopropyl Ether	Not Detected	5.0		1.0
100-41-4	Ethylbenzene	Not Detected	1.0		1.0
637-92-3	Ethyltertiarybutylether	Not Detected	5.0		1.0
67-72-1	Hexachloroethane	Not Detected	5.0		1.0
98-82-8	Isopropylbenzene	Not Detected	1.0		1.0
108383,106423	m & p - Xylene	Not Detected	2.0		1.0
74-88-4	Methyl iodide	Not Detected	1.0		1.0
75-09-2	Methylene chloride	Not Detected	5.0		1.0
1634-04-4	Methyltertiarybutylether	Not Detected	1.0		1.0
91-20-3	Naphthalene	Not Detected	5.0	X	1.0
104-51-8	n-Butylbenzene	Not Detected	1.0		1.0
103-65-1	n-Propylbenzene	Not Detected	1.0		1.0
95-47-6	o-Xylene	Not Detected	1.0		1.0
99-87-6	p-Isopropyl toluene	Not Detected	1.0		1.0
135-98-8	sec-Butylbenzene	Not Detected	1.0		1.0
100-42-5	Styrene	Not Detected	1.0		1.0
98-06-6	tert-Butylbenzene	Not Detected	1.0		1.0
75-65-0	tertiary Butyl Alcohol	Not Detected	50		1.0
994-05-8	tertiaryAmylmethylether	Not Detected	5.0		1.0
127-18-4	Tetrachloroethylene	Not Detected	1.0		1.0
109-99-9	Tetrahydrofuran	Not Detected	5.0		1.0
108-88-3	Toluene	Not Detected	1.0		1.0
156-60-5	trans-1,2-Dichloroethylene	Not Detected	1.0		1.0
10061-02-6	trans-1,3-Dichloropropylene	Not Detected	1.0		1.0
110-57-6	trans-1,4-Dichloro-2-butene	Not Detected	5.0	Z	1.0
79-01-6	Trichloroethylene	Not Detected	1.0		1.0
75-69-4	Trichlorofluoromethane	Not Detected	1.0		1.0
75-01-4	Vinyl chloride	Not Detected	1.0		1.0

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Sample Number: AB73294 SW-04

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/03/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 895

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
SURROGATE	#2 - Fluorobiphenyl#	67.4			
SURROGATE	#2,4,6-Tribromophenol#	94.0			
SURROGATE	#2-Fluorophenol#	26.3			
SURROGATE	#Nitrobenzene- D5#	50.5			
SURROGATE	#Phenol - D6#	16.2			
SURROGATE	#p-Terphenyl-D14#	91.6			
120-82-1	1,2,4-Trichlorobenzene	Not Detected	2.2		1.0
95-95-4	2,4,5-Trichlorophenol	Not Detected	5.6		1.0
88-06-2	2,4,6-Trichlorophenol	Not Detected	4.5		1.0
120-83-2	2,4-Dichlorophenol	Not Detected	11		1.0
105-67-9	2,4-Dimethylphenol	Not Detected	5.6		1.0
51-28-5	2,4-Dinitrophenol	Not Detected	28		1.0
121-14-2	2,4-Dinitrotoluene	Not Detected	5.6		1.0
606-20-2	2,6-Dinitrotoluene	Not Detected	5.6		1.0
95-51-2	2-Chloroaniline	Not Detected	5.6		1.0
91-58-7	2-Chloronaphthalene	Not Detected	2.2		1.0
95-57-8	2-Chlorophenol	Not Detected	11		1.0
534-52-1	2-Methyl-4,6-dinitrophenol	Not Detected	22		1.0
91-57-6	2-Methylnaphthalene	Not Detected	5.6		1.0
95-48-7	2-Methylphenol (o-Cresol)	Not Detected	11		1.0
88-74-4	2-Nitroaniline	Not Detected	22		1.0
88-75-5	2-Nitrophenol	Not Detected	5.6		1.0
108394,106445	3 & 4-Methylphenol	Not Detected	22		1.0
99-09-2	3-Nitroaniline	Not Detected	22		1.0
101-55-3	4-Bromophenyl phenyl ether	Not Detected	2.2		1.0
59-50-7	4-Chloro-3-methyl-phenol	Not Detected	5.6		1.0
106-47-8	4-Chloroaniline	Not Detected	11		1.0
7005-72-3	4-Chlorodiphenylether	Not Detected	1.1		1.0
100-01-6	4-Nitroaniline	Not Detected	22		1.0
100-02-7	4-Nitrophenol	Not Detected	28	5	1.0
83-32-9	Acenaphthene	Not Detected	1.1		1.0
208-96-8	Acenaphthylene	Not Detected	1.1		1.0
62-53-3	Aniline	Not Detected	4.5		1.0
120-12-7	Anthracene	Not Detected	1.1		1.0
103-33-3	Azobenzene	Not Detected	2.2	5	1.0
56-55-3	Benzo[a]anthracene	Not Detected	1.1		1.0
50-32-8	Benzo[a]pyrene	Not Detected	1.1		1.0
205-99-2	Benzo[b]fluoranthene	Not Detected	1.1		1.0
191-24-2	Benzo[g,h,i]perylene	Not Detected	1.1		1.0
207-08-9	Benzo[k]fluoranthene	Not Detected	1.1		1.0

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Sample Number: AB73294 SW-04

Base Neutral Acid Compounds

Analytical Method: 8270 **Date Tested:** 05/03/2011 **Analyst:** SMH
Extraction Method: 3510 **Extraction Date:** 04/29/2011 **Qualifier:** **Volume:** 895

CAS #	Compound	Result ug/L	RL	Qualifier	Dilution Factor
100-51-6	Benzyl Alcohol	Not Detected	56		1.0
111-91-1	Bis(2-chloroethoxy)methane	Not Detected	2.2		1.0
111-44-4	Bis(2-chloroethyl)ether	Not Detected	1.1		1.0
108-60-1	Bis(2-chloroisopropyl)ether	Not Detected	1.1	5	1.0
117-81-7	Bis(2-ethylhexyl)phthalate	Not Detected	5.6		1.0
85-68-7	Butyl benzyl phthalate	Not Detected	5.6		1.0
86-74-8	Carbazole	Not Detected	5.6		1.0
218-01-9	Chrysene	Not Detected	1.1		1.0
53-70-3	Dibenz[a,h]anthracene	Not Detected	2.2		1.0
132-64-9	Dibenzofuran	Not Detected	4.5		1.0
84-66-2	Diethylphthalate	Not Detected	5.6		1.0
131-11-3	Dimethyl phthalate	Not Detected	5.6		1.0
84-74-2	Di-n-butyl phthalate	Not Detected	5.6		1.0
117-84-0	Di-n-octyl phthalate	Not Detected	5.6		1.0
206-44-0	Fluoranthene	Not Detected	1.1		1.0
86-73-7	Fluorene	Not Detected	1.1		1.0
118-74-1	Hexachlorobenzene	Not Detected	1.1		1.0
87-68-3	Hexachlorobutadiene	Not Detected	1.1		1.0
77-47-4	Hexachlorocyclopentadiene	Not Detected	11	Z	1.0
67-72-1	Hexachloroethane	Not Detected	1.1		1.0
193-39-5	Indeno(1,2,3-c,d)pyrene	Not Detected	2.2		1.0
78-59-1	Isophorone	Not Detected	1.1		1.0
121-69-7	N,N-dimethylaniline	Not Detected	5.6		1.0
91-20-3	Naphthalene	Not Detected	1.1		1.0
98-95-3	Nitrobenzene	Not Detected	2.2		1.0
100-61-8	N-methylaniline	Not Detected	1.1		1.0
67-75-9	N-Nitrosodimethylamine	Not Detected	5.6	5	1.0
621-64-7	N-Nitrosodi-n-propylamine	Not Detected	2.2	5	1.0
86-30-6	N-Nitrosodiphenylamine	Not Detected	2.2		1.0
87-86-5	Pentachlorophenol	Not Detected	22		1.0
85-01-8	Phenanthrene	Not Detected	1.1		1.0
108-95-2	Phenol	Not Detected	5.6		1.0
129-00-0	Pyrene	Not Detected	1.1		1.0
110-86-1	Pyridine	Not Detected	22	5	1.0
632-22-4	Tetramethylurea	Not Detected	1.1	5	1.0

Unidentified peaks present in sample.

CAS# : Chemical Abstract Service Registry Number
RL : Reporting Limit
ND : Not Detected

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ENVIRONMENTAL LABORATORY
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Sample Number: AB73294 SW-04

CAS#	Analyte Name	Result	Unit	RL	Qualifier	Date Tested	Method	Analyst
CN_TOTAL	Cyanide	ND	mg/L	0.005		05/05/2011	ASTM D 751	MB
	Digestion Metals Water	Completed				05/03/2011	3010/200	WN
	Digestion Mercury Water	Completed				05/05/2011	7470/245.1	TS
7439-97-6	Mercury - Total	ND	µg/L	0.2		05/06/2011	7470/245.1	TS
7440-36-0	Antimony - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-38-2	Arsenic - Total	1.5	µg/L	1		05/05/2011	6020/200.8	KS
7440-39-3	Barium - Total	67	µg/L	5		05/05/2011	6020/200.8	KS
7440-41-7	Beryllium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-43-9	Cadmium - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-47-3	Chromium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-48-4	Cobalt - Total	ND	µg/L	15		05/05/2011	6020/200.8	KS
7440-50-8	Copper - Total	2.6	µg/L	1		05/05/2011	6020/200.8	KS
7439-92-1	Lead - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7439-96-5	Manganese - Total	140	µg/L	5		05/05/2011	6020/200.8	KS
7439-98-7	Molybdenum - Total	ND	µg/L	25		05/05/2011	6020/200.8	KS
7440-02-0	Nickel - Total	5.3	µg/L	2.0		05/05/2011	6020/200.8	KS
7782-49-2	Selenium - Total	ND	µg/L	1		05/05/2011	6020/200.8	KS
7440-22-4	Silver - Total	ND	µg/L	0.2		05/05/2011	6020/200.8	KS
7440-28-0	Thallium - Total	ND	µg/L	2		05/05/2011	6020/200.8	KS
7440-62-2	Vanadium - Total	ND	µg/L	2		05/05/2011	6020/200.8	KS
7440-66-6	Zinc - Total	ND	µg/L	10		05/05/2011	6020/200.8	KS
7439-89-6	Iron - Total	250	µg/L	20		05/11/2011	6010/200.7	WN
	Florisil Cleanup	Completed				05/03/2011	3620	DT
	Mercury Cleanup	Completed				05/04/2011	3600	ME

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Qualifier Code	Qualifier Description
1	Result(s) and RL(s) are estimated due to low surrogate recovery.
2	Result is estimated due to high surrogate recovery.
3	Result(s) and RL(s) are estimated due to low matrix spike recovery.
4	Result is estimated due to high matrix spike recovery.
5	Result and RL are estimated due to low continuing calibration standard criteria failure.
6	Result is estimated due to high continuing calibration standard criteria failure.
7	Result(s) and RL(s) are estimated due to poor precision.
8	Result(s) and RL(s) are estimated due to low recovery of batch QC.
9	Result outside QC acceptance criteria.
A	Value reported is the mean of two or more determinations.
C	Value calculated from other independent parameters.
D	Analyte value quantified from a dilution(s); reporting limit (RL) raised.
E	Result is estimated due to high recovery of batch QC.
F	Amenable cyanide was not analyzed due to low level of total cyanide.
G	Result and RL are estimated due to initial calibration standard criteria failure.
H	Recommended laboratory holding time was exceeded.
I	Dilution required due to matrix interference; reporting limit (RL) raised.
J	Analyte was positively identified. Value is an estimate.
JA	Result is estimated due to multiple Aroclors present.
JC	Result is estimated since confirmation analysis did not meet acceptance criteria
JD	Due to severe degradation, specific Aroclor identification is difficult and quantitation is estimated.
K	RL(s) raised due to matrix interferences.
KR	RL(s) raised due to low sample volume submitted.
KS	RL(s) raised due to low total solids.
KW	RL(s) raised due to light sample weight.
LB	Reported library search compounds are tentative identifications with estimated concentrations.
M	The level of the method preparation blank (MPB) is reported in the qualifier column.
N	Non-homogeneous sample made analysis of sample questionable.
O	Result and RL estimated due to analysis from an open vial.
P	Recommended sample collection/preservation technique not used; reported result(s) is an estimate.
Q	Quantity of sample insufficient to perform analyses requested.
R	Result confirmed by re-extraction and analysis.
S	Supernatant analyzed.
T	Reported value is less than the reporting limit (RL). Result is estimated.
V	Value not available due to dilution.
W	Reported value is less than the method detection limit (MDL).
X	Methods 8260 & 624 are used to analyze volatile organics that have boiling points below 200°C. 2-Methylnaphthalene & naphthalene have boiling points above 200°C and are better suited to analysis by methods 8270 or 625 as semivolatile organics.
PI	Possible interference may have affected the accuracy of the laboratory result
Z	Result reported below the RL to meet the TDL in RRD Op Memo 2 (10/22/04) multiplied by applicable dilution factor.

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Appendix E

Part 201 Generic Cleanup Criteria and Screening Levels

DEQ

Attachment 1
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Acenaphthene	83329	1,300	3,800	38	4,200 (S)	4,200 (S)	4,200 (S)	4,240	ID	ID
Acenaphthylene	208968	52	150	ID	3,900 (S)	3,900 (S)	3,900 (S)	3,930	ID	ID
Acetaldehyde (I)	75070	950	2,700	130	1.1E+6	2.3E+6	4.2E+7	1.0E+9	8.9E+6	2.6E+7
Acetate	71501	4,200	12,000	(G)	ID	ID	ID	ID	ID	ID
Acetic acid	64197	4,200	12,000	(G)	NLV	NLV	1.8E+8	6.0E+9	1.0E+9 (D)	1.0E+9 (D)
Acetone (I)	67641	730	2,100	1,700	1.0E+9 (D,S)	1.0E+9 (D,S)	3.1E+7	1.0E+9	1.5E+7	1.0E+9 (D)
Acetonitrile	75058	140	400	NA	2.4E+7	4.5E+7	5.6E+6	2.00E+8	2.1E+7	2.0E+8
Acetophenone	98862	1,500	4,400	ID	6.1E+6 (S)	6.1E+6 (S)	6.1E+6 (S)	6.1E+6	ID	ID
Acrolein (I)	107028	120	330	NA	2,100	4,200	3.4E+6	2.10E+8	6.7E+6	3.4E+5
Acrylamide	79061	0.5 (A)	0.5 (A)	10 (X)	NLV	NLV	13,000	2.20E+9	NA	ID
Acrylic acid	79107	3,900	11,000	NA	1.2E+7	2.8E+7	7.6E+7	1.0E+9	1.0E+9 (D)	ID
Acrylonitrile (I)	107131	2.6	11	2.0 (M); 1.2	34,000	1.9E+5	14,000	7.50E+7	6.4E+6	ID
Alachlor	15972608	2.0 (A)	2.0 (A)	11 (X)	NLV	NLV	1,700	1.83E+5	ID	ID
Aldicarb	116063	3.0 (A)	3.0 (A)	NA	NLV	NLV	1.2E+5	6.00E+6	ID	ID
Aldicarb sulfone	1646884	2.0 (A)	2.0 (A)	NA	NLV	NLV	2.1E+6	7.80E+6	ID	ID
Aldicarb sulfoxide	1646873	4.0 (A)	4.0 (A)	NA	NLV	NLV	2.7E+6	2.80E+7	ID	ID
Aldrin	309002	0.098	0.4	0.01 (M); 8.7E-6	180 (S)	180 (S)	0.34 (AA)	180	ID	ID
Aluminum (B)	7429905	50 (V)	50 (V)	NA	NLV	NLV	6.4E+7	NA	ID	ID
Ammonia	7664417	10,000 (N)	10,000 (N)	(CC)	3.2E+6	7.1E+6	ID	5.30E+8	ID	3.5E+6
t-Amyl methyl ether (TAME)	994058	190 (E)	190 (E)	NA	2.6E+5	5.7E+5	2.6E+6 (S)	2.64E+6	NA	NA
Aniline	62533	53	220	4.0	NLV	NLV	1.4E+5	3.60E+7	NA	ID

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Anthracene	120127	43 (S)	43 (S)	ID	43 (S)	43 (S)	43 (S)	43.4	ID	ID
Antimony	7440360	**6.0 (A)**	6.0 (A)	130 (X)	NLV	NLV	68,000	NA	ID	ID
Arsenic	7440382	**10 (A)**	10 (A)	10	NLV	NLV	4,300	NA	ID	ID
Asbestos (BB)	1332214	7.0E+6 f/ml (A)	7.0E+6 f/ml (A)	NA	NLV	NLV	ID	NA	NA	ID
Atrazine	1912249	**3.0 (A)**	3.0 (A)	7.3	NLV	NLV	5,400	70,000	ID	ID
Azobenzene	103333	23	94	ID	6,400 (S)	6,400 (S)	1,600	6,400	ID	ID
Barium (B)	7440393	2,000 (A)	2,000 (A)	(G)	NLV	NLV	1.4E+7	NA	ID	ID
Benzene (I)	71432	**5.0 (A)**	5.0 (A)	200 (X)	5,600	35,000	11,000	1.75E+6	68,000	67,000
Benzidine	92875	0.3 (M); 0.0037	0.3 (M); 0.015	0.3 (M); 0.073	NLV	NLV	7.1	5.20E+5	ID	ID
Benzo(a)anthracene (Q)	56553	2.1	8.5	ID	NLV	NLV	9.4 (S,AA)	9.4	ID	ID
Benzo(b)fluoranthene (Q)	205992	1.5 (S,AA)	1.5 (S,AA)	ID	ID	ID	1.5 (S,AA)	1.5	ID	ID
Benzo(k)fluoranthene (Q)	207089	1.0 (M); 0.8 (S)	1.0 (M); 0.8 (S)	NA	NLV	NLV	1.0 (M,AA); 0.8 (S)	0.8	ID	ID
Benzo(g,h,i)perylene	191242	1.0 (M); 0.26 (S)	1.0 (M); 0.26 (S)	ID	NLV	NLV	1.0 (M,AA); 0.26 (S)	0.26	ID	ID
Benzo(a)pyrene (Q)	50328	5.0 (A)	5.0 (A)	ID	NLV	NLV	1.0 (M,AA); 0.64	1.62	ID	ID
Benzoic acid	65850	32,000	92,000	NA	NLV	NLV	3.5E+6 (S)	3.50E+6	ID	ID
Benzyl alcohol	100516	10,000	29,000	NA	NLV	NLV	4.4E+7 (S)	4.40E+7	ID	ID
Benzyl chloride	100447	7.7	32	NA	12,000	77,000	3,600	4.90E+5	NA	ID
Beryllium	7440417	4.0 (A)	4.0 (A)	(G)	NLV	NLV	2.9E+5	NA	ID	ID
bis(2-Chloroethoxy)ethane	112265	ID	ID	ID	NLV	NLV	ID	1.89E+7	ID	ID
bis(2-Chloroethyl)ether (I)	111444	**2.0**	8.3	1.0 (M); 0.79	38,000	2.1E+5	5,700	1.72E+7	1.7E+7 (S)	1.7E+7 (S)
bis(2-Ethylhexyl)phthalate	117817	**6.0 (A)**	6.0 (A)	25	NLV	NLV	320 (AA)	340	NA	340 (S)

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Boron (B)	7440428	500 (F)	500 (F)	5,000 (X)	NLV	NLV	6.2E+7	NA	ID	ID
Bromate	15541454	10 (A)	10 (A)	40 (X)	NLV	NLV	4,800	38,000	ID	ID
Bromobenzene (I)	108861	18	50	NA	1.8E+5	3.9E+5	12,000	4.13E+5	ID	ID
Bromodichloromethane	75274	80 (A,W)	80 (A,W)	ID	4,800	37,000	14,000	6.74E+6	ID	ID
Bromoform	75252	80 (A,W)	80 (A,W)	ID	4.7E+5	3.1E+6 (S)	1.4E+5	3.10E+6	ID	ID
Bromomethane	74839	10	29	35	4,000	9,000	70,000	1.45E+7	ID	ID
n-Butanol (I)	71363	950	2,700	NA	NLV	NLV	8.8E+6	7.40E+7	4.7E+7	7.4E+7 (S)
2-Butanone (MEK) (I)	78933	13,000	38,000	2,200	2.4E+8 (S)	2.4E+8 (S)	2.4E+8 (S)	2.40E+8	ID	2.4E+8 (S)
n-Butyl acetate	123864	550	1,600	NA	6.7E+6 (S)	6.7E+6 (S)	1.8E+6	6.70E+6	2.5E+6	6.7E+6 (S)
t-Butyl alcohol	75650	3,900	11,000	NA	1.0E+9 (D,S)	1.0E+9 (D,S)	7.9E+7	1.0E+9	6.1E+7	ID
Butyl benzyl phthalate	85687	1,200	2,700 (S)	67 (X)	NLV	NLV	2,700 (S)	2,690	ID	ID
n-Butylbenzene	104518	80	230	ID	ID	ID	5,900	NA	ID	ID
sec-Butylbenzene	135988	80	230	ID	ID	ID	4,400	NA	ID	ID
t-Butylbenzene (I)	98066	80	230	ID	ID	ID	8,900	NA	ID	ID
Cadmium (B)	7440439	5.0 (A)	5.0 (A)	(G,X)	NLV	NLV	1.9E+5	NA	ID	ID
Camphene (I)	79925	ID	ID	NA	440	1,000	ID	33,400	ID	ID
Caprolactam	105602	5,800	17,000	NA	NLV	NLV	3.9E+8	5.25E+9	NA	1.0E+9 (D)
Carbaryl	63252	700	2,000	NA	ID	ID	1.3E+5 (S)	1.26E+5	ID	ID
Carbazole	86748	85	350	10 (M); 4.0	NLV	NLV	7,400	7,480	ID	ID
Carbofuran	1563662	40 (A)	40 (A)	NA	NLV	NLV	3.4E+5	7.00E+5	ID	ID
Carbon disulfide (I,R)	75150	800	2,300	ID	2.5E+5	5.5E+5	1.2E+6 (S)	1.19E+6	13,000	ID

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Carbon tetrachloride	56235	5.0 (A)	5.0 (A)	45 (X)	370	2,400	4,600	7.93E+5	ID	96,000
Chlordane (J)	57749	2.0 (A)	2.0 (A)	2.0 (M); 0.00025	56 (S)	56 (S)	15 (AA)	56	ID	ID
Chloride	16887006	2.5E+5 (E)	2.5E+5 (E)	(FF)	NLV	NLV	ID	NA	ID	ID
Chlorobenzene (I)	108907	100 (A)	100 (A)	25	2.1E+5	4.7E+5 (S)	86,000	4.72E+5	1.6E+5	ID
p-Chlorobenzene sulfonic acid	98668	7,300	21,000	ID	ID	ID	ID	NA	ID	ID
1-Chloro-1,1-difluoroethane	75683	15,000	44,000	NA	3.9E+6 (S)	3.9E+6 (S)	3.9E+6 (S)	3.9E+06	NA	ID
Chloroethane	75003	430	1,700	1,100 (X)	5.7E+6 (S)	5.7E+6 (S)	4.4E+5	5.74E+6	1.1E+5	ID
2-Chloroethyl vinyl ether	110758	ID	ID	NA	ID	ID	ID	1.50E+7	ID	ID
Chloroform	67663	80 (A,W)	80 (A,W)	350	28,000	1.8E+5	1.5E+5	7.92E+6	ID	ID
Chloromethane (I)	74873	260	1,100	ID	8,600	45,000	4.9E+5	6.34E+6	36,000	2.1E+5
4-Chloro-3-methylphenol	59507	150	420	7.4	NLV	NLV	79,000	3.90E+6	ID	ID
beta-Chloronaphthalene	91587	1,800	5,200	NA	ID	ID	6,700 (S)	6,740	ID	ID
2-Chlorophenol	95578	45	130	18	4.9E+5	1.1E+6	94,000	2.20E+7	ID	ID
o-Chlorotoluene (I)	95498	150	420	ID	2.2E+5	3.7E+5 (S)	44,000	3.73E+5	ID	ID
Chlorpyrifos	2921882	22	63	2.0 (M); 0.002	2.9	6.6	1,100 (S)	1,120	ID	ID
Chromium (III) (B,H)	16065831	100 (A)	100 (A)	(G,X)	NLV	NLV	2.9E+8	NA	ID	ID
Chromium (VI)	18540299	100 (A)	100 (A)	11	NLV	NLV	4.6E+5	NA	ID	ID
Chrysene (Q)	218019	1.6 (S)	1.6 (S)	ID	ID	ID	1.6 (S,AA)	1.6	ID	ID
Cobalt	7440484	40	100	100	NLV	NLV	2.4E+6	NA	ID	ID
Copper (B)	7440508	1,000 (E)	1,000 (E)	(G)	NLV	NLV	7.4E+6	NA	ID	ID
Cyanazine	21725462	2.3	9.4	56 (X)	NLV	NLV	2,800	1.70E+5	ID	ID

