

APPENDIX B:
LABORATORY DATA REPORTS

ENSR Consulting Engineering
 Project: MERRILL BENTHILL Sampling, Meadowlands, NJ
 Project ID: 09508-321-005B
 Account Job #: N48597

Client ID:	KM-SP-01/KEARNY MARSH		KM-SD-02/KEARNY MARSH		KM-SP-03 DUPLICATE/K MARSH		KM-SP-03/KEARNY MARSH		OM-SP-07/ORTANI MARSH		OM-SP-02/ORTANI MARSH	
	Sample Depth:	Lab ID:	Date Sampled:	Matrix:	Conc	Q	Sediment	Conc	Q	Sediment	Conc	Q
GC/MS Semi-volatiles (ppb) (SW846 8270C BY SIM)												
Acenaphthene	80.3	N48587-3	9/17/03	Sediment	<60.0		<60.0		<60.0		<60.0	
Acenaphthylene	<67.0				<60.0		97.1		<60.0		30.6	
Anthracene	148				<60.0		131		106		107	
Benzo(a)anthracene	539				91.6		497		391		301	
Benzo(a)pyrene	762				149		762		658		430	
Benzo(b)fluoranthene	976				176		779		636		460	
Benzo(g,h,i)perylene	580				102		347		271		225	
Benzo(k)fluoranthene	501				88.1		421		346		294	
Chrysene	717				121		562		412		345	
Dibenz(a,h)anthracene	132				<60.0		87.6		<60.0		66.3	
Fluoranthene	1300				184		950		817		658	
Fluorene	110				<60.0		90		<60.0		29.4	
Hexachlorobenzene	<33.0				<30.0		<44.0		<49.0		<30.0	
Indeno(1,2,3-cd)pyrene	533				99.5		362		292		238	
2-Methylnaphthalene	<67.0				<60.0		<87.0		<98.0		40.3	
Mirex	<33.0				<30.0		<44.0		<49.0		<8.4	
Naphthalene	<67.0				<60.0		<87.0		<98.0		68.2	
Phenanthrene	520				134		340		126		126	
Pyrene	1230				180		879		659		637	
TOTAL TARGETED GC/MS Semi-volatiles (ppb)	8128.3				1325.2		6258.7		4788		4166.8	
GC Semi-volatiles (ppb) (SW846 8081A)												
Aldrin	<6.6				<6.0		<8.7		<9.9		<1.7	
alpha-BHC	<6.6				<6.0		<8.7		<9.9		<1.7	
beta-BHC	<6.6				<6.0		<8.7		<9.9		<1.7	
delta-BHC	<6.6				<6.0		<8.7		<9.9		<1.7	
gamma-BHC (Lindane)	<6.6				<6.0		<8.7		<9.9		<1.7	
Chlordane	399				<150.0		<220.0		<250.0		<42.0	
Dieldrin	<6.6				<6.0		<8.7		<9.9		<1.7	
4,4'-DDD	182				<6.0		1000		728		<1.7	
4,4'-DDE	71.1				<6.0		211		155		15.2	
4,4'-DDT	<6.6				<6.0		57.5		21.2		<1.7	
Endrin	<6.6				<6.0		<8.7		<9.9		<1.7	
Endosulfan sulfate	<6.6				<6.0		<8.7		<9.9		<1.7	
Endrin aldehyde	<6.6				<6.0		<8.7		<9.9		<1.7	
Endosulfan-I	<6.6				<6.0		<8.7		<9.9		<1.7	
Endosulfan-II	<6.6				<6.0		<8.7		<9.9		<1.7	
Heptachlor	<6.6				<6.0		<8.7		<9.9		<1.7	
Heptachlor epoxide	<6.6				<6.0		<8.7		<9.9		<1.7	
Methoxychlor	32.4				<6.0		<22.0		<25.0		<4.2	
Toxaphene	<63.0				<76.0		<110.0		<120.0		<21.0	
Aroclor 1016	<34.0				<30.0		<44.0		<50.0		<8.5	
Aroclor 1221	<34.0				<30.0		<44.0		<50.0		<8.5	
Aroclor 1222	<34.0				<30.0		<44.0		<50.0		<8.5	
Aroclor 1242	<34.0				<30.0		<44.0		<50.0		<8.5	
Aroclor 1248	376				<30.0		<44.0		<50.0		1110	
Aroclor 1254	342				<30.0		<44.0		<50.0		735	
Aroclor 1260	264				<30.0		<44.0		<50.0		226	
TOTAL TARGETED GC Semi-volatiles (ppb)	1666.5				0		1288.5		905.2		1860.2	
Metals Analysis (ppm)												
Arsenic	22.5				18.3		23.5		29.4		33.2	
General Chemistry Solids, Percent (%)	9.9				11		7.6		6.7		39	

Q = Qualified associated with reported result.
 < = less than detection limit reported

ENSR Consulting Engineering
 Project: MERI BENTHIL Sampling, Meadowlands, NJ
 Project ID: 08508-321-005B
 Accutest Job #: N48367

