

ATTACHMENT F

USEPA APPENDIX IX TARGET ANALYTE LIST

***GEOMORPH[®] SITE CHARACTERIZATION
UPPER TITABAWASSEE RIVER***

Appendix IX Target Analyte List
GeoMorph[®] Site Characterization
 Upper Tittabawassee River
 Midland, Michigan

CAS #	Parameter
50-29-3	4,4'-DDT
50-32-8	Benzo[a]pyrene
51-28-5	2,4-Dinitrophenol
52-85-7	Famphur
53-70-3	Dibenzo[a,h]anthracene
53-96-3	2-Acetylaminofluorene
55-18-5	N-Nitrosodiethylamine
56-23-5	Carbon tetrachloride
56-38-2	Parathion
56-49-5	3-Methylcholanthrene
56-55-3	Benzo(a)anthracene
56-57-5	4-Nitroquinoline 1-oxide
57-12-5	Cyanide
57-74-9	Chlordane
57-97-6	7,12-Dimethylbenz[a]anthracene
58-89-9	gamma-BHC; Lindane
58-90-2	2,3,4,6-Tetrachlorophenol
59-50-7	p-Chloro-m-cresol
59-89-2	N-Nitrosomorpholine
60-11-7	p-Dimethylaminoazobenzene
60-51-5	Dimethoate
60-57-1	Dieldrin
62-44-2	Phenacetin
62-50-0	Ethyl methanesulfonate
62-53-3	Aniline
62-75-9	N-Nitrosodimethylamine
66-27-3	Methyl methanesulfonate
67-64-1	Acetone
67-66-3	Chloroform
67-72-1	Hexachloroethane
70-30-4	Hexachlorophene
71-43-2	Benzene
71-55-6	1,1,1-Trichloroethane
72-20-8	Endrin
72-43-5	Methoxychlor
72-54-8	4,4'-DDD
72-55-9	4,4'-DDE
74-83-9	Bromomethane
74-87-3	Chloromethane
74-88-4	Iodomethane
74-95-3	Dibromomethane

Appendix IX Target Analyte List
GeoMorph[®] Site Characterization
 Upper Tittabawassee River
 Midland, Michigan

CAS #	Parameter
75-00-3	Chloroethane
75-01-4	Vinyl chloride
75-05-8	Acetonitrile
75-09-2	Methylene chloride
75-15-0	Carbon disulfide
75-25-2	Bromoform
75-27-4	Bromodichloromethane
75-34-3	1,1-Dichloroethane
75-35-4	1,1-Dichloroethene
75-69-4	trichlorofluoromethane
75-71-8	Dichlorodifluoromethane
76-01-7	Pentachloroethane
76-44-8	Heptachlor
77-47-4	Hexachlorocyclopentadiene
78-59-1	Isophorone
78-83-1	Isobutyl alcohol
78-87-5	1,2-Dichloropropane
78-93-3	Methyl ethyl ketone
79-00-5	1,1,2-Trichloroethane
79-01-6	Trichlorethene
79-34-5	1,1,2,2-Tetrachloroethane
80-62-6	Methyl methacrylate
82-68-8	Pentachloronitrobenzene
83-32-9	Acenaphthene
84-66-2	Diethyl phthalate
84-74-2	Di-n-butyl phthalate
85-01-8	Phenanthrene
85-68-7	Butyl benzyl phthalate
86-30-6	N-Nitrosodiphenylamine
86-73-7	Fluorene
87-65-0	2,6-Dichlorophenol
87-68-3	Hexachlorobutadiene
87-86-5	Pentachlorophenol
88-06-2	2,4,6-Trichlorophenol
88-74-4	o-Nitroaniline
88-75-5	o-Nitrophenol
88-85-7	Dinoseb
91-20-3	Naphthalene
91-57-6	2-Methylnaphthalene
91-58-7	2-Chloronaphthalene
91-59-8	2-Naphthylamine

Appendix IX Target Analyte List
GeoMorph[®] Site Characterization
 Upper Tittabawassee River
 Midland, Michigan

CAS #	Parameter
91-80-5	Methapyrilene
91-94-1	3,3'-Dichlorobenzidine
92-67-1	4-Aminobiphenyl
93-72-1	2,4,5-TP; Silvex
93-76-5	2,4,5-T
94-59-7	Safrole
94-75-7	2,4-D
95-48-7	o-Cresol
95-50-1	1,2-Dichlorobenzene
95-53-4	0-Toluidine
95-57-8	2-Chlorophenol
95-94-3	1,2,4,5-Tetrachlorobenzene
95-95-4	2,4,5-Trichlorophenol
96-12-8	1,2-Dibromo-3-chloropropane
96-18-4	1,2,3-Trichloropropane
97-63-2	Ethyl methacrylate
98-86-2	Acetophenone
98-95-3	Nitrobenzene
99-09-2	m-Nitroaniline
99-35-4	1,3,5-Trinitrobenzene
99-55-8	5-Nitro-o-toluidine
99-65-0	1,3-Dinitrobenzene
100-01-6	p-Nitroaniline
100-02-7	p-Nitrophenol
100-41-4	Ethylbenzene
100-42-5	Styrene
100-51-6	Benzyl alcohol
100-75-4	N-Nitrosopiperidine
101-55-3	4-Bromophenyl phenyl ether
105-67-9	2,4-Dimethylphenol
106-44-5	p-Cresol
106-46-7	1,4-Dichlorobenzene
106-47-8	p-Chloroaniline
106-50-3	p-Phenylenediamine
106-93-4	Ethylene dibromide
107-02-8	Acrolein
107-05-1	Allyl chloride
107-06-2	1,2-Dichloroethane
107-12-0	Propionitrile
107-13-1	Acrylonitrile
108-05-4	Vinyl acetate