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Cyanide (P,R)	57125	200 (A)	200 (A)	5.2	NLV	NLV	57,000	NA	ID	ID
Cyclohexanone	108941	33,000	94,000	NA	1,500	3,300	2.3E+7 (S)	2.30E+7	NA	ID
Dacthal	1861321	73	210	NA	NLV	NLV	500 (S)	500	ID	ID
Dalapon	75990	200 (A)	200 (A)	NA	NLV	NLV	1.2E+7	5.02E+8	ID	ID
4-4'-DDD	72548	9.1	37	NA	NLV	NLV	44 (AA)	90	ID	ID
4-4'-DDE	72559	4.3	15	NA	NLV	NLV	27 (AA)	120	ID	ID
4-4'-DDT	50293	3.6	10	0.02 (M); 1.1E-5	NLV	NLV	13 (AA)	25	NA	ID
Decabromodiphenyl ether	1163195	30 (S)	30 (S)	NA	30 (S)	30 (S)	30 (S)	30	ID	ID
Di-n-butyl phthalate	84742	880	2,500	9.7	NLV	NLV	11,000 (S)	11,200	NA	ID
Di(2-ethylhexyl) adipate	103231	400 (A)	400 (A)	ID	NLV	NLV	470 (S)	471	ID	ID
Di-n-octyl phthalate	117840	130	380	ID	NLV	NLV	400	3,000	ID	ID
Diacetone alcohol (I)	123422	ID	ID	NA	NLV	NLV	ID	1.0E+9	1.0E+9 (S)	ID
Diazinon	333415	1.3	3.8	1.0 (M); 0.004	NLV	NLV	1,300	68,800	NA	ID
Dibenzo(a,h)anthracene (Q)	53703	2.0 (M); 0.21	2.0 (M); 0.85	ID	NLV	NLV	2.0 (M,AA); 0.31	2.49	ID	ID
Dibenzofuran	132649	ID	ID	4.0	10,000 (S)	10,000 (S)	ID	10,000	ID	ID
Dibromochloromethane	124481	80 (A,W)	80 (A,W)	ID	14,000	1.1E+5	18,000	2.60E+6	ID	ID
Dibromochloropropane	96128	0.2 (A)	0.2 (A)	ID	1,200 (S)	1,200 (S)	390	1,230	NA	ID
Dibromomethane	74953	80	230	NA	ID	ID	5.3E+5	1.10E+7	ID	ID
Dicamba	1918009	220	630	NA	NLV	NLV	5.9E+5	4.5E+6	ID	ID
1,2-Dichlorobenzene	95501	600 (A)	600 (A)	13	1.6E+5 (S)	1.6E+5 (S)	1.6E+5 (S)	1.56E+5	NA	1.6E+5 (S)
1,3-Dichlorobenzene	541731	6.6	19	28	18,000	41,000	2,000	1.11E+5	ID	ID

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1,4-Dichlorobenzene	106467	75 (A)	75 (A)	17	16,000	74,000 (S)	6,400	73,800	NA	ID
3,3'-Dichlorobenzidine	91941	1.1	4.3	0.3 (M); 0.2	NLV	NLV	180	3,110	ID	ID
Dichlorodifluoromethane	75718	1,700	4,800	ID	2.2E+5	3.0E+5 (S)	3.0E+5 (S)	3.00E+5	ID	ID
1,1-Dichloroethane	75343	880	2,500	740	1.0E+6	2.3E+6	2.4E+6	5.06E+6	3.8E+5	ID
1,2-Dichloroethane (I)	107062	5.0 (A)	5.0 (A)	360 (X)	9,600	59,000	19,000	8.52E+6	2.5E+6	ID
1,1-Dichloroethylene (I)	75354	7.0 (A)	7.0 (A)	130	200	1,300	11,000	2.25E+6	97,000	1.4E+5
cis-1,2-Dichloroethylene	156592	70 (A)	70 (A)	620	93,000	2.1E+5	2.0E+5	3.50E+6	5.3E+5	ID
trans-1,2-Dichloroethylene	156605	100 (A)	100 (A)	1,500 (X)	85,000	2.0E+5	2.2E+5	6.30E+6	2.3E+5	ID
2,6-Dichloro-4-nitroaniline	99309	2,200	6,300	NA	NLV	NLV	7,000 (S)	7,000	ID	ID
2,4-Dichlorophenol	120832	73	210	11	NLV	NLV	48,000	4.50E+6	ID	ID
2,4-Dichlorophenoxyacetic acid	94757	70 (A)	70 (A)	220	NLV	NLV	1.2E+5	6.80E+5	ID	ID
1,2-Dichloropropane (I)	78875	5.0 (A)	5.0 (A)	230 (X)	16,000	36,000	16,000	2.80E+6	5.5E+5	2.8E+6 (S)
1,3-Dichloropropene	542756	8.5	35	9.0 (X)	3,900	26,000	5,500	2.80E+6	1.3E+5	ID
Dichlorovos	62737	1.6	6.7	NA	NLV	NLV	5,900	1.60E+7	NA	ID
Dicyclohexyl phthalate	84617	ID	ID	NA	ID	ID	ID	4,000	ID	ID
Dieldrin	60571	0.11	0.43	0.02 (M); 6.5E-6	200 (S)	200 (S)	2.4 (AA)	195	ID	ID
Diethyl ether	60297	10 (E)	10 (E)	ID	6.1E+7 (S)	6.1E+7 (S)	3.5E+7	6.10E+7	6.5E+5	6.1E+7 (S)
Diethyl phthalate	84662	5,500	16,000	110	NLV	NLV	1.1E+6 (S)	1.08E+6	NA	ID
Diethylene glycol monobutyl ether	112345	88	250	NA	NLV	NLV	4.0E+6	1.0E+9	ID	ID
Diisopropyl ether	108203	30	86	ID	8,000 (S)	8,000 (S)	8,000 (S)	8,041	8,000 (S)	ID
Diisopropylamine (I)	108189	5.6	16	NA	2.1E+7	3.7E+7 (S)	21,000	3.69E+7	4.6E+6	ID

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Dimethyl phthalate	131113	73,000	2.1E+5	NA	NLV	NLV	4.2E+6 (S)	4.19E+6	NA	ID
N,N-Dimethylacetamide	127195	180	520	4,100 (X)	NLV	NLV	2.3E+7	1.0E+9	NA	ID
N,N-Dimethylaniline	121697	16	46	NA	2.4E+5	1.3E+6 (S)	20,000	1.27E+6	NA	1.3E+6 (S)
Dimethylformamide (I)	68122	700	2,000	NA	NLV	NLV	1.1E+8	1.0E+9	ID	ID
2,4-Dimethylphenol	105679	370	1,000	380	NLV	NLV	5.2E+5	7.87E+6	ID	ID
2,6-Dimethylphenol	576261	4.4	13	NA	NLV	NLV	6,300	6.14E+6	ID	ID
3,4-Dimethylphenol	95658	10	29	NA	NLV	NLV	18,000	4.93E+6	ID	ID
Dimethylsulfoxide	67685	2.2E+5	6.3E+5	1.9E+5	NLV	NLV	1.7E+8 (S)	1.66E+8	ID	ID
2,4-Dinitrotoluene	121142	7.7	32	NA	NLV	NLV	8,600	2.70E+5	ID	ID
Dinoseb	88857	7.0 (A)	7.0 (A)	1.0 (M); 0.48	NLV	NLV	7,000	52,000	ID	ID
1,4-Dioxane (I)	123911	85	350	2,800 (X)	NLV	NLV	1.7E+6	9.00E+8	1.4E+8	ID
Diquat	85007	20 (A)	20 (A)	NA	NLV	NLV	7.0E+5 (S)	7.00E+5	ID	ID
Dissolved oxygen (DO)	NA	ID	ID	(EE)	ID	ID	ID	NA	NA	NA
Diuron	330541	31	90	NA	NLV	NLV	37,000 (S)	37,300	ID	ID
Endosulfan (J)	115297	44	130	0.03 (M); 0.029	ID	ID	510 (S)	510	ID	ID
Endothall	145733	100 (A)	100 (A)	NA	NLV	NLV	2.5E+7 (AA)	1.00E+8	ID	ID
Endrin	72208	2.0 (A)	2.0 (A)	ID	NLV	NLV	160 (AA)	250	ID	ID
Epichlorohydrin (I)	106898	5.0 (M); 2.0 (A)	5.0 (M); 2.0 (A)	NA	3.2E+5	6.3E+5	11,000	6.60E+7	4.7E+7	ID
Ethanol (I)	64175	1.9E+6	3.8E+6	ID	NLV	NLV	1.0E+9 (D,S)	1.0E+9	9.7E+7	ID
Ethyl acetate (I)	141786	6,600	19,000	NA	6.4E+7 (S)	6.4E+7 (S)	6.4E+7 (S)	6.40E+7	4.2E+6	ID
Ethyl-tert-butyl ether (ETBE)	637923	49 (E)	49 (E)	ID	2.9E+6	5.6E+6 (S)	ID	5.63E+6	ID	ID

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Ethylbenzene (I)	100414	74 (E)	74 (E)	18	1.1E+5	1.7E+5 (S)	1.7E+5 (S)	1.69E+5	43,000	1.7E+5 (S)
Ethylene dibromide	106934	0.05 (A)	0.05 (A)	5.7 (X)	2,400	15,000	25	4.20E+6	ID	ID
Ethylene glycol	107211	15,000	42,000	1.9E+5 (X)	NLV	NLV	1.0E+9 (D,S)	1.0E+9	NA	1.0E+9 (D,S)
Ethylene glycol monobutyl ether	111762	3,700	10,000	NA	2.9E+6	6.5E+6	5.3E+7	2.24E+8	NA	ID
Fluoranthene	206440	210 (S)	210 (S)	1.6	210 (S)	210 (S)	210 (S)	206	ID	ID
Fluorene	86737	880	2,000 (S)	12	2,000 (S)	2,000 (S)	2,000 (S)	1,980	ID	ID
Fluorine (soluble fluoride) (B)	7782414	2,000 (E)	2,000 (E)	ID	NLV	NLV	1.2E+7	NA	ID	ID
Formaldehyde	50000	1,300	3,800	120	63,000	3.6E+5	3.0E+7	5.50E+8	ID	61,000
Formic acid (I,U)	64186	10,000	29,000	ID	7.7E+6	1.5E+7	6.0E+8	1.0E+9	1.0E+9 (D)	3.5E+8
1-Formylpiperidine	2591868	80	230	NA	ID	ID	ID	NA	ID	ID
Gentian violet	548629	15	63	NA	NLV	NLV	1.0E+6 (S)	1.00E+6	ID	ID
Glyphosate	1071836	700 (A)	700 (A)	NA	NLV	NLV	1.2E+7 (S,AA)	1.16E+7	ID	ID
Heptachlor	76448	0.4 (A)	0.4 (A)	0.01 (M); 0.0018	180 (S)	180 (S)	2.9 (AA)	180	ID	ID
Heptachlor epoxide	1024573	0.2 (A)	0.2 (A)	ID	NLV	NLV	9.0 (AA)	200	ID	ID
n-Heptane	142825	2,700 (S)	2,700 (S)	NA	2,700 (S)	2,700 (S)	2,700 (S)	2,690	200	2,700 (S)
Hexabromobenzene	87821	0.17 (S); 20	0.17 (S); 58	ID	ID	ID	0.17 (S); 1,500	0.17	ID	ID
Hexachlorobenzene (C-66)	118741	1.0 (A)	1.0 (A)	0.2 (M); 0.0003	440	3,000	4.6	6,200	ID	ID
Hexachlorobutadiene (C-46)	87683	15	42	0.053	1,600	3,200 (S)	400	3,230	ID	ID
alpha-Hexachlorocyclohexane	319846	0.43	1.7	ID	2,000 (S)	2,000 (S)	60	2,000	ID	ID
beta-Hexachlorocyclohexane	319857	0.88	3.6	ID	NLV	NLV	120	240	ID	ID
Hexachlorocyclopentadiene (C-56)	77474	50 (A)	50 (A)	ID	130	420	1,600	1,800	ID	ID

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Hexachloroethane	67721	7.3	21	6.7 (X)	27,000	50,000 (S)	1,900	50,000	ID	ID
n-Hexane	110543	3,000	8,600	NA	12,000 (S)	12,000 (S)	12,000 (S)	12,000	12,000 (S)	ID
2-Hexanone	591786	1,000	2,900	ID	4.2E+6	8.7E+6	5.2E+6	1.60E+7	NA	ID
Indeno(1,2,3-cd)pyrene (Q)	193395	2.0 (M); 0.022 (S)	2.0 (M); 0.022 (S)	ID	NLV	NLV	2.0 (M,AA); 0.022 (S)	0.022	ID	ID
Iron (B)	7439896	300 (E)	300 (E)	NA	NLV	NLV	5.8E+7	NA	ID	ID
Isobutyl alcohol (I)	78831	2,300	6,700	NA	7.6E+7 (S)	7.6E+7 (S)	2.5E+7	7.60E+7	ID	ID
Isophorone	78591	770	3,100	1,300 (X)	NLV	NLV	9.9E+5	1.20E+7	ID	1.2E+7 (S)
Isopropyl alcohol (I)	67630	470	1,300	57,000 (X)	NLV	NLV	1.3E+7	1.0E+9	6.0E+7	1.0E+9 (D,S)
Isopropyl benzene	98828	800	2,300	28	56,000 (S)	56,000 (S)	56,000 (S)	56,000	29,000	ID
Lead (B)	7439921	4.0 (L)	4.0 (L)	(G,X)	NLV	NLV	ID	NA	ID	ID
Lindane	58899	0.2 (A)	0.2 (A)	0.03 (M); 0.026	ID	ID	190	6,800	ID	ID
Lithium (B)	7439932	170	350	440	NLV	NLV	5.4E+6	NA	ID	ID
Magnesium (B)	7439954	4.0E+5	1.1E+6	NA	NLV	NLV	1.0E+9 (D)	NA	ID	ID
Manganese (B)	7439965	50 (E)	50 (E)	(G,X)	NLV	NLV	9.1E+6	NA	ID	ID
Mercury (Total) (B,Z)	Varies	2.0 (A)	2.0 (A)	0.0013	56 (S)	56 (S)	56 (S)	56	ID	ID
Methane	74828	ID	ID	NA	(K)	(K)	ID	NA	520	ID
Methanol	67561	3,700	10,000	5.9E+5 (X)	2.9E+7 (S)	2.9E+7 (S)	2.9E+7 (S)	2.90E+7	4.5E+6	2.9E+7 (S)
Methoxychlor	72435	40 (A)	40 (A)	NA	ID	ID	45 (S)	45	ID	ID
2-Methoxyethanol (I)	109864	7.3	21	NA	NLV	NLV	8.3E+5	1.0E+9	ID	ID
2-Methyl-4-chlorophenoxyacetic acid	94746	7.3	21	NA	NLV	NLV	9,200	9.24E+5	ID	ID
2-Methyl-4,6-dinitrophenol	534521	20 (M); 2.6	20 (M); 7.3	NA	NLV	NLV	9,500	2.00E+5	ID	ID

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N-Methyl-morpholine (I)	109024	20	56	NA	NLV	NLV	1.5E+6	1.0E+9	ID	ID
Methyl parathion	298000	1.8	5.2	NA	NLV	NLV	3,000	50,000	ID	ID
4-Methyl-2-pentanone (MIBK) (I)	108101	1,800	5,200	ID	2.0E+7 (S)	2.0E+7 (S)	1.3E+7	2.00E+7	ID	2.0E+7 (S)
Methyl-tert-butyl ether (MTBE)	1634044	40 (E)	40 (E)	7,100 (X)	4.7E+7 (S)	4.7E+7 (S)	6.1E+5	4.68E+7	ID	ID
Methylcyclopentane (I)	96377	ID	ID	NA	22,000	49,000	ID	73,890	ID	ID
4,4'-Methylene-bis-2-chloroaniline (MBOCA)	101144	1.1	4.5	NA	NLV	NLV	110 (AA)	14,000	ID	ID
Methylene chloride	75092	5.0 (A)	5.0 (A)	1,500 (X)	2.2E+5	1.4E+6	2.2E+5	1.70E+7	ID	ID
2-Methylnaphthalene	91576	260	750	19	25,000 (S)	25,000 (S)	25,000 (S)	24,600	ID	ID
Methylphenols (J)	1319773	370	1,000	30 (M); 25	NLV	NLV	8.1E+5	2.80E+7	NA	ID
Metolachlor	51218452	240	990	15	NLV	NLV	91,000	5.30E+5	ID	ID
Metribuzin	21087649	180	520	NA	ID	ID	1.2E+6 (S)	1.2E+6	ID	ID
Mirex	2385855	0.02 (M); 6.8E-6 (S)	0.02 (M); 6.8E-6 (S)	.02 (M); 6.8E-6 (S	ID	ID	0.02 (M); 6.8E-6 (S)	6.8E-6	NA	ID
Molybdenum (B)	7439987	73	210	3,200 (X)	NLV	NLV	9.7E+5	NA	ID	ID
Naphthalene	91203	520	1,500	11	31,000 (S)	31,000 (S)	31,000 (S)	31,000	NA	31,000 (S)
Nickel (B)	7440020	100 (A)	100 (A)	(G)	NLV	NLV	7.4E+7	NA	ID	ID
Nitrate (B,N)	14797558	10,000 (A,N)	10,000 (A,N)	ID	NLV	NLV	3.1E+8	NA	ID	ID
Nitrite (B,N)	14797650	1,000 (A,N)	1,000 (A,N)	NA	NLV	NLV	ID	NA	ID	ID
Nitrobenzene (I)	98953	3.4	9.6	180 (X)	2.8E+5	5.5E+5	11,000	2.09E+6	NA	ID
2-Nitrophenol	88755	20	58	ID	NLV	NLV	79,000	2.50E+6	ID	ID
n-Nitroso-di-n-propylamine	621647	5.0 (M); 0.19	5.0 (M); 0.77	NA	NLV	NLV	360	9.89E+6	ID	ID

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N-Nitrosodiphenylamine	86306	270	1,100	NA	NLV	NLV	35,000 (S)	35,100	ID	ID
Oxamyl	23135220	200 (A)	200 (A)	NA	NLV	NLV	6.2E+7	2.80E+8	ID	ID
Oxo-hexyl acetate	88230357	73	210	NA	ID	ID	ID	NA	ID	ID
Pendimethalin	40487421	280 (S)	280 (S)	NA	NLV	NLV	280 (S)	275	ID	ID
Pentachlorobenzene	608935	6.1	17	5.0 (M); 0.019	ID	ID	240	650	ID	ID
Pentachloronitrobenzene	82688	32 (S)	32 (S)	NA	32 (S)	32 (S)	32 (S)	32	ID	ID
Pentachlorophenol	87865	1.0 (A)	1.0 (A)	(G,X)	NLV	NLV	200	1.85E+6	ID	ID
Pentane	109660	ID	ID	NA	38,000 (S)	38,000 (S)	ID	38,200	340	38,000 (S)
2-Pentene (l)	109682	ID	ID	NA	ID	ID	ID	2.03E+5	ID	ID
pH	NA	6.5 to 8.5 (E)	6.5 to 8.5 (E)	6.5 to 9.0	ID	ID	ID	NA	NA	NA
Phenanthrene	85018	52	150	2.0 (M); 1.4	1,000 (S)	1,000 (S)	1,000 (S)	1,000	ID	ID
Phenol	108952	4,400	13,000	450	NLV	NLV	2.9E+7	8.28E+7	NA	ID
Phosphorus (Total)	7723140	63,000	2.4E+5	(EE)	NLV	NLV	ID	NA	ID	ID
Phthalic acid	88993	14,000	40,000	NA	NLV	NLV	1.4E+7 (S)	1.42E+7	ID	ID
Phthalic anhydride	85449	15,000	44,000	NA	NLV	NLV	6.2E+6 (S)	6.2E+6	NA	ID
Picloram	1918021	500 (A)	500 (A)	46	NLV	NLV	4.3E+5 (S)	4.30E+5	ID	ID
Piperidine	110894	3.2	9.2	NA	NLV	NLV	34,000	1.0E+9	ID	ID
Polybrominated biphenyls (J)	67774327	0.03	0.09	ID	NLV	NLV	ID	1.66E+7	ID	ID
Polychlorinated biphenyls (PCBs) (J,T)	1336363	0.5 (A)	0.5 (A)	0.2 (M); 2.6E-5	45 (S)	45 (S)	3.3 (AA)	44.7	ID	ID
Prometon	1610180	160	460	NA	NLV	NLV	1.8E+5	7.50E+5	ID	ID
Propachlor	1918167	95	270	NA	NLV	NLV	4.4E+5	6.55E+5	ID	ID

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Propazine	139402	200	560	NA	NLV	NLV	8,600 (S)	8,600	ID	ID
Propionic acid	79094	12,000	35,000	ID	NLV	NLV	2.8E+8	1.0E+9	1.0E+9 (D)	ID
Propyl alcohol (I)	71238	1,400	4,000	NA	NLV	NLV	2.8E+7	1.0E+9	7.1E+7	1.0E+9 (D,S)
n-Propylbenzene (I)	103651	80	230	ID	ID	ID	15,000	NA	ID	ID
Propylene glycol	57556	1.5E+5	4.2E+5	2.9E+5	NLV	NLV	1.0E+9 (D,S)	1.0E+9	ID	ID
Pyrene	129000	140 (S)	140 (S)	ID	140 (S)	140 (S)	140 (S)	135	ID	ID
Pyridine (I)	110861	20 (M); 7.3	21	NA	5,500	12,000	94,000	3.00E+5	81,000	ID
Selenium (B)	7782492	50 (A)	50 (A)	5.0	NLV	NLV	9.7E+5	NA	ID	ID
Silver (B)	7440224	34	98	0.2 (M); 0.06	NLV	NLV	1.5E+6	NA	ID	ID
Silvex (2,4,5-TP)	93721	50 (A)	50 (A)	30	NLV	NLV	43,000	1.40E+5	ID	ID
Simazine	122349	4.0 (A)	4.0 (A)	17	NLV	NLV	4,500 (S)	4,470	ID	ID
Sodium	17341252	1.2E+5	3.5E+5	NA	NLV	NLV	1.0E+9 (D)	NA	ID	ID
Sodium azide	26628228	88	250	50 (M); 7.3	ID	ID	ID	NA	ID	ID
Strontium (B)	7440246	4,600	13,000	21,000	NLV	NLV	1.2E+8	NA	ID	ID
Styrene	100425	100 (A)	100 (A)	80 (X)	1.7E+5	3.1E+5 (S)	9,700	3.10E+5	1.4E+5	3.1E+5 (S)
Sulfate	14808798	2.5E+5 (E)	2.5E+5 (E)	NA	NLV	NLV	ID	NA	ID	ID
Tebuthiuron	34014181	510	1,500	NA	NLV	NLV	2.5E+6 (S)	2.50E+6	ID	ID
2,3,7,8-Tetrabromodibenzo-p-dic (O)	50585416	(O)	(O)	(O)	NLV	NLV	(O)	0.00996	ID	ID
1,2,4,5-Tetrachlorobenzene	95943	1,300 (S)	1,300 (S)	2.9 (X)	1,300 (S)	1,300 (S)	1,300 (S)	1,300	ID	ID
2,3,7,8-Tetrachlorodibenzo-p-dic (O)	1746016	3.0E-5 (A)	3.0E-5 (A)	1.0E-5 (M); 3.1E-9	NLV	NLV	1.0E-5 (M,O,AA)	0.019	ID	ID
1,1,1,2-Tetrachloroethane	630206	77	320	ID	15,000	96,000	30,000	1.10E+6	ID	ID

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1,1,2,2-Tetrachloroethane	79345	8.5	35	78 (X)	12,000	77,000	4,700	2.97E+6	ID	ID
Tetrachloroethylene	127184	5.0 (A)	5.0 (A)	60 (X)	25,000	1.7E+5	12,000	2.0E+5	ID	2.0E+5 (S)
Tetrahydrofuran	109999	95	270	11,000 (X)	6.9E+6	1.6E+7	1.6E+6	1.0E+9	60,000	3.6E+6
Tetranitromethane	509148	ID	ID	NA	580	3,200	ID	85,000	ID	ID
Thallium (B)	7440280	2.0 (A)	2.0 (A)	3.7 (X)	NLV	NLV	13,000	NA	ID	ID
Toluene (I)	108883	790 (E)	790 (E)	270	5.3E+5 (S)	5.3E+5 (S)	5.3E+5 (S)	5.26E+5	61,000	ID
p-Toluidine	106490	15	62	NA	NLV	NLV	24,000	7.60E+6	NA	ID
Total dissolved solids (TDS)	NA	5.0E+5 (E)	5.0E+5 (E)	(EE)	ID	ID	ID	NA	NA	NA
Toxaphene	8001352	3.0 (A)	3.0 (A)	1.0 (M); 6.8E-5	NLV	NLV	44	740	ID	740 (S)
Triallate	2303175	95	270	NA	ID	ID	4,000 (S)	4,000	ID	ID
Tributylamine	102829	10	29	ID	14,000	32,000	2,300	75,400	ID	ID
1,2,4-Trichlorobenzene	120821	70 (A)	70 (A)	99 (X)	3.0E+5 (S)	3.0E+5 (S)	19,000	3.00E+5	NA	3.0E+5 (S)
1,1,1-Trichloroethane	71556	200 (A)	200 (A)	89	6.6E+5	1.3E+6 (S)	1.3E+6 (S)	1.33E+6	ID	1.3E+6 (S)
1,1,2-Trichloroethane	79005	5.0 (A)	5.0 (A)	330 (X)	17,000	1.1E+5	21,000	4.42E+6	NA	ID
Trichloroethylene	79016	5.0 (A)	5.0 (A)	200 (X)	15,000	97,000	22,000	1.10E+6	ID	1.1E+6 (S)
Trichlorofluoromethane	75694	2,600	7,300	NA	1.1E+6 (S)	1.1E+6 (S)	1.1E+6 (S)	1.10E+6	ID	1.1E+6 (S)
2,4,5-Trichlorophenol	95954	730	2,100	NA	NLV	NLV	1.7E+5	1.20E+6	ID	ID
2,4,6-Trichlorophenol	88062	120	470	5.0	NLV	NLV	10,000	8.00E+5	ID	ID
1,2,3-Trichloropropane	96184	42	120	NA	8,300	18,000	84,000	1.90E+6	NA	ID
1,1,2-Trichloro-1,2,2-trifluoroetha	76131	1.7E+5 (S)	1.7E+5 (S)	32	1.7E+5 (S)	1.7E+5 (S)	1.7E+5 (S)	1.70E+5	ID	1.7E+5 (S)
Triethanolamine	102716	3,700	10,000	NA	NLV	NLV	1.0E+9 (D,S)	1.0E+9	ID	ID

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Triethylene glycol	112276	4,300	12,000	NA	NLV	NLV	1.0E+6 (S)	1.00E+6	ID	ID
3-Trifluoromethyl-4-nitrophenol	88302	4,500	13,000	NA	NLV	NLV	5.0E+6 (S)	5.00E+6	ID	ID
Trifluralin	1582098	37	110	NA	ID	ID	2,400	8,100	ID	ID
2,2,4-Trimethyl pentane	540841	ID	ID	NA	2,300 (S)	2,300 (S)	ID	2,330	160	ID
2,4,4-Trimethyl-2-pentene (I)	107404	ID	ID	NA	ID	ID	ID	11,900	ID	ID
1,2,4-Trimethylbenzene (I)	95636	63 (E)	63 (E)	**17**	56,000 (S)	56,000 (S)	56,000 (S)	55,890	56,000 (S)	ID
1,3,5-Trimethylbenzene (I)	108678	72 (E)	72 (E)	**45**	61,000 (S)	61,000 (S)	61,000 (S)	61,150	ID	ID
Triphenyl phosphate	115866	1,200	1,400 (S)	NA	NLV	NLV	1,400 (S)	1,430	ID	ID
tris(2,3-Dibromopropyl)phosphat	126727	10 (M); 0.71	10 (M); 2.9	ID	4,700 (S)	4,700 (S)	2,100	4,700	ID	ID
Urea	57136	ID	ID	NA	NLV	NLV	ID	NA	ID	ID
Vanadium	7440622	**4.5**	62	12	NLV	NLV	9.7E+5	NA	ID	ID
Vinyl acetate (I)	108054	640	1,800	NA	4.1E+6	8.9E+6	8.0E+6	2.00E+7	1.8E+6	4.8E+6
Vinyl chloride	75014	**2.0 (A)**	2.0 (A)	13 (X)	1,100	13,000	1,000	2.76E+6	33,000	ID
White phosphorus (R)	12185103	0.11	0.31	NA	NLV	NLV	2,900	NA	ID	ID
Xylenes (I)	1330207	280 (E)	280 (E)	**41**	1.9E+5 (S)	1.9E+5 (S)	1.9E+5 (S)	1.86E+5	70,000	1.9E+5 (S)
Zinc (B)	7440666	2,400	5,000 (E)	(G)	NLV	NLV	1.1E+8	NA	ID	ID

DEQ

Attachment 1
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DOCUMENT RELEASE DATE: MARCH 25, 2011

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			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
Guidesheet Number ⟶		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Acenaphthene	83329	NA	3.0E+5	**8,700**	9.7E+5	1.9E+8	8.1E+7	8.1E+7	8.1E+7	1.4E+10	4.1E+7	NA
Acenaphthylene	208968	NA	5,900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	NA
Acetaldehyde (I)	75070	NA	19,000	**2,600**	1.1E+8 (C)	2.2E+5	1.7E+5	1.7E+5	2.8E+5	6.0E+8	2.9E+7	1.1E+8
Acetate	71501	NA	ID	(G)	ID	ID	ID	ID	ID	ID	ID	ID
Acetic acid	64197	NA	84,000	(G)	6.5E+8 (C)	NLV	NLV	NLV	NLV	1.7E+10	1.3E+8	6.5E+8
Acetone (I)	67641	NA	**15,000**	34,000	1.1E+8 (C)	1.1E+8 (C)	1.3E+8	1.3E+8	1.9E+8	3.9E+11	2.3E+7	1.1E+8
Acetonitrile	75058	NA	2,800	NA	2.2E+7 (C)	4.8E+6	1.6E+6	1.6E+6	2.1E+6	4.0E+9	4.3E+6	2.2E+7
Acetophenone	98862	NA	30,000	ID	1.1E+6 (C)	1.1E+6 (C)	4.4E+7	4.4E+7	4.4E+7	3.3E+10	1.1E+6 (C)	1.1E+6
Acrolein (I)	107028	NA	2,400	NA	2.3E+7 (C)	410	310	310	610	1.3E+6	3.6E+6	2.3E+7
Acrylamide	79061	NA	10	200 (X)	2.6E+5	NLV	NLV	NLV	NLV	2.4E+6	1,900	NA
Acrylic acid	79107	NA	78,000	NA	1.1E+8 (C)	2.4E+6	1.9E+5	2.3E+5	2.3E+5	6.7E+7	3.5E+7 (DD)	1.1E+8
Acrylonitrile (I)	107131	NA	**100 (M); 52**	100 (M); 40	2.8E+5	6,600	5,000	5,100	10,000	4.6E+7	16,000	8.3E+6
Alachlor	15972608	NA	**52**	290 (X)	44,000	NLV	NLV	NLV	NLV	ID	93,000	NA
Aldicarb	116063	NA	60	NA	2.4E+6	NLV	NLV	NLV	NLV	ID	2.3E+5	NA
Aldicarb sulfone	1646884	NA	200 (M); 40	NA	4.2E+7	NLV	NLV	NLV	NLV	ID	2.5E+5	NA
Aldicarb sulfoxide	1646873	NA	200(M); 80	NA	5.4E+7	NLV	NLV	NLV	NLV	ID	2.9E+5	NA
Aldrin	309002	NA	NLL	NLL	NLL	1.3E+6	58,000	58,000	58,000	6.4E+5	**1,000**	NA
Aluminum (B)	7429905	6.9E+6	1,000	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	5.0E+7 (DD)	NA
Ammonia	7664417	NA	ID	(CC)	ID	ID	ID	ID	ID	6.7E+9	ID	1.0E+7
t-Amyl methyl ether (TAME)	994058	NA	3,900	NA	4.4E+5 (C)	58,000	3.4E+5	7.6E+5	1.8E+6	4.1E+9	4.4E+5 (C)	4.4E+5
Aniline	62533	NA	1,100	**330 (M); 80**	2.8E+6	NLV	NLV	NLV	NLV	6.7E+7	3.3E+5	4.5E+6

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Anthracene	120127	NA	41,000	ID	41,000	1.0E+9 (D)	1.4E+9	1.4E+9	1.4E+9	6.7E+10	2.3E+8	NA
Antimony	7440360	NA	**4,300**	94,000 (X)	4.9E+7	NLV	NLV	NLV	NLV	1.3E+7	1.8E+5	NA
Arsenic	7440382	5,800	**4,600**	4,600	2.0E+6	NLV	NLV	NLV	NLV	7.2E+5	7,600	NA
Asbestos (BB)	1332214	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	**1.0E+7 (M); 68,000**	ID	NA
Atrazine	1912249	NA	**60**	150	1.1E+5	NLV	NLV	NLV	NLV	ID	71,000 (DD)	NA
Azobenzene	103333	NA	4,200	ID	3.0E+5	6.1E+6	6.3E+5	6.3E+5	6.3E+5	1.0E+8	1.4E+5	NA
Barium (B)	7440393	75,000	1.3E+6	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	3.3E+8	3.7E+7	NA
Benzene (I)	71432	NA	**100**	4,000 (X)	2.2E+5	1,600	13,000	34,000	79,000	3.8E+8	1.8E+5	4.0E+5
Benzidine	92875	NA	1,000 (M); 6.0	1,000 (M); 6.0	1,000 (M); 140	NLV	NLV	NLV	NLV	46,000	1,000 (M); 23	NA
Benzo(a)anthracene (Q)	56553	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	**20,000**	NA
Benzo(b)fluoranthene (Q)	205992	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	20,000	NA
Benzo(k)fluoranthene (Q)	207089	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	**2.0E+5**	NA
Benzo(g,h,i)perylene	191242	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	8.0E+8	**2.5E+6**	NA
Benzo(a)pyrene (Q)	50328	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.5E+6	**2,000**	NA
Benzoic acid	65850	NA	6.4E+5	NA	7.0E+7	NLV	NLV	NLV	NLV	ID	9.9E+8	NA
Benzyl alcohol	100516	NA	2.0E+5	NA	5.8E+6 (C)	NLV	NLV	NLV	NLV	3.3E+11	5.8E+6 (C)	5.8E+6
Benzyl chloride	100447	NA	150	NA	72,000	6,300	14,000	14,000	17,000	6.2E+7	48,000	2.3E+5
Beryllium	7440417	NA	51,000	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.3E+6	4.1E+5	NA
bis(2-Chloroethoxy)ethane	112265	NA	ID	ID	ID	NLV	NLV	NLV	NLV	ID	ID	2.7E+6
bis(2-Chloroethyl)ether (I)	111444	NA	**100**	100 (M); 20	1.1E+5	8,300	3,800	3,800	3,800	9.4E+6	13,000	2.2E+6
bis(2-Ethylhexyl)phthalate	117817	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	7.0E+8	**2.8E+6**	1.0E+7

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Boron (B)	7440428	NA	**10,000**	1.0E+5 (X)	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	4.8E+7 (DD)	NA
Bromate	15541454	NA	**200**	800 (X)	96,000	NLV	NLV	NLV	NLV	ID	17,000	NA
Bromobenzene (I)	108861	NA	550	NA	3.6E+5	3.1E+5	4.5E+5	4.5E+5	4.5E+5	5.3E+8	5.4E+5	7.6E+5
Bromodichloromethane	75274	NA	1,600 (W)	ID	2.8E+5	1,200	9,100	9,700	19,000	8.4E+7	1.1E+5	1.5E+6
Bromoform	75252	NA	1,600 (W)	ID	8.7E+5 (C)	1.5E+5	9.0E+5	9.0E+5	9.0E+5	2.8E+9	8.2E+5	8.7E+5
Bromomethane	74839	NA	**200**	700	1.4E+6	860	11,000	57,000	1.4E+5	3.3E+8	3.2E+5	2.2E+6
n-Butanol (I)	71363	NA	19,000	NA	8.7E+6 (C)	NLV	NLV	NLV	NLV	2.3E+10	8.7E+6 (C)	8.7E+6
2-Butanone (MEK) (I)	78933	NA	2.6E+5	**44,000**	2.7E+7 (C)	2.7E+7 (C)	2.9E+7	2.9E+7	3.5E+7	6.7E+10	2.7E+7 (C,DD)	2.7E+7
n-Butyl acetate	123864	NA	11,000	NA	1.1E+6 (C)	1.1E+6 (C)	1.1E+8	2.6E+8	3.2E+8	4.7E+11	1.1E+6 (C)	1.1E+6
t-Butyl alcohol	75650	NA	78,000	NA	1.1E+8 (C)	1.1E+8 (C)	9.7E+7	2.0E+8	2.0E+8	1.3E+11	1.1E+8 (C)	1.1E+8
Butyl benzyl phthalate	85687	NA	3.1E+5 (C)	**1.2E+5 (X)**	3.1E+5 (C)	NLV	NLV	NLV	NLV	4.7E+10	3.1E+5 (C)	3.1E+5
n-Butylbenzene	104518	NA	1,600	ID	1.2E+5	ID	ID	ID	ID	2.0E+9	2.5E+6	1.0E+7
sec-Butylbenzene	135988	NA	1,600	ID	88,000	ID	ID	ID	ID	4.0E+8	2.5E+6	1.0E+7
t-Butylbenzene (I)	98066	NA	1,600	ID	1.8E+5	ID	ID	ID	ID	6.7E+8	2.5E+6	1.0E+7
Cadmium (B)	7440439	1,200	6,000	(G,X)	2.3E+8	NLV	NLV	NLV	NLV	1.7E+6	5.5E+5	NA
Camphene (I)	79925	NA	ID	NA	ID	3,700	1.5E+5	9.1E+5	2.2E+6	5.3E+9	ID	NA
Caprolactam	105602	NA	1.2E+5	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	6.7E+8	5.3E+7 (DD)	NA
Carbaryl	63252	NA	14,000	NA	2.6E+6	ID	ID	ID	ID	ID	2.2E+7	NA
Carbazole	86748	NA	9,400	**1,100**	8.2E+5	NLV	NLV	NLV	NLV	6.2E+7	5.3E+5	NA
Carbofuran	1563662	NA	800	NA	6.8E+6	NLV	NLV	NLV	NLV	ID	1.1E+6	NA
Carbon disulfide (I,R)	75150	NA	16,000	ID	2.8E+5 (C)	76,000	1.3E+6	7.9E+6	1.9E+7	4.7E+10	2.8E+5 (C,DD)	2.8E+5

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Carbon tetrachloride	56235	NA	**100**	900 (X)	92,000	190	3,500	12,000	28,000	1.3E+8	96,000	3.9E+5
Chlordane (J)	57749	NA	NLL	NLL	NLL	1.1E+7	1.2E+6	1.2E+6	1.2E+6	3.1E+7	**31,000**	NA
Chloride	16887006	NA	5.0E+6	(X)	ID	NLV	NLV	NLV	NLV	ID	5.0E+5 (F)	NA
Chlorobenzene (I)	108907	NA	2,000	**500**	2.6E+5 (C)	1.2E+5	7.7E+5	9.9E+5	2.1E+6	4.7E+9	2.6E+5 (C)	2.6E+5
p-Chlorobenzene sulfonic acid	98668	NA	1.5E+5	ID	NA	ID	ID	ID	ID	ID	2.3E+8	ID
1-Chloro-1,1-difluoroethane	75683	NA	3.0E+5	NA	9.6E+5 (C)	9.6E+5 (C)	7.9E+7	5.6E+8	1.4E+9	3.3E+12	9.6E+5 (C)	9.6E+5
Chloroethane	75003	NA	8,600	22,000 (X)	9.5E+5 (C)	9.5E+5 (C)	3.0E+7	1.2E+8	2.8E+8	6.7E+11	9.5E+5 (C)	9.5E+5
2-Chloroethyl vinyl ether	110758	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	1.9E+6
Chloroform	67663	NA	**1,600 (W)**	7,000	1.5E+6 (C)	7,200	45,000	1.2E+5	2.7E+5	1.3E+9	1.2E+6	1.5E+6
Chloromethane (I)	74873	NA	5,200	ID	1.1E+6 (C)	2,300	40,000	4.1E+5	1.0E+6	4.9E+9	1.1E+6 (C)	1.1E+6
4-Chloro-3-methylphenol	59507	NA	5,800	**280**	3.0E+6	NLV	NLV	NLV	NLV	ID	4.5E+6	NA
beta-Chloronaphthalene	91587	NA	6.2E+5	NA	2.3E+6	ID	ID	ID	ID	ID	5.6E+7	NA
2-Chlorophenol	95578	NA	900	360	1.9E+6	4.3E+5	9.6E+5	9.6E+5	9.6E+5	1.2E+9	1.4E+6	1.9E+7
o-Chlorotoluene (I)	95498	NA	3,300	ID	5.0E+5 (C)	2.7E+5	1.2E+6	2.9E+6	6.3E+6	4.7E+9	5.0E+5 (C)	5.0E+5
Chlorpyrifos	2921882	NA	17,000	1,500	8.4E+5	**130**	4,600	23,000	55,000	1.3E+8	1.1E+7	NA
Chromium (III) (B,H)	16065831	18,000 (total)	1.0E+9 (D)	(G,X)	1.0E+9 (D)	NLV	NLV	NLV	NLV	3.3E+8	7.9E+8	NA
Chromium (VI)	18540299	NA	30,000	**3,300**	1.4E+8	NLV	NLV	NLV	NLV	2.6E+5	2.5E+6	NA
Chrysene (Q)	218019	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	2.0E+6	NA
Cobalt	7440484	6,800	**800**	2,000	4.8E+7	NLV	NLV	NLV	NLV	1.3E+7	2.6E+6	NA
Copper (B)	7440508	32,000	5.8E+6	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.3E+8	2.0E+7	NA
Cyanazine	21725462	NA	**200**	1,100 (X)	56,000	NLV	NLV	NLV	NLV	ID	14,000	NA

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Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Cyanide (P,R)	57125	390 (total)	4,000	100	2.5E+5	NLV	NLV	NLV	NLV	2.5E+5	12,000	NA
Cyclohexanone	108941	NA	5.2E+6	NA	2.2E+8 (C)	17,000	1.0E+6	1.1E+7	2.7E+7	6.7E+10	2.2E+8 (C)	2.2E+8
Dacthal	1861321	NA	50,000	NA	3.4E+5	NLV	NLV	NLV	NLV	ID	2.3E+6	NA
Dalapon	75990	NA	4,000	NA	5.9E+7 (C)	NLV	NLV	NLV	NLV	ID	1.9E+7	5.9E+7
4-4'-DDD	72548	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	4.4E+7	95,000	NA
4-4'-DDE	72559	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	3.2E+7	45,000	NA
4-4'-DDT	50293	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	3.2E+7	57,000	NA
Decabromodiphenyl ether	1163195	NA	1.4E+5	NA	1.4E+5	1.0E+9 (D)	8.6E+7	8.6E+7	8.6E+7	2.3E+9	3.8E+6	NA
Di-n-butyl phthalate	84742	NA	7.6E+5 (C)	11,000	7.6E+5 (C)	NLV	NLV	NLV	NLV	3.3E+9	7.6E+5 (C)	7.6E+5
Di(2-ethylhexyl) adipate	103231	NA	9.6E+5 (C)	ID	9.6E+5 (C)	NLV	NLV	NLV	NLV	9.2E+9	9.6E+5 (C,DD)	9.6E+5
Di-n-octyl phthalate	117840	NA	1.0E+8	ID	1.4E+8 (C)	NLV	NLV	NLV	NLV	3.1E+10	6.9E+6	1.4E+8
Diacetone alcohol (I)	123422	NA	ID	NA	ID	NLV	NLV	NLV	NLV	1.6E+11	ID	1.1E+8
Diazinon	333415	NA	95	72	95,000	NLV	NLV	NLV	NLV	ID	12,000 (DD)	3.1E+5
Dibenzo(a,h)anthracene (Q)	53703	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	2,000	NA
Dibenzofuran	132649	NA	ID	1,700	ID	2.0E+6	1.3E+5	1.3E+5	1.3E+5	6.7E+6	ID	NA
Dibromochloromethane	124481	NA	1,600 (W)	ID	3.6E+5	3,900	24,000	24,000	33,000	1.3E+8	1.1E+5	6.1E+5
Dibromochloropropane	96128	NA	10 (M); 4.0	ID	1,200 (C)	1,200 (C)	13,000	13,000	13,000	1.3E+7	1,200 (C)	1,200
Dibromomethane	74953	NA	1,600	NA	2.0E+6 (C)	ID	ID	ID	ID	ID	2.0E+6 (C)	2.0E+6
Dicamba	1918009	NA	4,400	NA	1.2E+7	NA	NLV	NLV	NLV	ID	3.4E+6	NA
1,2-Dichlorobenzene	95501	NA	14,000	280	2.1E+5 (C)	2.1E+5 (C)	3.9E+7	3.9E+7	5.2E+7	1.0E+11	2.1E+5 (C)	2.1E+5
1,3-Dichlorobenzene	541731	NA	170	680	51,000	26,000	79,000	79,000	1.1E+5	2.0E+8	1.7E+5 (C)	1.7E+5

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1,4-Dichlorobenzene	106467	NA	1,700	360	1.4E+5	19,000	77,000	77,000	1.1E+5	4.5E+8	4.0E+5	NA
3,3'-Dichlorobenzidine	91941	NA	2,000 (M); 28	2,000 (M); 7.4	4,600	NLV	NLV	NLV	NLV	6.5E+6	6,600	NA
Dichlorodifluoromethane	75718	NA	95,000	ID	1.0E+6 (C)	9.0E+5	5.3E+7	5.5E+8	1.4E+9	3.3E+12	1.0E+6 (C)	1.0E+6
1,1-Dichloroethane	75343	NA	18,000	15,000	8.9E+5 (C)	2.3E+5	2.1E+6	5.9E+6	1.4E+7	3.3E+10	8.9E+5 (C)	8.9E+5
1,2-Dichloroethane (I)	107062	NA	100	7,200 (X)	3.8E+5	2,100	6,200	11,000	26,000	1.2E+8	91,000	1.2E+6
1,1-Dichloroethylene (I)	75354	NA	140	2,600	2.2E+5	62	1,100	5,300	13,000	6.2E+7	2.0E+5	5.7E+5
cis-1,2-Dichloroethylene	156592	NA	1,400	12,000	6.4E+5 (C)	22,000	1.8E+5	4.2E+5	9.9E+5	2.3E+9	6.4E+5 (C)	6.4E+5
trans-1,2-Dichloroethylene	156605	NA	2,000	30,000 (X)	1.4E+6 (C)	23,000	2.8E+5	8.3E+5	2.0E+6	4.7E+9	1.4E+6 (C)	1.4E+6
2,6-Dichloro-4-nitroaniline	99309	NA	44,000	NA	1.4E+5	NLV	NLV	NLV	NLV	ID	6.8E+7	NA
2,4-Dichlorophenol	120832	NA	1,500	330 (M); 220	9.6E+5	NLV	NLV	NLV	NLV	5.1E+9	6.6E+5 (DD)	1.8E+6
2,4-Dichlorophenoxyacetic acid	94757	NA	1,400	4,400	2.4E+6	NLV	NLV	NLV	NLV	6.7E+9	2.5E+6	NA
1,2-Dichloropropane (I)	78875	NA	100	4,600 (X)	3.2E+5	4,000	25,000	50,000	1.1E+5	2.7E+8	1.4E+5	5.5E+5
1,3-Dichloropropene	542756	NA	170	180 (X)	1.1E+5	1,000	18,000	68,000	1.6E+5	7.8E+8	10,000	6.2E+5
Dichlorovos	62737	NA	50 (M); 32	NA	1.2E+5	NLV	NLV	NLV	NLV	3.3E+7	10,000	2.2E+6
Dicyclohexyl phthalate	84617	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	NA
Dieldrin	60571	NA	NLL	NLL	NLL	1.4E+5	19,000	19,000	19,000	6.8E+5	1,100	NA
Diethyl ether	60297	NA	200	ID	7.4E+6 (C)	7.4E+6 (C)	8.5E+7	1.5E+8	3.4E+8	8.0E+11	7.4E+6 (C)	7.4E+6
Diethyl phthalate	84662	NA	1.1E+5	2,200	7.4E+5 (C)	NLV	NLV	NLV	NLV	3.3E+9	7.4E+5 (C)	7.4E+5
Diethylene glycol monobutyl ether	112345	NA	1,800	NA	8.0E+7	NLV	NLV	NLV	NLV	1.3E+9	2.7E+6	1.1E+8
Diisopropyl ether	108203	NA	600	ID	1,300 (C)	1,300 (C)	3.4E+5	7.6E+5	1.8E+6	4.1E+9	1,300 (C)	1,300
Diisopropylamine (I)	108189	NA	110	NA	4.2E+5	5.5E+6	6.2E+6	6.2E+6	7.3E+6	1.3E+10	1.7E+5	6.7E+6

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			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
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Dimethyl phthalate	131113	NA	7.9E+5 (C)	NA	7.9E+5 (C)	NLV	NLV	NLV	NLV	3.3E+9	7.9E+5 (C)	7.9E+5
N,N-Dimethylacetamide	127195	NA	3,600	82,000 (X)	1.1E+8 (C)	NLV	NLV	NLV	NLV	ID	5.6E+6	1.1E+8
N,N-Dimethylaniline	121697	NA	320	NA	4.0E+5	1.7E+5	1.5E+5	1.5E+5	1.5E+5	2.6E+8	5.0E+5	8.0E+5
Dimethylformamide (I)	68122	NA	14,000	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	2.0E+9	2.2E+7	1.1E+8
2,4-Dimethylphenol	105679	NA	7,400	7,600	1.0E+7	NLV	NLV	NLV	NLV	4.7E+9	1.1E+7	NA
2,6-Dimethylphenol	576261	NA	330 (M); 88	NA	1.3E+5	NLV	NLV	NLV	NLV	1.3E+8	1.4E+5	NA
3,4-Dimethylphenol	95658	NA	330 (M); 200	NA	3.6E+5	NLV	NLV	NLV	NLV	2.3E+8	3.2E+5	NA
Dimethylsulfoxide	67685	NA	4.4E+6	3.8E+6	1.8E+7 (C)	NLV	NLV	NLV	NLV	1.3E+9	1.8E+7 (C)	1.8E+7
2,4-Dinitrotoluene	121142	NA	430	NA	1.7E+5	NLV	NLV	NLV	NLV	1.6E+7	48,000	NA
Dinoseb	88857	NA	300	200 (M); 43	1.4E+5 (C)	NLV	NLV	NLV	NLV	2.7E+8	66,000 (DD)	1.4E+5
1,4-Dioxane (I)	123911	NA	1,700	56,000 (X)	3.4E+7	NLV	NLV	NLV	NLV	5.7E+8	5.3E+5	9.7E+7
Diquat	85007	NA	400	NA	1.4E+7	NLV	NLV	NLV	NLV	ID	5.0E+5	NA
Diuron	330541	NA	620	NA	7.4E+5	NLV	NLV	NLV	NLV	4.7E+8	9.7E+5	NA
Endosulfan (J)	115297	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	1.4E+6	NA
Endothall	145733	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	2.3E+9	3.8E+6	NA
Endrin	72208	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	65,000	NA
Epichlorohydrin (I)	106898	NA	100	NA	2.2E+5	64,000	31,000	31,000	35,000	6.7E+7	8,900	7.3E+6
Ethanol (I)	64175	NA	3.8E+7	ID	1.1E+8 (C)	NLV	NLV	NLV	NLV	1.3E+12	1.1E+8 (C,DD)	1.1E+8
Ethyl acetate (I)	141786	NA	1.3E+5	NA	7.5E+6 (C)	7.5E+6 (C)	4.9E+7	4.9E+7	9.8E+7	2.1E+11	7.5E+6 (C)	7.5E+6
Ethyl-tert-butyl ether (ETBE)	637923	NA	980	ID	ID	5.4E+5	1.9E+6	4.5E+6	1.1E+7	2.5E+10	ID	6.5E+5
Ethylbenzene (I)	100414	NA	1,500	360	1.4E+5 (C)	87,000	7.2E+5	1.0E+6	2.2E+6	1.0E+10	1.4E+5 (C)	1.4E+5