Appendix IX Target Analyte List
GeoMorph[®] Site Characterization
 Upper Tittabawassee River
 Midland, Michigan

CAS #	Parameter
108-10-1	Methyl isobutyl ketone
108-39-4	m-Cresol
108-60-1	Bis(2-chloroisopropyl) ether
108-88-3	Toluene
108-90-7	Chlorobenzene
108-95-2	Phenol
109-06-8	2-Picoline
110-57-6	trans-1,4-dichloro-2-butene
110-86-1	Pyridine
111-44-4	Bis(2-chloroethyl) ether
111-91-1	Bis(2-chloroethoxy)methane
117-81-7	Bis (2-ethylhexyl) phthalate
117-84-0	Di-n-octyl phthalate
118-74-1	Hexachlorobenzene
119-93-7	3,3'- Dimethylbenzidine
120-12-7	Anthracene
120-58-1	Isosafrole
120-82-1	1,2,4-Trichlorobenzene
120-83-2	2,4-Dichlorophenol
121-14-2	2,4-Dinitrotoluene
122-09-8	a,a-Dimethylphenethylamine
122-39-4	Diphenylamine
123-91-1	1,4-Dioxane
124-48-1	Dibromochloromethane
126-68-1	O,O,O-Triethyl phosphorothioate
126-98-7	Methacrylonitrile
126-99-8	Chloroprene
127-18-4	Tetrachloroethene
129-00-0	Pyrene
130-15-4	1,4-Naphthoquinone
131-11-3	Dimethyl phthalate
132-64-9	Dibenzofuran
134-32-7	1-Naphthalenamine
140-57-8	Aramite
143-50-0	Kepone
156-60-5	trans-1,2-dichloroethene
191-24-2	Benzo[ghi]perylene
193-39-5	Indeno[1,2,3-cd]pyrene
205-99-2	Benzo(b)fluoranthene
206-44-0	Fluoranthene
207-08-9	Benzo[k]fluoranthene

Appendix IX Target Analyte List
GeoMorph[®] Site Characterization
 Upper Tittabawassee River
 Midland, Michigan

CAS #	Parameter
208-96-8	Acenaphthylene
218-01-9	Chrysene
297-97-2	Thionazin
298-00-0	Methyl Parathion
298-02-2	Phorate
298-04-4	Disulfoton
309-00-2	Aldrin
319-84-6	alpha-BHC
319-85-7	beta-BHC
319-86-8	delta-BHC
465-73-6	Isodrin
510-15-6	Chlorobenzilate
534-52-1	2-Methyl-4,6-dinitrophenol
541-73-1	1,3-Dichlorobenzene
591-78-6	2-Hexanone
606-20-2	2,6-Dinitrotoluene
608-93-5	Pentachlorobenzene
621-64-7	N-Nitrosodipropylamine
630-20-6	1,1,1,2-Tetrachloroethane
924-16-3	N-Nitrosodi-n-butylamine
930-55-2	N-Nitrosopyrrolidine
959-98-8	Endosulfan I
1024-57-3	Heptachlor epoxide
1031-07-8	Endosulfan sulfate
1330-20-7	Xylene (total)
1336-36-3	PCB
1746-01-6	2,3,7,8-TCDD
1888-71-7	Hexachloropropene
2303-16-4	Diallate
3268-87-9	OCDD
3689-24-5	Sulfotepp
7005-72-3	4-Chlorophenyl phenyl ether
7421-93-4	Endrin Aldehyde
7439-92-1	Lead
7439-97-6	Mercury
7440-02-0	Nickel
7440-22-4	Silver
7440-28-0	Thallium
7440-31-5	Tin
7440-36-0	Antimony
7440-38-2	Arsenic

Appendix IX Target Analyte List
GeoMorph[®] Site Characterization
 Upper Tittabawassee River
 Midland, Michigan

CAS #	Parameter
7440-39-3	Barium
7440-41-7	Beryllium
7440-43-9	Cadmium
7440-47-3	Chromium
7440-48-4	Cobalt
7440-50-8	Copper
7440-62-2	Vanadium
7440-66-6	Zinc
7782-49-2	Selenium
8001-35-2	Toxaphene
10061-01-5	cis-1,3-dichloropropene
10061-02-6	trans-1,3-dichloropropene
10595-95-6	N-Nitrosomethylethalamine
11096-82-5	Aroclor 1260
11097-69-1	Aroclor 1254
11100-14-4	Aroclor 1268
11104-28-2	Aroclor 1221
11141-16-5	Aroclor 1232
12672-29-6	Aroclor 1248
12674-11-2	Aroclor 1016
18496-25-8	Sulfide
19408-74-3	1,2,3,7,8,9-HxCDD
23950-58-5	Pronamide
33213-65-9	Endosulfan II
35822-46-9	1,2,3,4,6,7,8-HpCDD
37324-23-5	Aroclor 1262
39001-02-0	OCDF
39227-28-6	1,2,3,4,7,8-HxCDD
40321-76-4	1,2,3,7,8-PeCDD
51207-31-9	2,3,7,8-TCDF
53469-21-9	Aroclor 1242
55673-89-7	1,2,3,4,7,8,9-HpCDF
57117-31-4	2,3,4,7,8-PeCDF
57117-41-6	1,2,3,7,8-PeCDF
57117-44-9	1,2,3,6,7,8-HxCDF
57653-85-7	1,2,3,6,7,8-HxCDD
60851-34-5	2,3,4,6,7,8-HxCDF
67562-39-4	1,2,3,4,6,7,8-HpCDF
70648-26-9	1,2,3,7,8-HxCDF
72918-21-9	1,2,3,7,8,9-HxCDF
	PCDDs