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Ethylene dibromide	106934	NA	**20 (M); 1.0**	110 (X)	500	670	1,700	1,700	3,300	1.4E+7	92	8.9E+5
Ethylene glycol	107211	NA	3.0E+5	3.8E+6 (X)	1.1E+8 (C)	NLV	NLV	NLV	NLV	6.7E+10	1.1E+8 (C)	1.1E+8
Ethylene glycol monobutyl ether	111762	NA	74,000	NA	4.1E+7 (C)	7.4E+5	1.8E+7	1.5E+8	3.6E+8	8.7E+11	4.1E+7 (C)	4.1E+7
Fluoranthene	206440	NA	7.3E+5	**5,500**	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	7.4E+8	9.3E+9	4.6E+7	NA
Fluorene	86737	NA	3.9E+5	**5,300**	8.9E+5	5.8E+8	1.3E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	NA
Fluorine (soluble fluoride) (B)	7782414	NA	40,000	ID	2.4E+8	NLV	NLV	NLV	NLV	ID	9.0E+6 (DD)	NA
Formaldehyde	50000	NA	26,000	**2,400**	6.0E+7 (C)	12,000	13,000	23,000	52,000	2.4E+8	4.1E+7	6.0E+7
Formic acid (I,U)	64186	NA	2.0E+5	ID	1.1E+8 (C)	1.5E+6	2.1E+5	1.4E+5	1.4E+5	1.3E+8	1.1E+8 (C)	1.1E+8
1-Formylpiperidine	2591868	NA	1,600	NA	ID	ID	ID	ID	ID	ID	2.5E+6	1.0E+7
Gentian violet	548629	NA	300	NA	2.0E+7	NLV	NLV	NLV	NLV	ID	96,000	NA
Glyphosate	1071836	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	**1.1E+7 (DD)**	NA
Heptachlor	76448	NA	NLL	NLL	NLL	3.5E+5	62,000	62,000	62,000	2.4E+6	**5,600**	NA
Heptachlor epoxide	1024573	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.2E+6	**3,100**	NA
n-Heptane	142825	NA	2.4E+5 (C)	NA	2.4E+5 (C)	2.4E+5 (C)	2.1E+7	4.4E+7	1.0E+8	2.3E+11	2.4E+5 (C)	2.4E+5
Hexabromobenzene	87821	NA	5,400	ID	5,400	ID	ID	ID	ID	ID	1.1E+6	NA
Hexachlorobenzene (C-66)	118741	NA	1,800	**350**	8,200	41,000	17,000	17,000	17,000	6.8E+6	8,900	NA
Hexachlorobutadiene (C-46)	87683	NA	26,000	**91**	3.5E+5 (C)	1.3E+5	1.3E+5	1.3E+5	1.3E+5	1.4E+8	1.0E+5	3.5E+5
alpha-Hexachlorocyclohexane	319846	NA	18	ID	2,500	30,000	12,000	22,000	25,000	1.7E+6	2,600	NA
beta-Hexachlorocyclohexane	319857	NA	37	ID	5,100	NLV	NLV	NLV	NLV	5.9E+6	5,400	NA
Hexachlorocyclopentadiene (C-56)	77474	NA	3.2E+5	ID	7.2E+5 (C)	30,000	50,000	50,000	50,000	1.3E+7	7.2E+5 (C)	7.2E+5
Hexachloroethane	67721	NA	**430**	1,800 (X)	1.1E+5	40,000	5.5E+5	9.3E+5	9.3E+5	2.3E+8	2.3E+5	NA

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n-Hexane	110543	NA	44,000 (C)	NA	44,000 (C)	44,000 (C)	3.0E+6	3.2E+6	6.2E+6	1.3E+10	44,000 (C)	44,000
2-Hexanone	591786	NA	20,000	ID	2.5E+6 (C)	9.9E+5	1.1E+6	1.1E+6	1.4E+6	2.7E+9	2.5E+6 (C)	2.5E+6
Indeno(1,2,3-cd)pyrene (Q)	193395	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	**20,000**	NA
Iron (B)	7439896	1.2E+7	6,000	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	1.6E+8	NA
Isobutyl alcohol (I)	78831	NA	46,000	NA	8.9E+6 (C)	8.9E+6 (C)	7.9E+7	7.9E+7	7.9E+7	1.0E+11	8.9E+6 (C)	8.9E+6
Isophorone	78591	NA	15,000	**26,000 (X)**	2.4E+6 (C)	NLV	NLV	NLV	NLV	1.2E+10	2.4E+6 (C)	2.4E+6
Isopropyl alcohol (I)	67630	NA	**9,400**	1.1E+6 (X)	1.1E+8 (C)	NLV	NLV	NLV	NLV	1.5E+10	1.4E+7	1.1E+8
Isopropyl benzene	98828	NA	91,000	3,200	3.9E+5 (C)	3.9E+5 (C)	1.7E+6	1.7E+6	2.8E+6	5.8E+9	3.9E+5 (C)	3.9E+5
Lead (B)	7439921	21,000	7.0E+5	(G,X)	ID	NLV	NLV	NLV	NLV	1.0E+8	4.0E+5	NA
Lindane	58899	NA	20 (M); 7.0	20 (M); 1.1	7,100	ID	ID	ID	ID	ID	8,300	NA
Lithium (B)	7439932	9,800	3,400	**8,800**	1.1E+8	NLV	NLV	NLV	NLV	ID	4.2E+6 (DD)	NA
Magnesium (B)	7439954	NA	8.0E+6	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	6.7E+9	1.0E+9 (D)	NA
Manganese (B)	7439965	4.4E+5	1,000	(G,X)	1.8E+8	NLV	NLV	NLV	NLV	3.3E+6	2.5E+7	NA
Mercury (Total) (B,Z)	Varies	130	1,700	**50 (M); 1.2**	47,000	48,000	52,000	52,000	52,000	2.0E+7	1.6E+5	NA
Methane	74828	NA	ID	NA	ID	8.4E+6 ug/m3 (GG)	ID	ID	ID	ID	ID	ID
Methanol	67561	NA	74,000	3.1E+6 (C)	3.1E+6 (C)	3.1E+6 (C)	3.1E+7	4.4E+7	9.6E+7	2.2E+11	3.1E+6 (C)	3.1E+6
Methoxychlor	72435	NA	16,000	NA	18,000	ID	ID	ID	ID	ID	1.9E+6	NA
2-Methoxyethanol (I)	109864	NA	150	NA	1.7E+7	NLV	NLV	NLV	NLV	1.3E+9	2.3E+5	1.1E+8
2-Methyl-4-chlorophenoxyacetic acid	94746	NA	390	NA	4.9E+5	NLV	NLV	NLV	NLV	ID	2.3E+5	NA
2-Methyl-4,6-dinitrophenol	534521	NA	830 (M); 400	NA	1.9E+5	NLV	NLV	NLV	NLV	ID	79,000	NA
N-Methyl-morpholine (I)	109024	NA	400	NA	3.0E+7	NLV	NLV	NLV	NLV	ID	6.1E+5	1.1E+8

DEQ

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Methyl parathion	298000	NA	46	NA	76,000	NLV	NLV	NLV	NLV	ID	56,000	NA
4-Methyl-2-pentanone (MIBK) (I)	108101	NA	36,000	ID	2.7E+6 (C)	2.7E+6 (C)	4.5E+7	4.5E+7	6.7E+7	1.4E+11	2.7E+6 (C)	2.7E+6
Methyl-tert-butyl ether (MTBE)	1634044	NA	800	1.4E+5 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	3.9E+7	8.7E+7	2.0E+11	1.5E+6	5.9E+6
Methylcyclopentane (I)	96377	NA	ID	NA	ID	92,000	2.3E+6	8.2E+6	2.0E+7	4.7E+10	ID	3.5E+5
4,4'-Methylene-bis-2-chloroaniline (MBOCA)	101144	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	8.4E+7	6,800	NA
Methylene chloride	75092	NA	100	30,000 (X)	2.3E+6 (C)	45,000	2.1E+5	5.9E+5	1.4E+6	6.6E+9	1.3E+6	2.3E+6
2-Methylnaphthalene	91576	NA	57,000	4,200	5.5E+6	2.7E+6	1.5E+6	1.5E+6	1.5E+6	6.7E+8	8.1E+6	NA
Methylphenols (J)	1319773	NA	7,400	1,000 (M); 600	1.6E+7	NLV	NLV	NLV	NLV	6.7E+9	1.1E+7	NA
Metolachlor	51218452	NA	4,800	300	4.4E+5 (C)	NLV	NLV	NLV	NLV	ID	4.4E+5 (C,DD)	4.4E+5
Metribuzin	21087649	NA	3,600	NA	2.4E+7	ID	ID	ID	ID	ID	9.6E+6	NA
Mirex	2385855	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	9,600	NA
Molybdenum (B)	7439987	NA	1,500	64,000 (X)	1.9E+7	NLV	NLV	NLV	NLV	ID	2.6E+6	NA
Naphthalene	91203	NA	35,000	730	2.1E+6	2.5E+5	3.0E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	NA
Nickel (B)	7440020	20,000	1.0E+5	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.3E+7	4.0E+7	NA
Nitrate (B,N)	14797558	NA	2.0E+5 (N)	ID	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	ID	NA
Nitrite (B,N)	14797650	NA	20,000 (N)	NA	3.8E+8	NLV	NLV	NLV	NLV	ID	ID	NA
Nitrobenzene (I)	98953	NA	330 (M); 68	3,600 (X)	2.2E+5	91,000	54,000	54,000	54,000	4.7E+7	1.0E+5	4.9E+5
2-Nitrophenol	88755	NA	400	ID	1.6E+6	NLV	NLV	NLV	NLV	ID	6.3E+5	NA
n-Nitroso-di-n-propylamine	621647	NA	330 (M); 100	NA	7,200	NLV	NLV	NLV	NLV	1.6E+6	1,200	1.5E+6
N-Nitrosodiphenylamine	86306	NA	5,400	NA	7.0E+5	NLV	NLV	NLV	NLV	2.2E+9	1.7E+6	NA

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Oxamyl	23135220	NA	4,000	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	8.6E+6	NA
Oxo-hexyl acetate	88230357	NA	1,500	NA	ID	ID	ID	ID	ID	5.4E+9	2.3E+6	1.0E+7
Pendimethalin	40487421	NA	1.1E+6	NA	1.1E+6	NLV	NLV	NLV	NLV	ID	4.6E+7	NA
Pentachlorobenzene	608935	NA	29,000	9,500	1.9E+5 (C)	ID	ID	ID	ID	ID	1.9E+5 (C)	1.9E+5
Pentachloronitrobenzene	82688	NA	37,000	NA	37,000	1.2E+5	2.3E+5	2.3E+5	2.3E+5	3.3E+8	1.7E+6	NA
Pentachlorophenol	87865	NA	22	(G,X)	4,300	NLV	NLV	NLV	NLV	1.0E+8	90,000	NA
Pentane	109660	NA	ID	NA	ID	2.4E+5 (C)	3.7E+7	3.1E+8	5.8E+8	1.2E+12	ID	2.4E+5
2-Pentene (I)	109682	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	2.2E+5
Phenanthrene	85018	NA	56,000	2,100	1.1E+6	2.8E+6	1.6E+5	1.6E+5	1.6E+5	6.7E+6	1.6E+6	NA
Phenol	108952	NA	88,000	9,000	1.2E+7 (C)	NLV	NLV	NLV	NLV	4.0E+10	1.2E+7 (C,DD)	1.2E+7
Phosphorus (Total)	7723140	NA	1.3E+6	(EE)	ID	NLV	NLV	NLV	NLV	6.7E+7	1.0E+9 (D)	NA
Phthalic acid	88993	NA	2.8E+5	NA	1.7E+6 (C)	NLV	NLV	NLV	NLV	ID	1.7E+6 (C)	1.7E+6
Phthalic anhydride	85449	NA	3.0E+5	NA	1.1E+6 (C)	NLV	NLV	NLV	NLV	ID	1.1E+6 (C)	1.1E+6
Picloram	1918021	NA	10,000	920	8.6E+6	NLV	NLV	NLV	NLV	ID	1.6E+7	NA
Piperidine	110894	NA	64	NA	6.8E+5	NLV	NLV	NLV	NLV	9.3E+9	99,000	1.2E+8
Polybrominated biphenyls (J)	67774327	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	1,200	NA
Polychlorinated biphenyls (PCBs) (J,T)	1336363	NA	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	7.9E+6	5.2E+6	(T)	NA
Prometon	1610180	NA	4,900	NA	5.5E+6	NLV	NLV	NLV	NLV	ID	5.0E+6	NA
Propachlor	1918167	NA	1,900	NA	8.8E+6	NLV	NLV	NLV	NLV	ID	2.9E+6	NA
Propazine	139402	NA	4,000	NA	1.7E+5	NLV	NLV	NLV	NLV	ID	6.1E+6	NA
Propionic acid	79094	NA	2.4E+5	ID	1.1E+8 (C)	NLV	NLV	NLV	NLV	2.0E+10	1.1E+8 (C)	1.1E+8

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Propyl alcohol (I)	71238	NA	28,000	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	4.9E+10	1.3E+7 (DD)	1.1E+8
n-Propylbenzene (I)	103651	NA	1,600	ID	3.0E+5	ID	ID	ID	ID	1.3E+9	2.5E+6	1.0E+7
Propylene glycol	57556	NA	**3.0E+6**	5.8E+6	1.1E+8 (C)	NLV	NLV	NLV	NLV	4.0E+11	1.1E+8 (C)	1.1E+8
Pyrene	129000	NA	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.5E+8	6.7E+9	2.9E+7	NA
Pyridine (I)	110861	NA	400	NA	37,000 (C)	1,100	8,200	40,000	97,000	2.3E+8	37,000 (C)	37,000
Selenium (B)	7782492	410	4,000	**400**	7.8E+7	NLV	NLV	NLV	NLV	1.3E+8	2.6E+6	NA
Silver (B)	7440224	1,000	4,500	**100 (M); 27**	2.0E+8	NLV	NLV	NLV	NLV	6.7E+6	2.5E+6	NA
Silvex (2,4,5-TP)	93721	NA	3,600	**2,200**	3.1E+6	NLV	NLV	NLV	NLV	ID	1.7E+6	NA
Simazine	122349	NA	80	340	90,000	NLV	NLV	NLV	NLV	ID	1.2E+6	NA
Sodium	17341252	NA	2.5E+6	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	1.0E+9 (D)	NA
Sodium azide	26628228	NA	1,800	1,000	ID	ID	ID	ID	ID	ID	2.7E+6	NA
Strontium (B)	7440246	NA	92,000	**4.2E+5**	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	3.3E+8	NA
Styrene	100425	NA	2,700	**2,100 (X)**	2.7E+5	2.5E+5	9.7E+5	9.7E+5	1.4E+6	5.5E+9	4.0E+5	5.2E+5
Sulfate	14808798	NA	5.0E+6	NA	ID	NLV	NLV	NLV	NLV	ID	ID	NA
Tebuthiuron	34014181	NA	10,000	NA	5.0E+7	NLV	NLV	NLV	NLV	ID	4.6E+6 (DD)	NA
2,3,7,8-Tetrabromodibenzo-p-dic (O)	50585416	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	(O)	(O)	NA
1,2,4,5-Tetrachlorobenzene	95943	NA	1.5E+6	3,400 (X)	1.5E+6	5.8E+5	2.3E+5	2.3E+5	2.3E+5	6.7E+7	7.7E+7	NA
2,3,7,8-Tetrachlorodibenzo-p-dic (O)	1746016	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	71 (O)	**0.09 (O)**	NA
1,1,1,2-Tetrachloroethane	630206	NA	1,500	ID	4.4E+5 (C)	6,200	36,000	54,000	1.0E+5	4.2E+8	4.4E+5 (C)	4.4E+5
1,1,2,2-Tetrachloroethane	79345	NA	**170**	1,600 (X)	94,000	4,300	10,000	10,000	14,000	5.4E+7	53,000	8.7E+5
Tetrachloroethylene	127184	NA	**100**	1,200 (X)	88,000 (C)	11,000	1.8E+5	4.8E+5	1.1E+6	5.4E+9	88,000 (C)	88,000

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Tetrahydrofuran	109999	NA	1,900	2.2E+5 (X)	3.2E+7	1.3E+6	1.3E+7	6.7E+7	1.6E+8	3.9E+11	2.9E+6	1.2E+8
Tetranitromethane	509148	NA	ID	NA	ID	500(M); 110	500 (M); 51	ID	ID	2.1E+5	ID	ID
Thallium (B)	7440280	NA	2,300	4,200 (X)	1.5E+7	NLV	NLV	NLV	NLV	1.3E+7	35,000	NA
Toluene (I)	108883	NA	16,000	5,400	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	5.1E+6	1.2E+7	2.7E+10	2.5E+5 (C)	2.5E+5
p-Toluidine	106490	NA	660 (M); 300	NA	4.8E+5	NLV	NLV	NLV	NLV	1.0E+8	94,000	1.2E+6
Toxaphene	8001352	NA	24,000	8,200	3.6E+5	NLV	NLV	NLV	NLV	9.7E+6	20,000	NA
Triallate	2303175	NA	95,000	NA	2.5E+5 (C)	ID	ID	ID	ID	ID	2.5E+5 (C)	2.5E+5
Tributylamine	102829	NA	7,800	ID	1.8E+6	5.8E+5	6.0E+5	6.0E+5	6.0E+5	4.7E+8	7.9E+5	3.7E+6
1,2,4-Trichlorobenzene	120821	NA	4,200	5,900 (X)	1.1E+6 (C)	1.1E+6 (C)	2.8E+7	2.8E+7	2.8E+7	2.5E+10	9.9E+5 (DD)	1.1E+6
1,1,1-Trichloroethane	71556	NA	4,000	1,800	4.6E+5 (C)	2.5E+5	3.8E+6	1.2E+7	2.8E+7	6.7E+10	4.6E+5 (C)	4.6E+5
1,1,2-Trichloroethane	79005	NA	100	6,600 (X)	4.2E+5	4,600	17,000	21,000	44,000	1.9E+8	1.8E+5	9.2E+5
Trichloroethylene	79016	NA	100	4,000 (X)	4.4E+5	7,100	78,000	1.7E+5	3.9E+5	1.8E+9	5.0E+5 (C,DD)	5.0E+5
Trichlorofluoromethane	75694	NA	52,000	NA	5.6E+5 (C)	5.6E+5 (C)	9.2E+7	6.3E+8	1.5E+9	3.8E+12	5.6E+5 (C)	5.6E+5
2,4,5-Trichlorophenol	95954	NA	39,000	NA	9.1E+6	NLV	NLV	NLV	NLV	2.3E+10	2.3E+7	NA
2,4,6-Trichlorophenol	88062	NA	2,400	330 (M); 100	2.0E+5	NLV	NLV	NLV	NLV	1.0E+9	7.1E+5	NA
1,2,3-Trichloropropane	96184	NA	840	NA	8.3E+5 (C)	4,000	9,200	9,200	11,000	2.0E+7	8.3E+5 (C)	8.3E+5
1,1,2-Trichloro-1,2,2-trifluoroeth	76131	NA	5.5E+5 (C)	1,700	5.5E+5 (C)	5.5E+5 (C)	1.8E+8	8.8E+8	2.1E+9	5.1E+12	5.5E+5 (C)	5.5E+5
Triethanolamine	102716	NA	74,000	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	3.3E+9	1.1E+8	1.1E+8
Triethylene glycol	112276	NA	1.1E+5 (C)	NA	1.1E+5 (C)	NLV	NLV	NLV	NLV	ID	1.1E+5 (C,DD)	1.1E+5
3-Trifluoromethyl-4-nitrophenol	88302	NA	1.1E+5	NA	1.2E+8	NLV	NLV	NLV	NLV	ID	4.1E+7 (DD)	NA
Trifluralin	1582098	NA	1.9E+5	NA	1.2E+7	ID	ID	ID	ID	ID	2.0E+6	NA

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			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
Guidesheet Number ⟶		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
2,2,4-Trimethyl pentane	540841	NA	ID	NA	ID	19,000 (C)	5.2E+6	3.9E+7	9.6E+7	2.3E+11	ID	19,000
2,4,4-Trimethyl-2-pentene (I)	107404	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	56,000
1,2,4-Trimethylbenzene (I)	95636	NA	2,100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	5.0E+8	8.2E+10	1.1E+5 (C)	1.1E+5
1,3,5-Trimethylbenzene (I)	108678	NA	1,800	1,100	94,000 (C)	94,000 (C)	1.6E+7	3.8E+8	3.8E+8	8.2E+10	94,000 (C)	94,000
Triphenyl phosphate	115866	NA	1.1E+5 (C)	NA	1.1E+5 (C)	NLV	NLV	NLV	NLV	ID	1.1E+5 (C)	1.1E+5
tris(2,3-Dibromopropyl)phosphat	126727	NA	930	ID	27,000 (C)	27,000 (C)	18,000	18,000	18,000	5.9E+6	4,400	27,000
Urea	57136	NA	ID	NA	ID	NLV	NLV	NLV	NLV	ID	ID	NA
Vanadium	7440622	NA	72,000	1.9E+5	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	7.5E+5 (DD)	NA
Vinyl acetate (I)	108054	NA	13,000	NA	2.4E+6 (C)	7.9E+5	1.7E+6	2.6E+6	5.8E+6	1.3E+10	2.4E+6 (C,DD)	2.4E+6
Vinyl chloride	75014	NA	40	260 (X)	20,000	270	4,200	30,000	73,000	3.5E+8	3,800	4.9E+5
White phosphorus (R)	12185103	NA	2.2	NA	58,000	NLV	NLV	NLV	NLV	ID	2,300 (DD)	NA
Xylenes (I)	1330207	NA	5,600	820	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	6.1E+7	1.3E+8	2.9E+11	1.5E+5 (C)	1.5E+5
Zinc (B)	7440666	47,000	2.4E+6	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	1.7E+8	NA

DEQ

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			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact	
Guidesheet Number ——>		#10	#11	#21	#12	#13	#22	#23	#24	#25	#26	#27	#20
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Acenaphthene	83329	NA	3.0E+5	8.8E+5	8,700	9.7E+5	3.5E+8	9.7E+7	9.7E+7	9.7E+7	6.2E+9	1.3E+8	NA
Acenaphthylene	208968	NA	5,900	17,000	ID	4.4E+5	3.0E+6	2.7E+6	2.7E+6	2.7E+6	1.0E+9	5.2E+6	NA
Acetaldehyde (I)	75070	NA	19,000	54,000	2,600	1.1E+8 (C)	4.0E+5	2.1E+5	2.1E+5	2.9E+5	2.6E+8	9.5E+7	1.1E+8
Acetate	71501	NA	ID	ID	(G)	ID	ID	ID	ID	ID	ID	ID	ID
Acetic acid	64197	NA	84,000	2.4E+5	(G)	6.5E+8 (C)	NLV	NLV	NLV	NLV	7.4E+9	4.2E+8	6.5E+8
Acetone (I)	67641	NA	15,000	42,000	34,000	1.1E+8 (C)	1.1E+8 (C)	1.6E+8	1.6E+8	2.0E+8	1.7E+11	7.3E+7	1.1E+8
Acetonitrile	75058	NA	2,800	8,000	NA	2.2E+7 (C)	8.8E+6	1.9E+6	1.9E+6	2.2E+6	1.8E+9	1.4E+7	2.2E+7
Acetophenone	98862	NA	30,000	88,000	ID	1.1E+6 (C)	1.1E+6 (C)	5.2E+7	5.2E+7	5.2E+7	1.4E+10	1.1E+6 (C)	1.1E+6
Acrolein (I)	107028	NA	2,400	6,600	NA	2.3E+7 (C)	760	370	370	630	5.9E+5	1.2E+7	2.3E+7
Acrylamide	79061	NA	10	10	200 (X)	2.6E+5	NLV	NLV	NLV	NLV	3.0E+6	8,700	NA
Acrylic acid	79107	NA	78,000	2.2E+5	NA	1.1E+8 (C)	5.5E+6	2.2E+5	2.7E+5	2.7E+5	2.9E+7	1.1E+8 (C,DD)	1.1E+8
Acrylonitrile (I)	107131	NA	100 (M); 52	220	100 (M); 40	2.8E+5	35,000	17,000	17,000	31,000	5.8E+7	74,000	8.3E+6
Alachlor	15972608	NA	52	52	290 (X)	44,000	NLV	NLV	NLV	NLV	ID	3.9E+5	NA
Aldicarb	116063	NA	60	60	NA	2.4E+6	NLV	NLV	NLV	NLV	ID	7.3E+5	NA
Aldicarb sulfone	1646884	NA	200 (M); 40	200 (M); 40	NA	4.2E+7	NLV	NLV	NLV	NLV	ID	8.0E+5	NA
Aldicarb sulfoxide	1646873	NA	200(M); 80	200 (M); 80	NA	5.4E+7	NLV	NLV	NLV	NLV	ID	9.5E+5	NA
Aldrin	309002	NA	NLL	NLL	NLL	NLL	7.1E+6	2.0E+5	2.0E+5	2.0E+5	8.0E+5	4,300	NA
Aluminum (B)	7429905	6.9E+6	1,000	1,000	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	3.7E+8 (DD)	NA
Ammonia	7664417	NA	ID	ID	(CC)	ID	ID	ID	ID	ID	2.9E+9	ID	1.0E+7
t-Amyl methyl ether (TAME)	994058	NA	3,900	3,900	NA	4.4E+5 (C)	1.1E+5	4.0E+5	7.8E+5	1.8E+6	1.8E+9	4.4E+5 (C)	4.4E+5
Aniline	62533	NA	1,100	4,400	330 (M); 80	2.8E+6	NLV	NLV	NLV	NLV	2.9E+7	1.5E+6	4.5E+6

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Anthracene	120127	NA	41,000	41,000	ID	41,000	1.0E+9 (D)	1.6E+9	1.6E+9	1.6E+9	2.9E+10	7.3E+8	NA
Antimony	7440360	NA	4,300	4,300	94,000 (X)	4.9E+7	NLV	NLV	NLV	NLV	5.9E+6	6.7E+5	NA
Arsenic	7440382	5,800	4,600	4,600	4,600	2.0E+6	NLV	NLV	NLV	NLV	9.1E+5	37,000	NA
Asbestos (BB)	1332214	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.0E+7 (M); 85,000	ID	NA
Atrazine	1912249	NA	60	60	150	1.1E+5	NLV	NLV	NLV	NLV	ID	3.3E+5 (DD)	NA
Azobenzene	103333	NA	4,200	17,000	ID	3.0E+5	3.2E+7	2.1E+6	2.1E+6	2.1E+6	1.3E+8	6.6E+5	NA
Barium (B)	7440393	75,000	1.3E+6	1.3E+6	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.5E+8	1.3E+8	NA
Benzene (I)	71432	NA	100	100	4,000 (X)	2.2E+5	8,400	45,000	99,000	2.3E+5	4.7E+8	4.0E+5 (C)	4.0E+5
Benzidine	92875	NA	1,000 (M); 6.0	1,000 (M); 6.0	1,000 (M); 6.0	1,000 (M); 140	NLV	NLV	NLV	NLV	59,000	1,000 (M); 110	NA
Benzo(a)anthracene (Q)	56553	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	80,000	NA
Benzo(b)fluoranthene (Q)	205992	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	80,000	NA
Benzo(k)fluoranthene (Q)	207089	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	8.0E+5	NA
Benzo(g,h,i)perylene	191242	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	3.5E+8	7.0E+6	NA
Benzo(a)pyrene (Q)	50328	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.9E+6	8,000	NA
Benzoic acid	65850	NA	6.4E+5	1.8E+6	NA	7.0E+7	NLV	NLV	NLV	NLV	ID	1.0E+9 (D)	NA
Benzyl alcohol	100516	NA	2.0E+5	5.8E+5	NA	5.8E+6 (C)	NLV	NLV	NLV	NLV	1.5E+11	5.8E+6 (C)	5.8E+6
Benzyl chloride	100447	NA	150	640	NA	72,000	33,000	48,000	48,000	52,000	7.8E+7	2.2E+5	2.3E+5
Beryllium	7440417	NA	51,000	51,000	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	5.9E+5	1.6E+6	NA
bis(2-Chloroethoxy)ethane	112265	NA	ID	ID	ID	ID	NLV	NLV	NLV	NLV	ID	ID	2.7E+6
bis(2-Chloroethyl)ether (I)	111444	NA	100	170	100 (M); 20	1.1E+5	44,000	13,000	13,000	13,000	1.2E+7	58,000	2.2E+6

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bis(2-Ethylhexyl)phthalate	117817	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	8.9E+8	1.0E+7 (C)	1.0E+7
Boron (B)	7440428	NA	10,000	10,000	1.0E+5 (X)	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	3.5E+8 (DD)	NA
Bromate	15541454	NA	200	200	800 (X)	96,000	NLV	NLV	NLV	NLV	ID	91,000	NA
Bromobenzene (I)	108861	NA	550	1,500	NA	3.6E+5	5.8E+5	5.4E+5	5.4E+5	5.4E+5	2.4E+8	7.6E+5 (C)	7.6E+5
Bromodichloromethane	75274	NA	1,600 (W)	1,600 (W)	ID	2.8E+5	6,400	31,000	31,000	57,000	1.1E+8	4.9E+5	1.5E+6
Bromoform	75252	NA	1,600 (W)	1,600 (W)	ID	8.7E+5 (C)	7.7E+5	3.1E+6	3.1E+6	3.1E+6	3.6E+9	8.7E+5 (C)	8.7E+5
Bromomethane	74839	NA	200	580	700	1.4E+6	1,600	13,000	57,000	1.4E+5	1.5E+8	1.0E+6	2.2E+6
n-Butanol (I)	71363	NA	19,000	54,000	NA	8.7E+6 (C)	NLV	NLV	NLV	NLV	1.0E+10	8.7E+6 (C)	8.7E+6
2-Butanone (MEK) (I)	78933	NA	2.6E+5	7.6E+5	44,000	2.7E+7 (C)	2.7E+7 (C)	3.5E+7	3.5E+7	3.6E+7	2.9E+10	2.7E+7 (C,DD)	2.7E+7
n-Butyl acetate	123864	NA	11,000	32,000	NA	1.1E+6 (C)	1.1E+6 (C)	1.4E+8	3.1E+8	3.5E+8	2.1E+11	1.1E+6 (C)	1.1E+6
t-Butyl alcohol	75650	NA	78,000	2.2E+5	NA	1.1E+8 (C)	1.1E+8 (C)	1.2E+8	2.4E+8	2.4E+8	5.6E+10	1.1E+8 (C)	1.1E+8
Butyl benzyl phthalate	85687	NA	3.1E+5 (C)	3.1E+5 (C)	1.2E+5 (X)	3.1E+5 (C)	NLV	NLV	NLV	NLV	2.1E+10	3.1E+5 (C)	3.1E+5
n-Butylbenzene	104518	NA	1,600	4,600	ID	1.2E+5	ID	ID	ID	ID	8.8E+8	8.0E+6	1.0E+7
sec-Butylbenzene	135988	NA	1,600	4,600	ID	88,000	ID	ID	ID	ID	1.8E+8	8.0E+6	1.0E+7
t-Butylbenzene (I)	98066	NA	1,600	4,600	ID	1.8E+5	ID	ID	ID	ID	2.9E+8	8.0E+6	1.0E+7
Cadmium (B)	7440439	1,200	6,000	6,000	(G,X)	2.3E+8	NLV	NLV	NLV	NLV	2.2E+6	2.1E+6	NA
Camphene (I)	79925	NA	ID	ID	NA	ID	6,700	1.8E+5	9.1E+5	2.2E+6	2.4E+9	ID	NA
Caprolactam	105602	NA	1.2E+5	3.4E+5	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	2.9E+8	3.1E+8 (DD)	NA
Carbaryl	63252	NA	14,000	40,000	NA	2.6E+6	ID	ID	ID	ID	ID	7.0E+7	NA
Carbazole	86748	NA	9,400	39,000	1,100	8.2E+5	NLV	NLV	NLV	NLV	7.8E+7	2.4E+6	NA
Carbofuran	1563662	NA	800	800	NA	6.8E+6	NLV	NLV	NLV	NLV	ID	3.6E+6	NA

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			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact	
Guidesheet Number ——>		#10	#11	#21	#12	#13	#22	#23	#24	#25	#26	#27	#20
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Carbon disulfide (I,R)	75150	NA	16,000	46,000	ID	2.8E+5 (C)	1.4E+5	1.6E+6	8.0E+6	1.9E+7	2.1E+10	2.8E+5 (C,DD)	2.8E+5
Carbon tetrachloride	56235	NA	100	100	900 (X)	92,000	990	12,000	34,000	79,000	1.7E+8	3.9E+5 (C)	3.9E+5
Chlordane (J)	57749	NA	NLL	NLL	NLL	NLL	5.9E+7	4.2E+6	4.2E+6	4.2E+6	2.1E+7	1.5E+5	NA
Chloride	16887006	NA	5.0E+6	5.0E+6	(X)	ID	NLV	NLV	NLV	NLV	ID	5.0E+5 (F)	NA
Chlorobenzene (I)	108907	NA	2,000	2,000	500	2.6E+5 (C)	2.2E+5	9.2E+5	1.1E+6	2.1E+6	2.1E+9	2.6E+5 (C)	2.6E+5
p-Chlorobenzene sulfonic acid	98668	NA	1.5E+5	4.2E+5	ID	NA	ID	ID	ID	ID	ID	7.3E+8	ID
1-Chloro-1,1-difluoroethane	75683	NA	3.0E+5	8.8E+5	NA	9.6E+5 (C)	9.6E+5 (C)	9.4E+7	5.7E+8	1.4E+9	1.5E+12	9.6E+5 (C)	9.6E+5
Chloroethane	75003	NA	8,600	34,000	22,000 (X)	9.5E+5 (C)	9.5E+5 (C)	3.6E+7	1.2E+8	2.8E+8	2.9E+11	9.5E+5 (C)	9.5E+5
2-Chloroethyl vinyl ether	110758	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	1.9E+6
Chloroform	67663	NA	1,600 (W)	1,600 (W)	7,000	1.5E+6 (C)	38,000	1.5E+5	3.4E+5	7.9E+5	1.6E+9	1.5E+6 (C)	1.5E+6
Chloromethane (I)	74873	NA	5,200	22,000	ID	1.1E+6 (C)	10,000	1.2E+5	1.0E+6	2.5E+6	2.6E+9	1.1E+6 (C)	1.1E+6
4-Chloro-3-methylphenol	59507	NA	5,800	16,000	280	3.0E+6	NLV	NLV	NLV	NLV	ID	1.5E+7	NA
beta-Chloronaphthalene	91587	NA	6.2E+5	1.8E+6	NA	2.3E+6	ID	ID	ID	ID	ID	1.8E+8	NA
2-Chlorophenol	95578	NA	900	2,600	360	1.9E+6	8.0E+5	1.1E+6	1.1E+6	1.1E+6	5.3E+8	4.5E+6	1.9E+7
o-Chlorotoluene (I)	95498	NA	3,300	9,300	ID	5.0E+5 (C)	5.0E+5 (C)	1.5E+6	3.1E+6	6.4E+6	2.1E+9	5.0E+5 (C)	5.0E+5
Chlorpyrifos	2921882	NA	17,000	48,000	1,500	8.4E+5	240	5,500	23,000	56,000	5.9E+7	3.4E+7	NA
Chromium (III) (B,H)	16065831	18,000 (total)	1.0E+9 (D)	1.0E+9 (D)	(G,X)	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.5E+8	1.0E+9 (D)	NA
Chromium (VI)	18540299	NA	30,000	30,000	3,300	1.4E+8	NLV	NLV	NLV	NLV	2.4E+5	9.2E+6	NA
Chrysene (Q)	218019	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	8.0E+6	NA
Cobalt	7440484	6,800	800	2,000	2,000	4.8E+7	NLV	NLV	NLV	NLV	5.9E+6	9.0E+6	NA
Copper (B)	7440508	32,000	5.8E+6	5.8E+6	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	5.9E+7	7.3E+7	NA

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Cyanazine	21725462	NA	200	200	1,100 (X)	56,000	NLV	NLV	NLV	NLV	ID	66,000	NA
Cyanide (P,R)	57125	390 (total)	4,000	4,000	100	2.5E+5	NLV	NLV	NLV	NLV	2.5E+5	2.5E+5	NA
Cyclohexanone	108941	NA	5.2E+6	1.5E+7	NA	2.2E+8 (C)	32,000	1.3E+6	1.1E+7	2.7E+7	2.9E+10	2.2E+8 (C)	2.2E+8
Dacthal	1861321	NA	50,000	1.4E+5	NA	3.4E+5	NLV	NLV	NLV	NLV	ID	7.3E+6	NA
Dalapon	75990	NA	4,000	4,000	NA	5.9E+7 (C)	NLV	NLV	NLV	NLV	ID	5.9E+7 (C)	5.9E+7
4-4'-DDD	72548	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	5.6E+7	4.0E+5	NA
4-4'-DDE	72559	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	4.0E+7	1.9E+5	NA
4-4'-DDT	50293	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	4.0E+7	2.8E+5	NA
Decabromodiphenyl ether	1163195	NA	1.4E+5	1.4E+5	NA	1.4E+5	1.0E+9 (D)	1.0E+8	1.0E+8	1.0E+8	1.0E+9	1.1E+7	NA
Di-n-butyl phthalate	84742	NA	7.6E+5 (C)	7.6E+5 (C)	11,000	7.6E+5 (C)	NLV	NLV	NLV	NLV	1.5E+9	7.6E+5 (C)	7.6E+5
Di(2-ethylhexyl) adipate	103231	NA	9.6E+5 (C)	9.6E+5 (C)	ID	9.6E+5 (C)	NLV	NLV	NLV	NLV	1.2E+10	9.6E+5 (C,DD)	9.6E+5
Di-n-octyl phthalate	117840	NA	1.0E+8	1.4E+8 (C)	ID	1.4E+8 (C)	NLV	NLV	NLV	NLV	1.4E+10	2.0E+7	1.4E+8
Diacetone alcohol (I)	123422	NA	ID	ID	NA	ID	NLV	NLV	NLV	NLV	7.1E+10	ID	1.1E+8
Diazinon	333415	NA	95	280	72	95,000	NLV	NLV	NLV	NLV	ID	70,000 (DD)	3.1E+5
Dibenzo(a,h)anthracene (Q)	53703	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	8,000	NA
Dibenzofuran	132649	NA	ID	ID	1,700	ID	3.6E+6	1.6E+5	1.6E+5	1.6E+5	2.9E+6	ID	NA
Dibromochloromethane	124481	NA	1,600 (W)	1,600 (W)	ID	3.6E+5	21,000	80,000	80,000	98,000	1.6E+8	5.0E+5	6.1E+5
Dibromochloropropane	96128	NA	10 (M); 4.0	10 (M); 4.0	ID	1,200 (C)	1,200 (C)	15,000	15,000	15,000	5.9E+6	1,200 (C)	1,200
Dibromomethane	74953	NA	1,600	4,600	NA	2.0E+6 (C)	ID	ID	ID	ID	ID	2.0E+6 (C)	2.0E+6
Dicamba	1918009	NA	4,400	13,000	NA	1.2E+7	NLV	NLV	NLV	NLV	ID	1.7E+7	NA
1,2-Dichlorobenzene	95501	NA	14,000	14,000	280	2.1E+5 (C)	2.1E+5 (C)	4.6E+7	4.6E+7	5.5E+7	4.4E+10	2.1E+5 (C)	2.1E+5

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1,3-Dichlorobenzene	541731	NA	170	480	680	51,000	48,000	94,000	94,000	1.1E+5	8.8E+7	1.7E+5 (C)	1.7E+5
1,4-Dichlorobenzene	106467	NA	1,700	1,700	360	1.4E+5	1.0E+5	2.6E+5	2.6E+5	3.4E+5	5.7E+8	1.9E+6	NA
3,3'-Dichlorobenzidine	91941	NA	2,000 (M); 28	2,000 (M); 110	2,000 (M); 7.4	4,600	NLV	NLV	NLV	NLV	8.2E+6	30,000	NA
Dichlorodifluoromethane	75718	NA	95,000	2.7E+5	ID	1.0E+6 (C)	1.7E+6	6.3E+7	5.5E+8	1.4E+9	1.5E+12	1.0E+6 (C)	1.0E+6
1,1-Dichloroethane	75343	NA	18,000	50,000	15,000	8.9E+5 (C)	4.3E+5	2.5E+6	6.0E+6	1.4E+7	1.5E+10	8.9E+5 (C)	8.9E+5
1,2-Dichloroethane (I)	107062	NA	100	100	7,200 (X)	3.8E+5	11,000	21,000	33,000	74,000	1.5E+8	4.2E+5	1.2E+6
1,1-Dichloroethylene (I)	75354	NA	140	140	2,600	2.2E+5	330	3,700	15,000	37,000	7.8E+7	5.7E+5 (C)	5.7E+5
cis-1,2-Dichloroethylene	156592	NA	1,400	1,400	12,000	6.4E+5 (C)	41,000	2.1E+5	4.3E+5	1.0E+6	1.0E+9	6.4E+5 (C)	6.4E+5
trans-1,2-Dichloroethylene	156605	NA	2,000	2,000	30,000 (X)	1.4E+6 (C)	43,000	3.3E+5	8.4E+5	2.0E+6	2.1E+9	1.4E+6 (C)	1.4E+6
2,6-Dichloro-4-nitroaniline	99309	NA	44,000	1.3E+5	NA	1.4E+5	NLV	NLV	NLV	NLV	ID	2.2E+8	NA
2,4-Dichlorophenol	120832	NA	1,500	4,200	330 (M); 220	9.6E+5	NLV	NLV	NLV	NLV	2.3E+9	1.8E+6 (C,DD)	1.8E+6
2,4-Dichlorophenoxyacetic acid	94757	NA	1,400	1,400	4,400	2.4E+6	NLV	NLV	NLV	NLV	2.9E+9	8.6E+6	NA
1,2-Dichloropropane (I)	78875	NA	100	100	4,600 (X)	3.2E+5	7,400	30,000	51,000	1.2E+5	1.2E+8	5.5E+5 (C)	5.5E+5
1,3-Dichloropropene	542756	NA	170	700	180 (X)	1.1E+5	5,400	60,000	2.0E+5	4.7E+5	5.9E+8	2.4E+5	6.2E+5
Dichlorovos	62737	NA	50 (M); 32	130	NA	1.2E+5	NLV	NLV	NLV	NLV	1.5E+7	47,000	2.2E+6
Dicyclohexyl phthalate	84617	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	NA
Dieldrin	60571	NA	NLL	NLL	NLL	NLL	7.2E+5	64,000	64,000	64,000	8.5E+5	4,700	NA
Diethyl ether	60297	NA	200	200	ID	7.4E+6 (C)	7.4E+6 (C)	1.0E+8	1.6E+8	3.5E+8	3.5E+11	7.4E+6 (C)	7.4E+6
Diethyl phthalate	84662	NA	1.1E+5	3.2E+5	2,200	7.4E+5 (C)	NLV	NLV	NLV	NLV	1.5E+9	7.4E+5 (C)	7.4E+5
Diethylene glycol monobutyl ether	112345	NA	1,800	5,000	NA	8.0E+7	NLV	NLV	NLV	NLV	5.9E+8	8.7E+6	1.1E+8
Diisopropyl ether	108203	NA	600	1,300 (C)	ID	1,300 (C)	1,300 (C)	3.2E+6	4.8E+6	1.0E+7	1.1E+10	1,300 (C)	1,300

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Diisopropylamine (I)	108189	NA	110	320	NA	4.2E+5	6.7E+6 (C)	7.4E+6	7.4E+6	7.7E+6	5.9E+9	5.6E+5	6.7E+6
Dimethyl phthalate	131113	NA	7.9E+5 (C)	7.9E+5 (C)	NA	7.9E+5 (C)	NLV	NLV	NLV	NLV	1.5E+9	7.9E+5 (C)	7.9E+5
N,N-Dimethylacetamide	127195	NA	3,600	10,000	82,000 (X)	1.1E+8 (C)	NLV	NLV	NLV	NLV	ID	1.8E+7	1.1E+8
N,N-Dimethylaniline	121697	NA	320	920	NA	4.0E+5	8.0E+5 (C)	5.2E+5	5.2E+5	5.2E+5	3.3E+8	8.0E+5 (C)	8.0E+5
Dimethylformamide (I)	68122	NA	14,000	40,000	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	8.8E+8	7.0E+7	1.1E+8
2,4-Dimethylphenol	105679	NA	7,400	20,000	7,600	1.0E+7	NLV	NLV	NLV	NLV	2.1E+9	3.6E+7	NA
2,6-Dimethylphenol	576261	NA	330 (M); 88	330 (M); 260	NA	1.3E+5	NLV	NLV	NLV	NLV	5.9E+7	4.4E+5	NA
3,4-Dimethylphenol	95658	NA	330 (M); 200	580	NA	3.6E+5	NLV	NLV	NLV	NLV	1.0E+8	1.0E+6	NA
Dimethylsulfoxide	67685	NA	4.4E+6	1.3E+7	3.8E+6	1.8E+7 (C)	NLV	NLV	NLV	NLV	5.9E+8	1.8E+7 (C)	1.8E+7
2,4-Dinitrotoluene	121142	NA	430	640	NA	1.7E+5	NLV	NLV	NLV	NLV	2.0E+7	2.2E+5	NA
Dinoseb	88857	NA	300	300	200 (M); 43	1.4E+5 (C)	NLV	NLV	NLV	NLV	1.2E+8	1.4E+5 (C,DD)	1.4E+5
1,4-Dioxane (I)	123911	NA	1,700	7,000	56,000 (X)	3.4E+7	NLV	NLV	NLV	NLV	7.1E+8	2.4E+6	9.7E+7
Diquat	85007	NA	400	400	NA	1.4E+7	NLV	NLV	NLV	NLV	ID	1.6E+6	NA
Diuron	330541	NA	620	1,800	NA	7.4E+5	NLV	NLV	NLV	NLV	2.1E+8	3.1E+6	NA
Endosulfan (J)	115297	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	4.4E+6	NA
Endothall	145733	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.0E+9	1.2E+7	NA
Endrin	72208	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	1.9E+5	NA
Epichlorohydrin (I)	106898	NA	100	100	NA	2.2E+5	1.2E+5	37,000	37,000	37,000	2.9E+7	41,000	7.3E+6
Ethanol (I)	64175	NA	3.8E+7	7.6E+7	ID	1.1E+8 (C)	NLV	NLV	NLV	NLV	5.6E+11	1.1E+8 (C,DD)	1.1E+8
Ethyl acetate (I)	141786	NA	1.3E+5	3.8E+5	NA	7.5E+6 (C)	7.5E+6 (C)	5.9E+7	5.9E+7	1.0E+8	9.4E+10	7.5E+6 (C)	7.5E+6
Ethyl-tert-butyl ether (ETBE)	637923	NA	980	980	ID	ID	6.5E+5 (C)	2.3E+6	4.6E+6	1.1E+7	1.1E+10	ID	6.5E+5

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DOCUMENT RELEASE DATE: MARCH 25, 2011

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			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact	
Guidesheet Number —>		#10	#11	#21	#12	#13	#22	#23	#24	#25	#26	#27	#20
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Ethylbenzene (I)	100414	NA	1,500	1,500	360	1.4E+5 (C)	1.4E+5 (C)	2.4E+6	3.1E+6	6.5E+6	1.3E+10	1.4E+5 (C)	1.4E+5
Ethylene dibromide	106934	NA	20 (M); 1.0	20 (M); 1.0	110 (X)	500	3,600	5,800	5,800	9,800	1.8E+7	430	8.9E+5
Ethylene glycol	107211	NA	3.0E+5	8.4E+5	3.8E+6 (X)	1.1E+8 (C)	NLV	NLV	NLV	NLV	2.9E+10	1.1E+8 (C)	1.1E+8
Ethylene glycol monobutyl ether	111762	NA	74,000	2.0E+5	NA	4.1E+7 (C)	1.4E+6	2.1E+7	1.5E+8	3.6E+8	3.8E+11	4.1E+7 (C)	4.1E+7
Fluoranthene	206440	NA	7.3E+5	7.3E+5	5,500	7.3E+5	1.0E+9 (D)	8.9E+8	8.8E+8	8.8E+8	4.1E+9	1.3E+8	NA
Fluorene	86737	NA	3.9E+5	8.9E+5	5,300	8.9E+5	1.0E+9 (D)	1.5E+8	1.5E+8	1.5E+8	4.1E+9	8.7E+7	NA
Fluorine (soluble fluoride) (B)	7782414	NA	40,000	40,000	ID	2.4E+8	NLV	NLV	NLV	NLV	ID	6.7E+7 (DD)	NA
Formaldehyde	50000	NA	26,000	76,000	2,400	6.0E+7 (C)	65,000	43,000	69,000	1.5E+5	3.0E+8	6.0E+7 (C)	6.0E+7
Formic acid (I,U)	64186	NA	2.0E+5	5.8E+5	ID	1.1E+8 (C)	2.8E+6	2.6E+5	1.6E+5	1.6E+5	5.9E+7	1.1E+8 (C)	1.1E+8
1-Formylpiperidine	2591868	NA	1,600	4,600	NA	ID	ID	ID	ID	ID	ID	8.0E+6	1.0E+7
Gentian violet	548629	NA	300	1,300	NA	2.0E+7	NLV	NLV	NLV	NLV	ID	4.4E+5	NA
Glyphosate	1071836	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	5.7E+7 (DD)	NA
Heptachlor	76448	NA	NLL	NLL	NLL	NLL	1.9E+6	2.1E+5	2.1E+5	2.1E+5	3.0E+6	23,000	NA
Heptachlor epoxide	1024573	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.5E+6	9,500	NA
n-Heptane	142825	NA	2.4E+5 (C)	2.4E+5 (C)	NA	2.4E+5 (C)	2.4E+5 (C)	2.5E+7	4.5E+7	1.0E+8	1.0E+11	2.4E+5 (C)	2.4E+5
Hexabromobenzene	87821	NA	5,400	5,400	ID	5,400	ID	ID	ID	ID	ID	3.1E+6	NA
Hexachlorobenzene (C-66)	118741	NA	1,800	1,800	350	8,200	2.2E+5	56,000	56,000	56,000	8.5E+6	37,000	NA
Hexachlorobutadiene (C-46)	87683	NA	26,000	72,000	91	3.5E+5 (C)	3.5E+5 (C)	4.6E+5	4.6E+5	4.6E+5	1.8E+8	3.5E+5 (C)	3.5E+5
alpha-Hexachlorocyclohexane	319846	NA	18	71	ID	2,500	1.6E+5	41,000	86,000	86,000	2.1E+6	12,000	NA
beta-Hexachlorocyclohexane	319857	NA	37	150	ID	5,100	NLV	NLV	NLV	NLV	7.4E+6	25,000	NA
Hexachlorocyclopentadiene (C-56)	77474	NA	3.2E+5	3.2E+5	ID	7.2E+5 (C)	56,000	60,000	60,000	60,000	5.9E+6	7.2E+5 (C)	7.2E+5

DEQ

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Hexachloroethane	67721	NA	430	1,200	1,800 (X)	1.1E+5	79,000	6.6E+5	1.4E+6	1.4E+6	1.0E+8	7.3E+5	NA
n-Hexane	110543	NA	44,000 (C)	44,000 (C)	NA	44,000 (C)	44,000 (C)	3.5E+6	3.5E+6	6.4E+6	5.9E+9	44,000 (C)	44,000
2-Hexanone	591786	NA	20,000	58,000	ID	2.5E+6 (C)	1.8E+6	1.3E+6	1.3E+6	1.5E+6	1.2E+9	2.5E+6 (C)	2.5E+6
Indeno(1,2,3-cd)pyrene (Q)	193395	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	80,000	NA
Iron (B)	7439896	1.2E+7	6,000	6,000	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	5.8E+8	NA
Isobutyl alcohol (I)	78831	NA	46,000	1.3E+5	NA	8.9E+6 (C)	8.9E+6 (C)	9.5E+7	9.5E+7	9.5E+7	4.4E+10	8.9E+6 (C)	8.9E+6
Isophorone	78591	NA	15,000	62,000	26,000 (X)	2.4E+6 (C)	NLV	NLV	NLV	NLV	8.2E+9	2.4E+6 (C)	2.4E+6
Isopropyl alcohol (I)	67630	NA	9,400	26,000	1.1E+6 (X)	1.1E+8 (C)	NLV	NLV	NLV	NLV	6.5E+9	4.7E+7	1.1E+8
Isopropyl benzene	98828	NA	91,000	2.6E+5	3,200	3.9E+5 (C)	3.9E+5 (C)	2.0E+6	2.0E+6	3.0E+6	2.6E+9	3.9E+5 (C)	3.9E+5
Lead (B)	7439921	21,000	7.0E+5	7.0E+5	(G,X)	ID	NLV	NLV	NLV	NLV	4.4E+7	9.0E+5 (DD)	NA
Lindane	58899	NA	20 (M); 7.0	20 (M); 7.0	20 (M); 1.1	7,100	ID	ID	ID	ID	ID	42,000	NA
Lithium (B)	7439932	9,800	3,400	7,000	8,800	1.1E+8	NLV	NLV	NLV	NLV	ID	3.1E+7 (DD)	NA
Magnesium (B)	7439954	NA	8.0E+6	2.2E+7	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	2.9E+9	1.0E+9 (D)	NA
Manganese (B)	7439965	4.4E+5	1,000	1,000	(G,X)	1.8E+8	NLV	NLV	NLV	NLV	1.5E+6	9.0E+7	NA
Mercury (Total) (B,Z)	Varies	130	1,700	1,700	50 (M); 1.2	47,000	89,000	62,000	62,000	62,000	8.8E+6	5.8E+5	NA
Methane	74828	NA	ID	ID	NA	ID	8.4E+6 ug/m3 (GG)	ID	ID	ID	ID	ID	ID
Methanol	67561	NA	74,000	2.0E+5	3.1E+6 (C)	3.1E+6 (C)	3.1E+6 (C)	3.7E+7	4.6E+7	9.7E+7	9.6E+10	3.1E+6 (C)	3.1E+6
Methoxychlor	72435	NA	16,000	16,000	NA	18,000	ID	ID	ID	ID	ID	5.6E+6	NA
2-Methoxyethanol (I)	109864	NA	150	420	NA	1.7E+7	NLV	NLV	NLV	NLV	5.9E+8	7.3E+5	1.1E+8
2-Methyl-4-chlorophenoxyacetic acid	94746	NA	390	1,100	NA	4.9E+5	NLV	NLV	NLV	NLV	ID	7.3E+5	NA
2-Methyl-4,6-dinitrophenol	534521	NA	830 (M); 400	830 (M); 400	NA	1.9E+5	NLV	NLV	NLV	NLV	ID	2.6E+5	NA

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N-Methyl-morpholine (I)	109024	NA	400	1,100	NA	3.0E+7	NLV	NLV	NLV	NLV	ID	2.0E+6	1.1E+8
Methyl parathion	298000	NA	46	130	NA	76,000	NLV	NLV	NLV	NLV	ID	1.8E+5	NA
4-Methyl-2-pentanone (MIBK) (I)	108101	NA	36,000	1.0E+5	ID	2.7E+6 (C)	2.7E+6 (C)	5.3E+7	5.3E+7	7.0E+7	6.0E+10	2.7E+6 (C)	2.7E+6
Methyl-tert-butyl ether (MTBE)	1634044	NA	800	800	1.4E+5 (X)	5.9E+6 (C)	5.9E+6 (C)	3.0E+7	4.1E+7	8.9E+7	8.8E+10	5.9E+6 (C)	5.9E+6
Methylcyclopentane (I)	96377	NA	ID	ID	NA	ID	1.7E+5	2.8E+6	8.3E+6	2.0E+7	2.1E+10	ID	3.5E+5
4,4'-Methylene-bis-2- chloroaniline (MBOCA)	101144	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.1E+8	32,000	NA
Methylene chloride	75092	NA	100	100	30,000 (X)	2.3E+6 (C)	2.4E+5	7.0E+5	1.7E+6	4.0E+6	8.3E+9	2.3E+6 (C)	2.3E+6
2-Methylnaphthalene	91576	NA	57,000	1.7E+5	4,200	5.5E+6	4.9E+6	1.8E+6	1.8E+6	1.8E+6	2.9E+8	2.6E+7	NA
Methylphenols (J)	1319773	NA	7,400	20,000	1,000 (M); 600	1.6E+7	NLV	NLV	NLV	NLV	2.9E+9	3.6E+7	NA
Metolachlor	51218452	NA	4,800	20,000	300	4.4E+5 (C)	NLV	NLV	NLV	NLV	ID	4.4E+5 (C,DD)	4.4E+5
Metribuzin	21087649	NA	3,600	10,000	NA	2.4E+7	ID	ID	ID	ID	ID	2.8E+7	NA
Mirex	2385855	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	40,000	NA
Molybdenum (B)	7439987	NA	1,500	4,200	64,000 (X)	1.9E+7	NLV	NLV	NLV	NLV	ID	9.6E+6	NA
Naphthalene	91203	NA	35,000	1.0E+5	730	2.1E+6	4.7E+5	3.5E+5	3.5E+5	3.5E+5	8.8E+7	5.2E+7	NA
Nickel (B)	7440020	20,000	1.0E+5	1.0E+5	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.6E+7	1.5E+8	NA
Nitrate (B,N)	14797558	NA	2.0E+5 (N)	2.0E+5 (N)	ID	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	ID	NA
Nitrite (B,N)	14797650	NA	20,000 (N)	20,000 (N)	NA	3.8E+8	NLV	NLV	NLV	NLV	ID	ID	NA
Nitrobenzene (I)	98953	NA	330 (M); 68	330 (M); 190	3,600 (X)	2.2E+5	1.7E+5	64,000	64,000	64,000	2.1E+7	3.4E+5	4.9E+5
2-Nitrophenol	88755	NA	400	1,200	ID	1.6E+6	NLV	NLV	NLV	NLV	ID	2.0E+6	NA
n-Nitroso-di-n-propylamine	621647	NA	330 (M); 100	330 (M); 100	NA	7,200	NLV	NLV	NLV	NLV	2.0E+6	5,400	1.5E+6
N-Nitrosodiphenylamine	86306	NA	5,400	22,000	NA	7.0E+5	NLV	NLV	NLV	NLV	2.8E+9	7.8E+6	NA

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Oxamyl	23135220	NA	4,000	4,000	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	2.8E+7	NA
Oxo-hexyl acetate	88230357	NA	1,500	4,200	NA	ID	ID	ID	ID	ID	2.4E+9	7.3E+6	1.0E+7
Pendimethalin	40487421	NA	1.1E+6	1.1E+6	NA	1.1E+6	NLV	NLV	NLV	NLV	ID	1.3E+8	NA
Pentachlorobenzene	608935	NA	29,000	81,000	9,500	1.9E+5 (C)	ID	ID	ID	ID	ID	1.9E+5 (C)	1.9E+5
Pentachloronitrobenzene	82688	NA	37,000	37,000	NA	37,000	2.2E+5	2.8E+5	2.8E+5	2.8E+5	1.5E+8	5.5E+6	NA
Pentachlorophenol	87865	NA	22	22	(G,X)	4,300	NLV	NLV	NLV	NLV	1.3E+8	3.2E+5	NA
Pentane	109660	NA	ID	ID	NA	ID	1.8E+5	4.4E+7	3.4E+8	6.0E+8	5.3E+11	ID	2.4E+5
2-Pentene (I)	109682	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	2.2E+5
Phenanthrene	85018	NA	56,000	1.6E+5	2,100	1.1E+6	5.1E+6	1.9E+5	1.9E+5	1.9E+5	2.9E+6	5.2E+6	NA
Phenol	108952	NA	88,000	2.6E+5	9,000	1.2E+7 (C)	NLV	NLV	NLV	NLV	1.8E+10	1.2E+7 (C,DD)	1.2E+7
Phosphorus (Total)	7723140	NA	1.3E+6	4.8E+6	(EE)	ID	NLV	NLV	NLV	NLV	2.9E+7	1.0E+9 (D)	NA
Phthalic acid	88993	NA	2.8E+5	8.0E+5	NA	1.7E+6 (C)	NLV	NLV	NLV	NLV	ID	1.7E+6 (C)	1.7E+6
Phthalic anhydride	85449	NA	3.0E+5	8.8E+5	NA	1.1E+6 (C)	NLV	NLV	NLV	NLV	ID	1.1E+6 (C)	1.1E+6
Picloram	1918021	NA	10,000	10,000	920	8.6E+6	NLV	NLV	NLV	NLV	ID	5.1E+7	NA
Piperidine	110894	NA	64	180	NA	6.8E+5	NLV	NLV	NLV	NLV	4.1E+9	3.2E+5	1.2E+8
Polybrominated biphenyls (J)	67774327	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	4,800	NA
Polychlorinated biphenyls (PCBs) (J,T)	1336363	NA	NLL	NLL	NLL	NLL	1.6E+7	8.1E+5	2.8E+7	2.8E+7	6.5E+6	(T)	NA
Prometon	1610180	NA	4,900	14,000	NA	5.5E+6	NLV	NLV	NLV	NLV	ID	1.6E+7	NA
Propachlor	1918167	NA	1,900	5,400	NA	8.8E+6	NLV	NLV	NLV	NLV	ID	9.5E+6	NA
Propazine	139402	NA	4,000	11,000	NA	1.7E+5	NLV	NLV	NLV	NLV	ID	2.0E+7	NA
Propionic acid	79094	NA	2.4E+5	7.0E+5	ID	1.1E+8 (C)	NLV	NLV	NLV	NLV	8.8E+9	1.1E+8 (C)	1.1E+8

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			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact	
Guidesheet Number —>		#10	#11	#21	#12	#13	#22	#23	#24	#25	#26	#27	#20
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Propyl alcohol (I)	71238	NA	28,000	80,000	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	2.1E+10	7.4E+7 (DD)	1.1E+8
n-Propylbenzene (I)	103651	NA	1,600	4,600	ID	3.0E+5	ID	ID	ID	ID	5.9E+8	8.0E+6	1.0E+7
Propylene glycol	57556	NA	3.0E+6	8.4E+6	5.8E+6	1.1E+8 (C)	NLV	NLV	NLV	NLV	1.8E+11	1.1E+8 (C)	1.1E+8
Pyrene	129000	NA	4.8E+5	4.8E+5	ID	4.8E+5	1.0E+9 (D)	7.8E+8	7.8E+8	7.8E+8	2.9E+9	8.4E+7	NA
Pyridine (I)	110861	NA	400	420	NA	37,000 (C)	2,000	9,800	40,000	97,000	1.0E+8	37,000 (C)	37,000
Selenium (B)	7782492	410	4,000	4,000	400	7.8E+7	NLV	NLV	NLV	NLV	5.9E+7	9.6E+6	NA
Silver (B)	7440224	1,000	4,500	13,000	100 (M); 27	2.0E+8	NLV	NLV	NLV	NLV	2.9E+6	9.0E+6	NA
Silvex (2,4,5-TP)	93721	NA	3,600	3,600	2,200	3.1E+6	NLV	NLV	NLV	NLV	ID	5.5E+6	NA
Simazine	122349	NA	80	80	340	90,000	NLV	NLV	NLV	NLV	ID	3.8E+6	NA
Sodium	17341252	NA	2.5E+6	7.0E+6	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	1.0E+9 (D)	NA
Sodium azide	26628228	NA	1,800	5,000	1,000	ID	ID	ID	ID	ID	ID	8.7E+6	NA
Strontium (B)	7440246	NA	92,000	2.6E+5	4.2E+5	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	1.0E+9 (D)	NA
Styrene	100425	NA	2,700	2,700	2,100 (X)	2.7E+5	5.2E+5 (C)	3.3E+6	3.3E+6	4.2E+6	6.9E+9	5.2E+5 (C)	5.2E+5
Sulfate	14808798	NA	5.0E+6	5.0E+6	NA	ID	NLV	NLV	NLV	NLV	ID	ID	NA
Tebuthiuron	34014181	NA	10,000	30,000	NA	5.0E+7	NLV	NLV	NLV	NLV	ID	2.7E+7 (DD)	NA
2,3,7,8-Tetrabromodibenzo-p-dioxin (O)	50585416	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	(O)	(O)	NA
1,2,4,5-Tetrachlorobenzene	95943	NA	1.5E+6	1.5E+6	3,400 (X)	1.5E+6	1.1E+6	2.7E+5	2.7E+5	2.7E+5	2.9E+7	2.5E+8	NA
2,3,7,8-Tetrachlorodibenzo-p-dioxin (O)	1746016	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	89 (O)	0.99 (O)	NA
1,1,1,2-Tetrachloroethane	630206	NA	1,500	6,400	ID	4.4E+5 (C)	33,000	1.2E+5	2.1E+5	3.3E+5	5.3E+8	4.4E+5 (C)	4.4E+5
1,1,2,2-Tetrachloroethane	79345	NA	170	700	1,600 (X)	94,000	23,000	34,000	34,000	34,000	6.8E+7	2.4E+5	8.7E+5
Tetrachloroethylene	127184	NA	100	100	1,200 (X)	88,000 (C)	60,000	6.0E+5	1.4E+6	3.3E+6	6.8E+9	88,000 (C)	88,000

Attachment 1
TABLE 3. SOIL: NONRESIDENTIAL
PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS;
PART 213 TIER 1 RISK-BASED SCREENING LEVELS (RBSLs)
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Tetrahydrofuran	109999	NA	1,900	5,400	2.2E+5 (X)	3.2E+7	2.4E+6	1.5E+7	6.7E+7	1.6E+8	1.7E+11	9.5E+6	1.2E+8
Tetranitromethane	509148	NA	ID	ID	NA	ID	600	500 (M); 180	ID	ID	2.6E+5	ID	ID
Thallium (B)	7440280	NA	2,300	2,300	4,200 (X)	1.5E+7	NLV	NLV	NLV	NLV	5.9E+6	1.3E+5	NA
Toluene (I)	108883	NA	16,000	16,000	5,400	2.5E+5 (C)	2.5E+5 (C)	3.3E+6	3.6E+7	3.6E+7	1.2E+10	2.5E+5 (C)	2.5E+5
p-Toluidine	106490	NA	660 (M); 300	1,200	NA	4.8E+5	NLV	NLV	NLV	NLV	1.3E+8	4.3E+5	1.2E+6
Toxaphene	8001352	NA	24,000	24,000	8,200	3.6E+5	NLV	NLV	NLV	NLV	1.2E+7	85,000	NA
Triallate	2303175	NA	95,000	2.5E+5 (C)	NA	2.5E+5 (C)	ID	ID	ID	ID	ID	2.5E+5 (C)	2.5E+5
Tributylamine	102829	NA	7,800	23,000	ID	1.8E+6	1.1E+6	7.2E+5	7.2E+5	7.2E+5	2.1E+8	2.6E+6	3.7E+6
1,2,4-Trichlorobenzene	120821	NA	4,200	4,200	5,900 (X)	1.1E+6 (C)	1.1E+6 (C)	3.4E+7	3.4E+7	3.4E+7	1.1E+10	1.1E+6 (C,DD)	1.1E+6
1,1,1-Trichloroethane	71556	NA	4,000	4,000	1,800	4.6E+5 (C)	4.6E+5	4.5E+6	1.5E+7	3.1E+7	2.9E+10	4.6E+5 (C)	4.6E+5
1,1,2-Trichloroethane	79005	NA	100	100	6,600 (X)	4.2E+5	24,000	57,000	57,000	1.2E+5	2.5E+8	8.4E+5	9.2E+5
Trichloroethylene	79016	NA	100	100	4,000 (X)	4.4E+5	37,000	2.6E+5	4.4E+5	1.1E+6	2.3E+9	5.0E+5 (C,DD)	5.0E+5
Trichlorofluoromethane	75694	NA	52,000	1.5E+5	NA	5.6E+5 (C)	5.6E+5 (C)	1.1E+8	1.4E+11	1.4E+11	1.7E+12	5.6E+5 (C)	5.6E+5
2,4,5-Trichlorophenol	95954	NA	39,000	1.1E+5	NA	9.1E+6	NLV	NLV	NLV	NLV	1.0E+10	7.3E+7	NA
2,4,6-Trichlorophenol	88062	NA	2,400	9,400	330 (M); 100	2.0E+5	NLV	NLV	NLV	NLV	1.3E+9	3.3E+6	NA
1,2,3-Trichloropropane	96184	NA	840	2,400	NA	8.3E+5 (C)	7,500	11,000	11,000	12,000	8.8E+6	8.3E+5 (C)	8.3E+5
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	NA	5.5E+5 (C)	5.5E+5 (C)	1,700	5.5E+5 (C)	5.5E+5 (C)	2.1E+8	8.9E+8	2.1E+9	2.3E+12	5.5E+5 (C)	5.5E+5
Triethanolamine	102716	NA	74,000	2.0E+5	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	1.5E+9	1.1E+8 (C)	1.1E+8
Triethylene glycol	112276	NA	1.1E+5 (C)	1.1E+5 (C)	NA	1.1E+5 (C)	NLV	NLV	NLV	NLV	ID	1.1E+5 (C,DD)	1.1E+5
3-Trifluoromethyl-4-nitrophenol	88302	NA	1.1E+5	3.1E+5	NA	1.2E+8	NLV	NLV	NLV	NLV	ID	2.4E+8 (DD)	NA
Trifluralin	1582098	NA	1.9E+5	5.7E+5	NA	1.2E+7	ID	ID	ID	ID	ID	5.7E+6	NA

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2,2,4-Trimethyl pentane	540841	NA	ID	ID	NA	ID	19,000 (C)	6.3E+6	4.0E+7	9.6E+7	1.0E+11	ID	19,000
2,4,4-Trimethyl-2-pentene (I)	107404	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	56,000
1,2,4-Trimethylbenzene (I)	95636	NA	2,100	2,100	570	1.1E+5 (C)	1.1E+5 (C)	2.5E+7	6.0E+8	6.0E+8	3.6E+10	1.1E+5 (C)	1.1E+5
1,3,5-Trimethylbenzene (I)	108678	NA	1,800	1,800	1,100	94,000 (C)	94,000 (C)	1.9E+7	4.6E+8	4.6E+8	3.6E+10	94,000 (C)	94,000
Triphenyl phosphate	115866	NA	1.1E+5 (C)	1.1E+5 (C)	NA	1.1E+5 (C)	NLV	NLV	NLV	NLV	ID	1.1E+5 (C)	1.1E+5
tris(2,3-Dibromopropyl)phosphate	126727	NA	930	930	ID	27,000 (C)	27,000 (C)	60,000	60,000	60,000	7.4E+6	20,000	27,000
Urea	57136	NA	ID	ID	NA	ID	NLV	NLV	NLV	NLV	ID	ID	NA
Vanadium	7440622	NA	72,000	9.9E+5	1.9E+5	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	5.5E+6 (DD)	NA
Vinyl acetate (I)	108054	NA	13,000	36,000	NA	2.4E+6 (C)	1.5E+6	2.0E+6	2.7E+6	5.9E+6	5.9E+9	2.4E+6 (C,DD)	2.4E+6
Vinyl chloride	75014	NA	40	40	260 (X)	20,000	2,800	29,000	1.7E+5	4.2E+5	8.9E+8	34,000	4.9E+5
White phosphorus (R)	12185103	NA	2.2	6.0	NA	58,000	NLV	NLV	NLV	NLV	ID	17,000 (DD)	NA
Xylenes (I)	1330207	NA	5,600	5,600	820	1.5E+5 (C)	1.5E+5 (C)	5.4E+7	6.5E+7	1.3E+8	1.3E+11	1.5E+5 (C)	1.5E+5
Zinc (B)	7440666	47,000	2.4E+6	5.0E+6	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	6.3E+8	NA

FOOTNOTES
for
Part 201 Criteria and Part 213 Risk-Based Screening Levels
Document Release Date: March 25, 2011

(A) Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.

(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.

(C) Value presented is a screening level based on the chemical-specific generic soil saturation concentration (C_{sat}) since the calculated risk-based criterion is greater than C_{sat}. Concentrations greater than C_{sat} are acceptable cleanup criteria for this pathway where a site-specific demonstration indicates that free-phase material containing a hazardous substance is not present.

(D) Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).

(E) Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). A notice of aesthetic impact may be employed as an institutional control mechanism if groundwater concentrations exceed the aesthetic drinking water criterion, but do not exceed the applicable health-based drinking water value provided in the following table:

Hazardous Substance	Chemical Abstract Service Number	Residential Health-Based Drinking Water Value	Non-Residential Health-Based Drinking Water Value
Aluminum	7429905	300	4,100
tertiary Amyl methyl ether	994058	910	2,600
Copper	7440508	1,400	4,000
Diethyl ether	60297	3,700	10,000
Ethylbenzene	100414	700	700
Iron	7439896	2,000	5,600
Manganese	7439965	860	2,500
Methyl-tert-butyl ether (MTBE)	1634044	240	690
Toluene	108883	1,000	1,000
1,2,4-Trimethylbenzene	95636	1,000	2,900
1,3,5-Trimethylbenzene	108678	1,000	2,900
Xylenes	1330207	10,000	10,000

(F) Criterion is based on adverse impacts to plant life and phytotoxicity.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg $CaCO_3$/L, use 400 mg $CaCO_3$/L for the FCV calculation. The FCV formula provides values in units of ug/L or ppb. The generic GSI criterion is the lesser of

the calculated FCV, the wildlife value (WV), and the surface water human non-drinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Hazardous Substance	FCV Formula ug/L	FCV Conversion Factor (CF)	WV ug/L	HNDV ug/L
Acetate	EXP(0.2732*(pH) + 7.0362)	NA	NA	1.3E+6
Acetic Acid	EXP(0.2732*(pH) + 7.0362)	NA	NA	1.3E+6
Barium	EXP(1.0629*(LnH)+1.1869)	NA	NA	1.6E+5
Beryllium	EXP(2.5279*(LnH)-10.7689)	NA	NA	1,200
Cadmium⊗	(EXP(0.7852*(LnH)-2.715))*CF	1.101672-((LnH)*(0.041838))	NA	130
Chromium (III) ⊗	(EXP(0.819*(LnH)+0.6848))*CF	0.86	NA	9,400
Copper	(EXP(0.8545*(LnH)-1.702)) *CF	0.96	NA	38,000
Lead⊗	(EXP(1.273*(LnH)-3.296))*CF	1.46203-((LnH)*(0.14571))	NA	190
Manganese⊗	EXP(0.8784*(LnH)+3.5199)	NA	NA	59,000
Nickel	(EXP(0.846*(LnH)+0.0584))*CF	0.997	NA	2.1E+5
Pentachlorophenol⊗	EXP(1.005*(pH)-5.134)	NA	NA	2.8
Zinc	(EXP(0.8473*(LnH)+0.884))*CF	0.986	NA	16,000

where,

EXP(x) = The base of the natural logarithm raised to power x (e^x).
LnH = The natural logarithm of water hardness in mg $CaCO_3$/L.
* = The multiplication symbol.
⊗ = The GSI criterion developed here may not be protective for surface water that is used as a drinking water source. Refer to footnote (X) for further guidance.

A spreadsheet that may be used to calculate GSI and GSI protection criteria for (G)-footnoted hazardous substances is available on the Department of Environmental Quality (DEQ) internet web site.

(H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria. If both Cr III and Cr VI are present in groundwater, the total concentration of both cannot exceed the drinking water criterion of 100 ug/L. If analytical data are provided for total chromium only, they shall be compared to the cleanup criteria for Cr VI. Cr III soil cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future, through an approved land or resource use restriction.

(I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. §261.21 (revised as of July 1, 2001), which is adopted by reference in these rules and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of $45, from the Superintendent of Documents, Government Printing Office, Washington, DC 20401 (stock number 869-044-00155-1), or from the DEQ, Remediation and Redevelopment Division (RRD), 525 West Allegan Street, Lansing, Michigan 48933, at cost.

(J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.

(K) Hazardous substance may be flammable or explosive, or both.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules. The generic residential drinking water criterion of 4 ug/L is linked to the generic residential soil direct contact criterion of 400 mg/kg. A higher concentration in the drinking water, up to the state action level of 15 ug/L, may be allowed as a site-specific remedy and still allow for drinking water use, under Section 20120a(2) of the NREPA if soil concentrations are appropriately lower than 400 mg/kg. If a site-specific criterion is approved based on this subdivision, a notice shall be filed on the deed for all property where the groundwater concentrations will exceed 4 ug/L to provide notice of the potential for unacceptable risk if soil or groundwater concentrations increase. Acceptable combinations of site-specific soil and drinking water concentrations are presented in the following table:

Acceptable Combinations of Lead in Drinking Water and Soil

Drinking Water Concentration (ug/L)	Soil Concentration (mg/kg)
5	386-395
6	376-385
7	376-385
8	366-375
9	356-365
10	346-355
11	336-345
12	336-345
13	326-335
14	316-325
15	306-315

(M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

(N) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 ug/kg.

(O) The concentration of all polychlorinated and polybrominated dibenzodioxin and dibenzofuran isomers present at a facility, expressed as an equivalent concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin based upon their relative potency, shall be added together and compared to the criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin. The generic cleanup criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin are not calculated according to the algorithms presented in R 299.5714 to R 299.5726. The generic cleanup criteria are being held at the values that the DEQ has used since August 1998, in recognition of

the fact that national efforts to reassess risks posed by dioxin are not yet complete. Until these studies are complete, it is premature to select a revised slope factor and/or reference dose for calculation of generic cleanup criteria.

(P) Amenable cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with all groundwater criteria. Total cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with soil criteria. Nonresidential direct contact criteria may not be protective of the potential for release of hydrogen cyanide gas. Additional land or resource use restrictions may be necessary to protect for the acute inhalation concerns associated with hydrogen cyanide gas.

(Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.

(R) Hazardous substance may exhibit the characteristic of reactivity as defined in 40 C.F.R. §261.23 (revised as of July 1, 2001), which is adopted by reference in these rules and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of $45, from the Superintendent of Documents, Government Printing Office, Washington, DC 20401 (stock number 869-044-00155-1), or from the DEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost.

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(T) Refer to the federal Toxic Substances Control Act (TSCA), 40 C.F.R. §761, Subpart D and 40 C.F.R. §761, Subpart G, to determine the applicability of TSCA cleanup standards. Subpart D and Subpart G of 40 C.F.R. §761 (July 1, 2001) are adopted by reference in these rules and are available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulations may be purchased, at a cost as of the time of adoption of these rules of $55, from the Superintendent of Documents, Government Printing Office, Washington, DC 20401, or from the DEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost. Alternatives to compliance with the TSCA standards listed below are possible under 40 C.F.R. §761 Subpart D. New releases may be subject to the standards identified in 40 C.F.R. §761, Subpart G. Use Part 201 soil direct contact cleanup criteria in the following table if TSCA standards are not applicable.

Land Use Category	TSCA, Subpart D Cleanup Standards	Part 201 Soil Direct Contact Cleanup Criteria
Residential	1,000 ppb, or 10,000 ppb if capped	4,000 ppb
Nonresidential	1,000 ppb, or 10,000 ppb if capped	16,000 ppb

(U) Hazardous substance may exhibit the characteristic of corrosivity as defined in 40 C.F.R. §261.22 (revised as of July 1, 2001), which is adopted by reference in

these rules and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of $45, from the Superintendent of Documents, Government Printing Office, Washington, DC 20401 (stock number 869-044-00155-1), or from the DEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost.

(V) Criterion is the aesthetic drinking water value as required by Section 20120(a)(5) of the NREPA. Concentrations up to 200 ug/L may be acceptable, and still allow for drinking water use, as part of a site-specific cleanup under Section 20120a(2) of the NREPA.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L. Concentrations of trihalomethanes in soil shall be added together to determine compliance with the drinking water protection criterion of 1,600 ug/kg.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Hazardous Substance	Chemical Abstract Service Number	Surface Water Human Drinking Water Values (HDV) (ug/L)	Soil GSI Protection Criteria for HDV (ug/kg)
Acrylamide	79061	0.5 (M); 0.12	10
Alachlor	15972608	3.5	88
Antimony	7440360	2.0 (M); 1.7	1,200
Benzene	71432	12	240
Boron	7440428	1,900	38,000
Bromate	15541454	10 (M); 0.5	200
Butyl benzyl phthalate	85687	6.9	13,000
Cadmium	7440439	2.5*	*
Carbon tetrachloride	56235	5.6	110
Chloride	16887006	50,000	1.0E+6
Chloroethane	75003	170	3,400
Chromium (III)	16065831	120*	*
Cyanazine	21725462	2.0 (M); 0.93	200 (M); 40
1,2-Dichloroethane	107062	6.0	120
trans-1,2-Dichloroethylene	156605	470	9,400
1,2-Dichloropropane	78875	9.1	180
1,3-Dichloropropene	542756	3.3	100 (M); 66
N,N-Dimethylacetamide	127195	700	14,000
1,4-Dioxane	123911	34	680
Ethylene dibromide	106934	0.17	20 (M); 3.4
Ethylene glycol	107211	56,000	1.1E+6
Hexachloroethane	67721	5.3	310
Isophorone	78591	310	6,200
Isopropyl alcohol	67630	28,000	5.6E+5
Lead	7439921	14*	*
Manganese	7439965	1,300*	*
Methanol	67561	14,000	2.8E+5
Methyl-tert-butyl ether (MTBE)	1634044	100	2,000
Methylene chloride	75092	47	940
Molybdenum	7439987	120	2,400
Nitrobenzene	98953	4.7	330 (M); 94
Pentachlorophenol	87865	1.8*	*
Styrene	100425	20	530
1,2,4,5-Tetrachlorobenzene	95943	2.8	3,300
1,1,2,2-Tetrachloroethane	79345	3.2	64
Tetrachloroethylene	127184	11	220
Tetrahydrofuran	109999	350	7,000
Thallium	7440280	2.0 (M); 1.2	1,400
1,2,4-Trichlorobenzene	120821	80	4,700
1,1,2-Trichloroethane	79005	12	240
Trichloroethylene	79016	29	580
Vinyl chloride	75014	1.0 (M); 0.25	40 (M); 20

(Y) Source size modifiers shown in the following table shall be used to determine soil inhalation criteria for ambient air when the source size is not one-half acre. The modifier shall be multiplied by the generic soil inhalation criteria shown in the

table of generic cleanup criteria to determine the applicable criterion.

Source Size sq. feet or acres	Modifier
400 sq feet	3.17
1000 sq feet	2.2
2000 sq feet	1.76
1/4 acre	1.15
1/2 acre	1
1 acre	0.87
2 acre	0.77
5 acre	0.66
10 acre	0.6
32 acre	0.5
100 acre	0.43

(Z) Mercury is typically measured as total mercury. The generic cleanup criteria, however, are based on data for different species of mercury. Specifically, data for elemental mercury, chemical abstract service (CAS) number 7439976, serve as the basis for the soil volatilization to indoor air criteria, groundwater volatilization to indoor air, and soil inhalation criteria. Data for methyl mercury, CAS number 22967926, serve as the basis for the GSI criterion; and data for mercuric chloride, CAS number 7487947, serve as the basis for the drinking water, groundwater contact, soil direct contact, and the groundwater protection criteria. Comparison to criteria shall be based on species-specific analytical data only if sufficient facility characterization has been conducted to rule out the presence of other species of mercury.

(AA) Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.

(BB) The state drinking water standard for asbestos is in units of fibers per milliliter of water (f/mL) longer than 10 millimicrons. Soil concentrations of asbestos are determined by polarized light microscopy.

(CC) Groundwater: The generic GSI criteria are based on the toxicity of unionized ammonia (NH_3); the criteria are 29 ug/L and 53 ug/L for cold water and warm water surface water, respectively. As a result, the GSI criterion shall be compared to the percent of the total ammonia concentration in the groundwater that will become NH_3 in the surface water. This percent NH_3 is a function of the pH and temperature of the receiving surface water and can be estimated using the following table, taken from Emerson, et al., (Journal of the Fisheries Research Board of Canada, Volume 32(12):2382, 1975).

Percent NH_3 in Aqueous Ammonia Solutions for 0-30 °C and pH 6-10

Temp (°F)	Temp (°C)	pH 6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
32.0	0	0.00827	0.0261	0.0826	0.261	0.820	2.55	7.64	20.7	45.3
33.8	1	0.00899	0.0284	0.0898	0.284	0.891	2.77	8.25	22.1	47.3
35.6	2	0.00977	0.0309	0.0977	0.308	0.968	3.00	8.90	23.6	49.4
37.4	3	0.0106	0.0336	0.106	0.335	1.05	3.25	9.60	25.1	51.5
39.2	4	0.0115	0.0364	0.115	0.363	1.14	3.52	10.3	26.7	53.5
41.0	5	0.0125	0.0395	0.125	0.394	1.23	3.80	11.1	28.3	55.6
42.8	6	0.0136	0.0429	0.135	0.427	1.34	4.11	11.9	30.0	57.6
44.6	7	0.0147	0.0464	0.147	0.462	1.45	4.44	12.8	31.7	59.5
46.4	8	0.0159	0.0503	0.159	0.501	1.57	4.79	13.7	33.5	61.4
48.2	9	0.0172	0.0544	0.172	0.542	1.69	5.16	14.7	35.3	63.3
50.0	10	0.0186	0.0589	0.186	0.586	1.83	5.56	15.7	37.1	65.1
51.8	11	0.0201	0.0637	0.201	0.633	1.97	5.99	16.8	38.9	66.8
53.6	12	0.0218	0.0688	0.217	0.684	2.13	6.44	17.9	40.8	68.5
55.4	13	0.0235	0.0743	0.235	0.738	2.30	6.92	19.0	42.6	70.2
57.2	14	0.0254	0.0802	0.253	0.796	2.48	7.43	20.2	44.5	71.7
59.0	15	0.0274	0.0865	0.273	0.859	2.67	7.97	21.5	46.4	73.3
60.8	16	0.0295	0.0933	0.294	0.925	2.87	8.54	22.8	48.3	74.7
62.6	17	0.0318	0.101	0.317	0.996	3.08	9.14	24.1	50.2	76.1
64.4	18	0.0343	0.108	0.342	1.07	3.31	9.78	25.5	52.0	77.4
66.2	19	0.0369	0.117	0.368	1.15	3.56	10.5	27.0	53.9	78.7
68.0	20	0.0397	0.125	0.396	1.24	3.82	11.2	28.4	55.7	79.9
69.8	21	0.0427	0.135	0.425	1.33	4.10	11.9	29.9	57.5	81.0
71.6	22	0.0459	0.145	0.457	1.43	4.39	12.7	31.5	59.2	82.1
73.4	23	0.0493	0.156	0.491	1.54	4.70	13.5	33.0	60.9	83.2
75.2	24	0.0530	0.167	0.527	1.65	5.03	14.4	34.6	62.6	84.1
77.0	25	0.0569	0.180	0.566	1.77	5.38	15.3	36.3	64.3	85.1
78.8	26	0.0610	0.193	0.607	1.89	5.75	16.2	37.9	65.9	85.9
80.6	27	0.0654	0.207	0.651	2.03	6.15	17.2	39.6	67.4	86.8
82.4	28	0.0701	0.221	0.697	2.17	6.56	18.2	41.2	68.9	87.3
84.2	29	0.0752	0.237	0.747	2.32	7.00	19.2	42.9	70.4	88.3
86.0	30	0.0805	0.254	0.799	2.48	7.46	20.3	44.6	71.8	89.0

The generic approach for estimating NH_3 assumes a default pH of 8 and default temperatures of 68°F and 85°F for cold water and warm water surface water, respectively. The resulting percent NH_3 is 3.8 percent and 7.2 percent for cold water and warm water, respectively. This default percentage shall be multiplied by the total ammonia-nitrogen (NH_3-N) concentration in the groundwater and the resulting NH_3 concentration compared to the applicable GSI criterion. As an

alternative, the maximum pH and temperature data from the specific receiving surface water can be used to estimate, from the table in this footnote, a lower percent unionized ammonia concentration for comparison to the generic GSI.

Soil: The generic soil GSI protection criteria for unionized ammonia are 580 ug/kg and 1,100 ug/kg for cold water and warm water surface water, respectively.

(DD) Hazardous substance causes developmental effects. Residential direct contact criteria are protective of both prenatal and postnatal exposure. Nonresidential direct contact criteria are protective for a pregnant adult receptor.

(EE) The following are applicable generic GSI criteria as required by Section 20120a(15) of the NREPA.

Hazardous Substance	GSI (ug/L)	Notes
Phosphorus	1,000	Criteria applicable unless receiving water is a surface water that has a phosphorus waste load allocation or is an inland lake. In those cases, contact the department for applicable values.
Total dissolved solids (TDS)	5.0E+5	If TDS data are not available, the TDS criterion may be used a screening level for the sum of the concentrations of the following substances: Calcium, Chlorides, Iron, Magnesium, Potassium, Sodium, Sulfate.
Dissolved Oxygen (DO): Cold receiving waters Warm receiving waters	 ≥ 7,000 ≥ 5,000	Since a low level of DO can be harmful to aquatic life, the criterion represents a minimum level that on-site samples must exceed. This is in contrast to other criteria which represent "not to exceed" concentrations. DO criteria are not applicable if groundwater Carbonaceous Biochemical Oxygen Demand (CBOD) is less than 10,000 ug/L and groundwater ammonia concentration is less than 2,000 ug/L.

(FF) The chloride GSI criterion shall be 125 mg/l when the discharge is to surface waters of the state designated as public water supply sources or 50 mg/l when the discharge is to the Great Lakes or connecting waters. Chloride GSI criteria shall not apply for surface waters of the state that are not designated as a public water supply source, however, the total dissolved solids criterion is applicable.

(GG) Risk-based criteria are not available for methane due to insufficient toxicity data. An acceptable soil gas concentration (presented for both residential and nonresidential land uses) was derived utilizing 25 percent of the lower explosive level for methane. This equates to 1.25 percent or 8.4E+6 ug/m^3.

"ID" means insufficient data to develop criterion.
"NA" means a criterion or value is not available or, in the case of background and CAS numbers, not applicable.
"NLL" means hazardous substance is not likely to leach under most soil conditions.
"NLV" means hazardous substance is not likely to volatilize under most conditions.

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT
LANSING

February 17, 2011

Pursuant to the December 2010 Part 201 amendments (amendments), the Part 201 and Part 213 Groundwater Surface Water Interface (GSI) criteria and the GSI Protection (GSIP) criteria for soil have been revised and published on the Department of Natural Resources and Environment - Remediation Division's Internet homepage. These criteria were effective on December 14, 2010.

Per the amendments, the generic GSI criteria are the water quality standards for surface water developed by the department pursuant to Part 31 (Sec. 20120e). As a result, some of the GSI and GSIP criteria have changed. These revised criteria replace the generic GSI and GSIP criteria presented in the 2006 Department of Environmental Quality - Remediation and Redevelopment Division Operational Memorandum No. 1 currently posted on the Internet. Additionally, the GSI and GSIP criteria will be updated periodically as the water quality standards are updated.

Only those Footnotes related to the GSI and GSIP criteria or related to the hazardous substances in the table are included. The data presented in the tables associated with Footnotes (G) and (X) have additionally been revised to be consistent with the GSI and GSIP criteria revisions. Users are referred to the above referenced Operational Memorandum No. 1 for other footnote descriptions unrelated to the GSI and GSIP criteria.

For those organic hazardous substances that have been revised pursuant to the amendments, the GSI Soil Water Partitioning (SWP) values are based on the organic SWP equation presented in the technical support document for the Groundwater Protection Criteria (attachment 9 of RRD Op Memo No. 1). For those organic hazardous substances that have not been revised pursuant to the amendments, the equation that the department uses to generate the GSI SWP values contains a minor formatting error that results in slightly different organic SWP values. Since the GSIP criteria were promulgated into rule in December of 2002, the department is not able to correct this pathway error until a Part 31 water quality standard has been updated for that hazardous substance or until the rules are repromulgated.

A compiled set of all Part 201 and Part 213 criteria tables (i.e., Tables 1 through 4), inclusive of the revised GSI and GSIP criteria, will be published next month.

For questions regarding the updated GSI criteria please contact:

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Remediation Division

Department of Natural Resources and Environment

Part 201 Groundwater Surface Water Interface Criteria and Part 213 Risk-Based Screening Levels Part 201 Groundwater Surface Water Interface Protection Soil Criteria and Part 213 Risk-Based Screening Levels Pursuant to Part 201 of the Natural Resources and Environmental Protection Act 451 of 1994 as amended. Effective date December 14, 2010

All criteria are expressed in units of parts per billion (ppb). One ppb is equivalent to one microgram per liter (µg/L) in water and one microgram per kilogram (µg/kg) in soil. A footnote is designated by a letter in parentheses and is explained after the table. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (Sec. 20120a(10)). In these cases, two numbers are presented in the cell. The first number is the criterion (i.e., TDL) and the second number is the risk-based or solubility value whichever is lower (R 299.5708).

Hazardous Substance	Chemical Abstract Service Number	Groundwater Surface Water Interface Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs
Acenaphthene	83329	38	8,700
Acenaphthylene	208968	ID	ID
Acetaldehyde (I)	75070	130	2,600
Acetate	71501	(G)	(G)
Acetic acid	64197	(G)	(G)
Acetone (I)	67641	1,700	34,000
Acetonitrile	75058	NA	NA
Acetophenone	98862	ID	ID
Acrolein (I)	107028	NA	NA
Acrylamide	79061	10 (X)	200 (X)
Acrylic acid	79107	NA	NA
Acrylonitrile (I)	107131	2.0 (M); 1.2	100 (M); 40
Alachlor	15972608	11 (X)	290 (X)
Aldicarb	116063	NA	NA
Aldicarb sulfone	1646884	NA	NA
Aldicarb sulfoxide	1646873	NA	NA
Aldrin	309002	0.01 (M); 8.7E-6	NLL
Aluminum (B)	7429905	NA	NA
Ammonia	7664417	(CC)	(CC)
t-Amyl methyl ether (TAME)	994058	NA	NA
Aniline	62533	4.0	330 (M); 80
Anthracene	120127	ID	ID
Antimony	7440360	130 (X)	94,000 (X)
Arsenic	7440382	10	4,600
Asbestos (BB)	1332214	NA	NLL
Atrazine	1912249	7.3	150

Hazardous Substance	Chemical Abstract Service Number	Groundwater Surface Water Interface Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs
Azobenzene	103333	ID	ID
Barium (B)	7440393	(G)	(G)
Benzene (I)	71432	200 (X)	4,000 (X)
Benzidine	92875	0.3 (M); 0.073	1,000 (M); 6.0
Benzo(a)anthracene (Q)	56553	ID	NLL
Benzo(b)fluoranthene (Q)	205992	ID	NLL
Benzo(k)fluoranthene (Q)	207089	NA	NLL
Benzo(g,h,i)perylene	191242	ID	NLL
Benzo(a)pyrene (Q)	50328	ID	NLL
Benzoic acid	65850	NA	NA
Benzyl alcohol	100516	NA	NA
Benzyl chloride	100447	NA	NA
Beryllium	7440417	(G)	(G)
bis(2-Chloroethoxy)ethane	112265	ID	ID
bis(2-Chloroethyl)ether (I)	111444	1.0 (M); 0.79	100 (M); 20
bis(2-Ethylhexyl)phthalate	117817	25	NLL
Boron (B)	7440428	5,000 (X)	1.0E+5 (X)
Bromate	15541454	40 (X)	800 (X)
Bromobenzene (I)	108861	NA	NA
Bromodichloromethane	75274	ID	ID
Bromoform	75252	ID	ID
Bromomethane	74839	35	700
n-Butanol (I)	71363	NA	NA
2-Butanone (MEK) (I)	78933	2,200	44,000
n-Butyl acetate	123864	NA	NA
t-Butyl alcohol	75650	NA	NA
Butyl benzyl phthalate	85687	67 (X)	1.2E+5 (X)
n-Butylbenzene	104518	ID	ID
sec-Butylbenzene	135988	ID	ID
t-Butylbenzene (I)	98066	ID	ID
Cadmium (B)	7440439	(G,X)	(G,X)
Camphene (I)	79925	NA	NA
Caprolactam	105602	NA	NA
Carbaryl	63252	NA	NA
Carbazole	86748	10 (M); 4.0	1,100
Carbofuran	1563662	NA	NA
Carbon disulfide (I,R)	75150	ID	ID
Carbon tetrachloride	56235	45 (X)	900 (X)
Chlordane (J)	57749	2.0 (M); 0.00025	NLL
Chloride	16887006	(FF)	(X)
Chlorobenzene (I)	108907	25	500
p-Chlorobenzene sulfonic acid	98668	ID	ID
1-Chloro-1,1-difluoroethane	75683	NA	NA
Chloroethane	75003	1,100 (X)	22,000 (X)
2-Chloroethyl vinyl ether	110758	NA	NA
Chloroform	67663	350	7,000
Chloromethane (I)	74873	ID	ID

Hazardous Substance	Chemical Abstract Service Number	Groundwater Surface Water Interface Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs
4-Chloro-3-methylphenol	59507	7.4	280
beta-Chloronaphthalene	91587	NA	NA
2-Chlorophenol	95578	18	360
o-Chlorotoluene (I)	95498	ID	ID
Chlorpyrifos	2921882	2.0 (M); 0.002	1,500
Chromium (III) (B,H)	16065831	(G,X)	(G,X)
Chromium (VI)	18540299	11	3,300
Chrysene (Q)	218019	ID	NLL
Cobalt	7440484	100	2,000
Copper (B)	7440508	(G)	(G)
Cyanazine	21725462	56 (X)	1,100 (X)
Cyanide (P,R)	57125	5.2	100
Cyclohexanone	108941	NA	NA
Dacthal	1861321	NA	NA
Dalapon	75990	NA	NA
4-4'-DDD	72548	NA	NLL
4-4'-DDE	72559	NA	NLL
4-4'-DDT	50293	0.02 (M); 1.1E-5	NLL
Decabromodiphenyl ether	1163195	NA	NA
Di-n-butyl phthalate	84742	9.7	11,000
Di(2-ethylhexyl) adipate	103231	ID	ID
Di-n-octyl phthalate	117840	ID	ID
Diacetone alcohol (I)	123422	NA	NA
Diazinon	333415	1.0 (M); 0.004	72
Dibenzo(a,h)anthracene (Q)	53703	ID	NLL
Dibenzofuran	132649	4.0	1,700
Dibromochloromethane	124481	ID	ID
Dibromochloropropane	96128	ID	ID
Dibromomethane	74953	NA	NA
Dicamba	1918009	NA	NA
1,2-Dichlorobenzene	95501	13	280
1,3-Dichlorobenzene	541731	28	680
1,4-Dichlorobenzene	106467	17	360
3,3'-Dichlorobenzidine	91941	0.3 (M); 0.2	2,000 (M); 7.4
Dichlorodifluoromethane	75718	ID	ID
1,1-Dichloroethane	75343	740	15,000
1,2-Dichloroethane (I)	107062	360 (X)	7,200 (X)
1,1-Dichloroethylene (I)	75354	130	2,600
cis-1,2-Dichloroethylene	156592	620	12,000
trans-1,2-Dichloroethylene	156605	1,500 (X)	30,000 (X)
2,6-Dichloro-4-nitroaniline	99309	NA	NA
2,4-Dichlorophenol	120832	11	330 (M); 220
2,4-Dichlorophenoxyacetic acid	94757	220	4,400
1,2-Dichloropropane (I)	78875	230 (X)	4,600 (X)
1,3-Dichloropropene	542756	9.0 (X)	180 (X)
Dichlorovos	62737	NA	NA
Dicyclohexyl phthalate	84617	NA	NA

Hazardous Substance	Chemical Abstract Service Number	Groundwater Surface Water Interface Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs
Dieldrin	60571	0.02 (M); 6.5E-6	NLL
Diethyl ether	60297	ID	ID
Diethyl phthalate	84662	110	2,200
Diethylene glycol monobutyl ether	112345	NA	NA
Diisopropyl ether	108203	ID	ID
Diisopropylamine (I)	108189	NA	NA
Dimethyl phthalate	131113	NA	NA
N,N-Dimethylacetamide	127195	4,100 (X)	82,000 (X)
N,N-Dimethylaniline	121697	NA	NA
Dimethylformamide (I)	68122	NA	NA
2,4-Dimethylphenol	105679	380	7,600
2,6-Dimethylphenol	576261	NA	NA
3,4-Dimethylphenol	95658	NA	NA
Dimethylsulfoxide	67685	1.9E+5	3.8E+6
2,4-Dinitrotoluene	121142	NA	NA
Dinoseb	88857	1.0 (M); 0.48	200 (M); 43
1,4-Dioxane (I)	123911	2,800 (X)	56,000 (X)
Diquat	85007	NA	NA
Dissolved oxygen (DO)	NA	(EE)	not applicable
Diuron	330541	NA	NA
Endosulfan (J)	115297	0.03 (M); 0.029	NLL
Endothall	145733	NA	NLL
Endrin	72208	ID	NLL
Epichlorohydrin (I)	106898	NA	NA
Ethanol (I)	64175	ID	ID
Ethyl acetate (I)	141786	NA	NA
Ethyl-tert-butyl ether (ETBE)	637923	ID	ID
Ethylbenzene (I)	100414	18	360
Ethylene dibromide	106934	5.7 (X)	110 (X)
Ethylene glycol	107211	1.9E+5 (X)	NA
Ethylene glycol monobutyl ether	111762	NA	NA
Fluoranthene	206440	1.6	5,500
Fluorene	86737	12	5,300
Fluorine (soluble fluoride) (B)	7782414	ID	ID
Formaldehyde	50000	120	2,400
Formic acid (I,U)	64186	ID	ID
1-Formylpiperidine	2591868	NA	NA
Gentian violet	548629	NA	NA
Glyphosate	1071836	NA	NLL
Heptachlor	76448	0.01 (M); 0.0018	NLL
Heptachlor epoxide	1024573	ID	NLL
n-Heptane	142825	NA	NA
Hexabromobenzene	87821	ID	ID
Hexachlorobenzene (C-66)	118741	0.2 (M); 0.0003	350
Hexachlorobutadiene (C-46)	87683	0.053	91
alpha-Hexachlorocyclohexane	319846	ID	ID
beta-Hexachlorocyclohexane	319857	ID	ID

Hazardous Substance	Chemical Abstract Service Number	Groundwater Surface Water Interface Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs
Hexachlorocyclopentadiene (C-56)	77474	ID	ID
Hexachloroethane	67721	6.7 (X)	1,800 (X)
n-Hexane	110543	NA	NA
2-Hexanone	591786	ID	ID
Indeno(1,2,3-cd)pyrene (Q)	193395	ID	NLL
Iron (B)	7439896	NA	NA
Isobutyl alcohol (I)	78831	NA	NA
Isophorone	78591	1,300 (X)	26,000 (X)
Isopropyl alcohol (I)	67630	57,000 (X)	1.1E+6 (X)
Isopropyl benzene	98828	28	3,200
Lead (B)	7439921	(G,X)	(G,X)
Lindane	58899	0.03 (M); 0.026	20 (M); 1.1
Lithium (B)	7439932	440	8,800
Magnesium (B)	7439954	NA	NA
Manganese (B)	7439965	(G,X)	(G,X)
Mercury (Total) (B,Z)	Varies	0.0013	50 (M); 1.2
Methane	74828	NA	NA
Methanol	67561	5.9E+5 (X)	3.1E+6 (C)
Methoxychlor	72435	NA	NA
2-Methoxyethanol (I)	109864	NA	NA
2-Methyl-4-chlorophenoxyacetic acid	94746	NA	NA
2-Methyl-4,6-dinitrophenol	534521	NA	NA
N-Methyl-morpholine (I)	109024	NA	NA
Methyl parathion	298000	NA	NA
4-Methyl-2-pentanone (MIBK) (I)	108101	ID	ID
Methyl-tert-butyl ether (MTBE)	1634044	7,100 (X)	1.4E+5 (X)
Methylcyclopentane (I)	96377	NA	NA
4,4'-Methylene-bis-2-chloroaniline (MBOCA	101144	NA	NLL
Methylene chloride	75092	1,500 (X)	30,000 (X)
2-Methylnaphthalene	91576	19	4,200
Methylphenols (J)	1319773	30 (M); 25	1,000 (M); 600
Metolachlor	51218452	15	300
Metribuzin	21087649	NA	NA
Mirex	2385855	0.02 (M); 6.8E-6 (S)	NLL
Molybdenum (B)	7439987	3,200 (X)	64,000 (X)
Naphthalene	91203	11	730
Nickel (B)	7440020	(G)	(G)
Nitrate (B,N)	14797558	ID	ID
Nitrite (B,N)	14797650	NA	NA
Nitrobenzene (I)	98953	180 (X)	3,600 (X)
2-Nitrophenol	88755	ID	ID
n-Nitroso-di-n-propylamine	621647	NA	NA
N-Nitrosodiphenylamine	86306	NA	NA
Oxamyl	23135220	NA	NA
Oxo-hexyl acetate	88230357	NA	NA
Pendimethalin	40487421	NA	NA
Pentachlorobenzene	608935	5.0 (M); 0.019	9,500

Hazardous Substance	Chemical Abstract Service Number	Groundwater Surface Water Interface Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs
Pentachloronitrobenzene	82688	NA	NA
Pentachlorophenol	87865	(G,X)	(G,X)
Pentane	109660	NA	NA
2-Pentene (I)	109682	NA	NA
pH	NA	6.5 to 9.0	not applicable
Phenanthrene	85018	2.0 (M); 1.4	2,100
Phenol	108952	450	9,000
Phosphorus (Total)	7723140	(EE)	(EE)
Phthalic acid	88993	NA	NA
Phthalic anhydride	85449	NA	NA
Picloram	1918021	46	920
Piperidine	110894	NA	NA
Polybrominated biphenyls (J)	67774327	ID	NLL
Polychlorinated biphenyls (PCBs) (J,T)	1336363	0.2 (M); 2.6E-5	NLL
Prometon	1610180	NA	NA
Propachlor	1918167	NA	NA
Propazine	139402	NA	NA
Propionic acid	79094	ID	ID
Propyl alcohol (I)	71238	NA	NA
n-Propylbenzene (I)	103651	ID	ID
Propylene glycol	57556	2.9E+5	5.8E+6
Pyrene	129000	ID	ID
Pyridine (I)	110861	NA	NA
Selenium (B)	7782492	5.0	400
Silver (B)	7440224	0.2 (M); 0.06	100 (M); 27
Silvex (2,4,5-TP)	93721	30	2,200
Simazine	122349	17	340
Sodium	17341252	NA	NA
Sodium azide	26628228	50 (M); 7.3	1000
Strontium (B)	7440246	21,000	4.2E+5
Styrene	100425	80 (X)	2100 (X)
Sulfate	14808798	NA	NA
Tebuthiuron	34014181	NA	NA
2,3,7,8-Tetrabromodibenzo-p-dioxin (O)	50585416	(O)	NLL
1,2,4,5-Tetrachlorobenzene	95943	2.9 (X)	3,400 (X)
2,3,7,8-Tetrachlorodibenzo-p-dioxin (O)	1746016	1.0E-5 (M); 3.1E-9	NLL
1,1,1,2-Tetrachloroethane	630206	ID	ID
1,1,2,2-Tetrachloroethane	79345	78 (X)	1,600 (X)
Tetrachloroethylene	127184	60 (X)	1,200 (X)
Tetrahydrofuran	109999	11,000 (X)	2.2E+5 (X)
Tetranitromethane	509148	NA	NA
Thallium (B)	7440280	3.7 (X)	4,200 (X)
Toluene (I)	108883	270	5,400
p-Toluidine	106490	NA	NA
Total dissolved solids (TDS)	NA	(EE)	not applicable
Toxaphene	8001352	1.0 (M); 6.8E-5	8,200
Triallate	2303175	NA	NA

Hazardous Substance	Chemical Abstract Service Number	Groundwater Surface Water Interface Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs
Tributylamine	102829	ID	ID
1,2,4-Trichlorobenzene	120821	99 (X)	5,900 (X)
1,1,1-Trichloroethane	71556	89	1,800
1,1,2-Trichloroethane	79005	330 (X)	6,600 (X)
Trichloroethylene	79016	200 (X)	4,000 (X)
Trichlorofluoromethane	75694	NA	NA
2,4,5-Trichlorophenol	95954	NA	NA
2,4,6-Trichlorophenol	88062	5.0	330 (M); 100
1,2,3-Trichloropropane	96184	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	32	1,700
Triethanolamine	102716	NA	NA
Triethylene glycol	112276	NA	NA
3-Trifluoromethyl-4-nitrophenol	88302	NA	NA
Trifluralin	1582098	NA	NA
2,2,4-Trimethyl pentane	540841	NA	NA
2,4,4-Trimethyl-2-pentene (I)	107404	NA	NA
1,2,4-Trimethylbenzene (I)	95636	17	570
1,3,5-Trimethylbenzene (I)	108678	45	1,100
Triphenyl phosphate	115866	NA	NA
tris(2,3-Dibromopropyl)phosphate	126727	ID	ID
Urea	57136	NA	NA
Vanadium	7440622	12	1.9E+5
Vinyl acetate (I)	108054	NA	NA
Vinyl chloride	75014	13 (X)	260 (X)
White phosphorus (R)	12185103	NA	NA
Xylenes (I)	1330207	41	820
Zinc (B)	7440666	(G)	(G)

Groundwater Surface Water Interface (GSI) and GSI Protection Footnotes for the Part 201 Criteria and Part 213 Risk-Based Screening Levels Pursuant to the Part 201 Amendments of December, 2010

(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.

(C) Value presented is a screening level based on the chemical-specific generic soil saturation concentration (C_{sat}) since the calculated risk-based criterion is greater than C_{sat}. Concentrations greater than C_{sat} are acceptable cleanup criteria for this pathway where a site-specific demonstration indicates that free-phase material containing a hazardous substance is not present.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg $CaCO_3$/L, use 400 mg $CaCO_3$/L for the FCV calculation. The FCV formula provides values in units of ug/L or ppb. The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV), and the surface water human non-drinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Hazardous Substance	FCV Formula ug/L	FCV Conversion Factor (CF)	WV ug/L	HNDV ug/L
Acetate	EXP(0.2732*(pH) + 7.0362)	NA	NA	1.3E+6
Acetic Acid	EXP(0.2732*(pH) + 7.0362)	NA	NA	1.3E+6
Barium	EXP(1.0629*(LnH)+1.1869)	NA	NA	1.6E+5
Beryllium	EXP(2.5279*(LnH)-10.7689)	NA	NA	1,200
Cadmium⊗	(EXP(0.7852*(LnH)-2.715))*CF	1.101672-((LnH)*(0.041838))	NA	130
Chromium (III) ⊗	(EXP(0.819*(LnH)+0.6848))*CF	0.86	NA	9,400
Copper	(EXP(0.8545*(LnH)-1.702)) *CF	0.96	NA	38,000
Lead⊗	(EXP(1.273*(LnH)-3.296))*CF	1.46203-((LnH)*(0.14571))	NA	190
Manganese⊗	EXP(0.8784*(LnH)+3.5199)	NA	NA	59,000
Nickel	(EXP(0.846*(LnH)+0.0584))*CF	0.997	NA	2.1E+5
Pentachlorophenol⊗	EXP(1.005*(pH)-5.134)	NA	NA	2.8
Zinc	(EXP(0.8473*(LnH)+0.884))*CF	0.986	NA	16,000

where,

EXP(x) = The base of the natural logarithm raised to power x (e^x).
LnH = The natural logarithm of water hardness in mg $CaCO_3$/L.
* = The multiplication symbol.
⊗ = The GSI criterion developed here may not be protective for surface water that is used as a drinking water source. Refer to footnote (X) for further guidance.

A spreadsheet that may be used to calculate GSI and GSI protection criteria for (G)-footnoted hazardous substances is available on the Department of Environmental Quality (DEQ) internet web site.

(H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria. If both Cr III and Cr VI are present in groundwater, the total concentration of both cannot exceed the drinking water criterion of 100 ug/L. If analytical data are provided for total chromium only, they shall be compared to the cleanup criteria for Cr VI. Cr III soil cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future, through an approved land or resource use restriction.

(I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. §261.21 (revised as of July 1, 2001), which is adopted by reference in these rules and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of $45, from the Superintendent of Documents, Government Printing Office, Washington, DC 20401 (stock number 869-044-00155-1), or from the DEQ, Remediation and Redevelopment Division (RRD), 525 West Allegan Street, Lansing, Michigan 48933, at cost.

(J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.

(M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

(N) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 ug/kg.

(O) The concentration of all polychlorinated and polybrominated dibenzodioxin and dibenzofuran isomers present at a facility, expressed as an equivalent concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin based upon their relative potency, shall be added together and compared to the criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin. The generic cleanup criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin are not calculated according to the algorithms presented in R 299.5714 to R 299.5726. The generic cleanup criteria are being held at the values that the DEQ has used since August 1998, in recognition of the fact that national efforts to reassess risks posed by dioxin are not yet complete. Until these studies are complete, it is premature to select a revised slope factor and/or reference dose for calculation of generic cleanup criteria.

(P) Amenable cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with all groundwater criteria. Total cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with soil criteria. Industrial-commercial direct contact criteria may not be protective of the potential for release of hydrogen cyanide gas. Additional land or resource use restrictions may be necessary to protect for the acute inhalation concerns associated with hydrogen cyanide gas.

(Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.

(R) Hazardous substance may exhibit the characteristic of reactivity as defined in 40 C.F.R. §261.23 (revised as of July 1, 2001), which is adopted by reference in these rules and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of $45, from the Superintendent of Documents, Government Printing Office, Washington, DC 20401 (stock number 869-044-00155-1), or from the DEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost.

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(T) Refer to the federal Toxic Substances Control Act (TSCA), 40 C.F.R. §761, Subpart D and 40 C.F.R. §761, Subpart G, to determine the applicability of TSCA cleanup standards. Subpart D and Subpart G of 40 C.F.R. §761 (July 1, 2001) are adopted by reference in these rules and are available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulations may be purchased, at a cost as of the time of adoption of these rules of $55, from the Superintendent of Documents, Government Printing Office, Washington, DC 20401, or from the DEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost. Alternatives to compliance with the TSCA standards listed below are possible under 40 C.F.R. §761 Subpart D. New releases may be subject to the standards identified in 40 C.F.R. §761, Subpart G. Use Part 201 soil direct contact cleanup criteria in the following table if TSCA standards are not applicable.

Land Use Category	TSCA, Subpart D Cleanup Standards	Part 201 Soil Direct Contact Cleanup Criteria
Residential & Commercial I	1,000 ppb, or 10,000 ppb if capped	4,000 ppb
Industrial & Commercial II	1,000 ppb, or 10,000 ppb if capped	16,000 ppb
Commercial III	1,000 ppb, or 10,000 ppb if capped	33,000 ppb
Commercial IV	1,000 ppb, or 10,000 ppb if capped	22,000 ppb

(U) Hazardous substance may exhibit the characteristic of corrosivity as defined in 40 C.F.R. §261.22 (revised as of July 1, 2001), which is adopted by reference in these rules and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of $45, from the Superintendent of Documents, Government Printing Office, Washington, DC 20401 (stock number 869-044-00155-1), or from the DEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Hazardous Substance	Chemical Abstract Service Number	Surface Water Human Drinking Water Values (HDV) (ug/L)	Soil GSI Protection Criteria for HDV (ug/kg)
Acrylamide	79061	0.5 (M); 0.12	10
Alachlor	15972608	3.5	88
Antimony	7440360	2.0 (M); 1.7	1,200
Benzene	71432	12	240
Boron	7440428	1,900	38,000
Bromate	15541454	10 (M); 0.5	200
Butyl benzyl phthalate	85687	6.9	13,000
Cadmium	7440439	2.5*	*
Carbon tetrachloride	56235	5.6	110
Chloride	16887006	50,000	1.0E+6
Chloroethane	75003	170	3,400
Chromium (III)	16065831	120*	*
Cyanazine	21725462	2.0 (M); 0.93	200 (M); 40
1,2-Dichloroethane	107062	6.0	120
trans-1,2-Dichloroethylene	156605	470	9,400
1,2-Dichloropropane	78875	9.1	180
1,3-Dichloropropene	542756	3.3	100 (M); 66
N,N-Dimethylacetamide	127195	700	14,000
1,4-Dioxane	123911	34	680
Ethylene dibromide	106934	0.17	20 (M); 3.4
Ethylene glycol	107211	56,000	1.1E+6
Hexachloroethane	67721	5.3	310
Isophorone	78591	310	6,200
Isopropyl alcohol	67630	28,000	5.6E+5
Lead	7439921	14*	*
Manganese	7439965	1,300*	*
Methanol	67561	14,000	2.8E+5
Methyl-tert-butyl ether (MTBE)	1634044	100	2,000
Methylene chloride	75092	47	940
Molybdenum	7439987	120	2,400
Nitrobenzene	98953	4.7	330 (M); 94
Pentachlorophenol	87865	1.8*	*
Styrene	100425	20	530
1,2,4,5-Tetrachlorobenzene	95943	2.8	3,300
1,1,2,2-Tetrachloroethane	79345	3.2	64
Tetrachloroethylene	127184	11	220
Tetrahydrofuran	109999	350	7,000
Thallium	7440280	2.0 (M); 1.2	1,400
1,2,4-Trichlorobenzene	120821	80	4,700
1,1,2-Trichloroethane	79005	12	240
Trichloroethylene	79016	29	580
Vinyl chloride	75014	1.0 (M); 0.25	40 (M); 20

(Z) Mercury is typically measured as total mercury. The generic cleanup criteria, however, are based on data for different species of mercury. Specifically, data for elemental mercury, chemical abstract service (CAS) number 7439976, serve as the basis for the soil volatilization to indoor air criteria, groundwater volatilization to indoor air, and soil inhalation criteria. Data for methyl mercury, CAS number 22967926, serve as the basis for the GSI criterion; and data for mercuric chloride, CAS number 7487947, serve as the basis for the drinking water, groundwater contact, soil direct contact, and the groundwater protection criteria. Comparison to criteria shall be based on species-specific analytical data only if sufficient facility characterization has been conducted to rule out the presence of other species of mercury.

(BB) The state drinking water standard for asbestos is in units of fibers per milliliter of water (f/mL) longer than 10 millimicrons. Soil concentrations of asbestos are determined by polarized light microscopy.

(CC) Groundwater: The generic GSI criteria are based on the toxicity of unionized ammonia (NH_3); the criteria are 29 ug/L and 53 ug/L for cold water and warm water surface water, respectively. As a result, the GSI criterion shall be compared to the percent of the total ammonia concentration in the groundwater that will become NH_3 in the surface water. This percent NH_3 is a function of the pH and temperature of the receiving surface water and can be estimated using the following table, taken from Emerson, et al., (Journal of the Fisheries Research Board of Canada, Volume 32(12):2382, 1975).

Percent NH_3 in Aqueous Ammonia Solutions for 0-30 °C and pH 6-10

Temp (°F)	Temp (°C)	pH 6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
32.0	0	0.00827	0.0261	0.0826	0.261	0.820	2.55	7.64	20.7	45.3
33.8	1	0.00899	0.0284	0.0898	0.284	0.891	2.77	8.25	22.1	47.3
35.6	2	0.00977	0.0309	0.0977	0.308	0.968	3.00	8.90	23.6	49.4
37.4	3	0.0106	0.0336	0.106	0.335	1.05	3.25	9.60	25.1	51.5
39.2	4	0.0115	0.0364	0.115	0.363	1.14	3.52	10.3	26.7	53.5
41.0	5	0.0125	0.0395	0.125	0.394	1.23	3.80	11.1	28.3	55.6
42.8	6	0.0136	0.0429	0.135	0.427	1.34	4.11	11.9	30.0	57.6
44.6	7	0.0147	0.0464	0.147	0.462	1.45	4.44	12.8	31.7	59.5
46.4	8	0.0159	0.0503	0.159	0.501	1.57	4.79	13.7	33.5	61.4
48.2	9	0.0172	0.0544	0.172	0.542	1.69	5.16	14.7	35.3	63.3
50.0	10	0.0186	0.0589	0.186	0.586	1.83	5.56	15.7	37.1	65.1
51.8	11	0.0201	0.0637	0.201	0.633	1.97	5.99	16.8	38.9	66.8
53.6	12	0.0218	0.0688	0.217	0.684	2.13	6.44	17.9	40.8	68.5
55.4	13	0.0235	0.0743	0.235	0.738	2.30	6.92	19.0	42.6	70.2
57.2	14	0.0254	0.0802	0.253	0.796	2.48	7.43	20.2	44.5	71.7
59.0	15	0.0274	0.0865	0.273	0.859	2.67	7.97	21.5	46.4	73.3
60.8	16	0.0295	0.0933	0.294	0.925	2.87	8.54	22.8	48.3	74.7
62.6	17	0.0318	0.101	0.317	0.996	3.08	9.14	24.1	50.2	76.1
64.4	18	0.0343	0.108	0.342	1.07	3.31	9.78	25.5	52.0	77.4
66.2	19	0.0369	0.117	0.368	1.15	3.56	10.5	27.0	53.9	78.7
68.0	20	0.0397	0.125	0.396	1.24	3.82	11.2	28.4	55.7	79.9
69.8	21	0.0427	0.135	0.425	1.33	4.10	11.9	29.9	57.5	81.0
71.6	22	0.0459	0.145	0.457	1.43	4.39	12.7	31.5	59.2	82.1
73.4	23	0.0493	0.156	0.491	1.54	4.70	13.5	33.0	60.9	83.2
75.2	24	0.0530	0.167	0.527	1.65	5.03	14.4	34.6	62.6	84.1
77.0	25	0.0569	0.180	0.566	1.77	5.38	15.3	36.3	64.3	85.1
78.8	26	0.0610	0.193	0.607	1.89	5.75	16.2	37.9	65.9	85.9
80.6	27	0.0654	0.207	0.651	2.03	6.15	17.2	39.6	67.4	86.8
82.4	28	0.0701	0.221	0.697	2.17	6.56	18.2	41.2	68.9	87.3
84.2	29	0.0752	0.237	0.747	2.32	7.00	19.2	42.9	70.4	88.3
86.0	30	0.0805	0.254	0.799	2.48	7.46	20.3	44.6	71.8	89.0

The generic approach for estimating NH_3 assumes a default pH of 8 and default temperatures of 68°F and 85°F for cold water and warm water surface water, respectively. The resulting percent NH_3 is 3.8 percent and 7.2 percent for cold water and warm water, respectively. This default percentage shall be multiplied by the total ammonia-nitrogen (NH_3-N)

concentration in the groundwater and the resulting NH_3 concentration compared to the applicable GSI criterion. As an alternative, the maximum pH and temperature data from the specific receiving surface water can be used to estimate, from the table in this footnote, a lower percent unionized ammonia concentration for comparison to the generic GSI.

Soil: The generic soil GSI protection criteria for unionized ammonia are 580 ug/kg and 1,100 ug/kg for cold water and warm water surface water, respectively.

(EE) The following are applicable generic GSI criteria as required by Section 20120a(15) of the NREPA.

Hazardous Substance	GSI (ug/L)	Notes
Phosphorus	1,000	Criteria applicable unless receiving water is a surface water that has a phosphorus waste load allocation or is an inland lake. In those cases, contact the department for applicable values.
Total dissolved solids (TDS)	5.0E+5	If TDS data are not available, the TDS criterion may be used a screening level for the sum of the concentrations of the following substances: Calcium, Chlorides, Iron, Magnesium, Potassium, Sodium, Sulfate.
Dissolved Oxygen (DO): Cold receiving waters Warm receiving waters	 ≥ 7,000 ≥ 5,000	Since a low level of DO can be harmful to aquatic life, the criterion represents a minimum level that on-site samples must exceed. This is in contrast to other criteria which represent "not to exceed" concentrations. DO criteria are not applicable if groundwater Carbonaceous Biochemical Oxygen Demand (CBOD) is less than 10,000 ug/L and groundwater ammonia concentration is less than 2,000 ug/L.

(FF) The chloride GSI criterion shall be 125 mg/l when the discharge is to surface waters of the state designated as public water supply sources or 50 mg/l when the discharge is to the Great Lakes or connecting waters. Chloride GSI criteria shall not apply for surface waters of the state that are not designated as a public water supply source, however, the total dissolved solids criterion is applicable.

"ID" means insufficient data to develop criterion.
"NA" means a criterion or value is not available or, in the case of background and CAS numbers, not applicable.
"NLL" means hazardous substance is not likely to leach under most soil conditions.