GC/MS Semi-volatiles (ppb) (SW846 8270C BY SIM)	Client ID: RM-SD-01/RIVERBEND MARSH		RM-SD-02/RIVERBEND MARSH		SHSM-SD-01/SECAUCUS H.S. MARSH		SHSM-SD-02/SECAUCUS MARSH		SHSM-SD-03/SHS MARSH	
	Sample Depth:	Lab ID:	Date Sampled:	Matrix:	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Acenaphthene	59.8	N48367-1	9/15/03		<30.0	<25.0	<24.0	<24.0	166	
Acenaphthylene	220				81.5	56.9	56	56	68	
Anthracene	228				118	64.8	64.8	64.8	74.1	
Benzo(a)anthracene	612				306	225	203	203	223	
Benzo(a)pyrene	971				390	326	299	299	326	
Benzo(b)fluoranthene	804				370	349	308	308	326	
Benzo(g,h)perylene	597				224	228	202	202	236	
Benzo(k)fluoranthene	502				261	208	210	210	246	
Chrysene	631				330	273	246	246	284	
Dibenz(a,h)anthracene	179				56.3	57.7	402	402	74.5	
Fluoranthene	948				523	437	402	402	452	
Fluorene	41				<30.0	<25.0	<24.0	<24.0	51.1	
Hexachlorobenzene	<12.0				<15.0	<13.0	<12.0	<12.0	<15.0	
Indeno(1,2,3-cd)pyrene	525				212	207	180	180	207	
2-Methylnaphthalene	24.2				<30.0	<24.0	<24.0	<24.0	<29.0	
Mirex	<12.0				<15.0	<13.0	<12.0	<12.0	<15.0	
Naphthalene	55.6				36.1	26.8	32.4	32.4	46.5	
Phenanthrene	310				168	145	128	128	171	
Pyrene	947				415	367	309	309	371	
TOTAL TARGETED GC/MS Semi-volatiles (ppb)	7654.6				3492.9	2971.2	2707.9	2707.9	3302.2	
GC Semi-volatiles (ppb) (SW846 8081A)										
Aldrin	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
alpha-BHC	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
beta-BHC	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
delta-BHC	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
gamma-BHC (Lindane)	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
Chlordane	<61.0				<76.0	<61.0	<86.0	<86.0	<75.0	
Dieldrin	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
4,4'-DDD	3.4				<3.0	<2.5	<3.4	<3.4	9.4	
4,4'-DDE	6.7				<3.0	<2.5	<3.4	<3.4	12.9	
4,4'-DDT	<2.4				4.2	<2.5	<3.4	<3.4	<3.0	
Endrin	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
Endosulfan sulfate	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
Endrin aldehyde	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
Endosulfan-I	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
Endosulfan-II	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
Heptachlor	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
Heptachlor epoxide	<2.4				<3.0	<2.5	<3.4	<3.4	<3.0	
Methoxychlor	<6.1				<7.6	<6.4	<8.6	<8.6	<7.5	
Toxaphene	<30.0				<38.0	<32.0	<43.0	<43.0	<38.0	
Aroclor 1016	<12.0				<15.0	<13.0	<13.0	<13.0	<15.0	
Aroclor 1221	<12.0				<15.0	<13.0	<13.0	<13.0	<15.0	
Aroclor 1232	<12.0				<15.0	<13.0	<13.0	<13.0	<15.0	
Aroclor 1242	125				<15.0	<13.0	<13.0	<13.0	<15.0	
Aroclor 1246	<12.0				<15.0	<13.0	<13.0	<13.0	<15.0	
Aroclor 1254	149				73.4	95.5	112	112	160	
Aroclor 1260	<12.0				75.6	79.5	101	101	<15.0	
TOTAL TARGETED GC Semi-volatiles (ppb)	<12.0				<15.0	<13.0	<13.0	<13.0	<15.0	
Metals Analysis (ppm)	284.1				153.2	175	218.4	218.4	230.6	
Arsenic	16.1				15.5	14.1	14.1	14.1	16.5	
General Chemistry										
Solids, Percent (%)	27				22	26.2	26.2	26.2	22.1	

Q = Qualified associated with reported result
 < = less than detection limit reported

ENSR Consulting Engineering
 Project: MERRI BENTHIL Sampling, Meadowlands, NJ
 Project ID: 08508-321-005B
 Accutest Job #: N48466

Sample Depth:	Client ID: SAW-SD-01/SAWMILL MARSH		SAW-SD-02/SAWMILL MARSH		SHSM-SD-03/SHS MARSH	
	Lab ID:	Conc	Q	Conc	Q	Conc
Date Sampled:	9/16/03	Sediment	Sediment	Sediment	Sediment	Sediment
Matrix:						

GC/MS Semi-volatiles (ppb) (SW846 8270C BY SIM)	Conc	Q	Conc	Q	Conc	Q
Acenaphthene	35.5		<15.0		166	
Acenaphthylene	171		26.4		88	
Anthracene	242		32.2		74.1	
Benzo(a)anthracene	614		93.2		223	
Benzo(a)pyrene	795		136		326	
Benzo(b)fluoranthene	746		133		326	
Benzo(g,h,i)perylene	354		92.8		236	
Benzo(k)fluoranthene	470		110		246	
Chrysene	610		99.6		264	
Dibenzo(a,h)anthracene	104		22.5		74.5	
Fluoranthene	850		197		452	
Fluorene	30.7		<15.0		51.1	
Hexachlorobenzene	<12.0		<7.3		<15.0	
Indeno(1,2,3-cd)pyrene	356		83.9		207	
2-Methylnaphthalene	<23.0		<15.0		<29.0	
Mirex	<12.0		<7.3		<15.0	
Naphthalene	43.8		16.5		46.5	
Phenanthrene	180		55.4		171	
Pyrene	761		161		371	
TOTAL TARGETED GC/MS Semi-volati	6363		1261.5		3302.2	

GC Semi-volatiles (ppb) (SW846 8081A)	Conc	Q	Conc	Q	Conc	Q
Aldrin	<2.4		<1.5		<3.0	
alpha-BHC	<2.4		<1.5		<3.0	
beta-BHC	<2.4		<1.5		<3.0	
delta-BHC	<2.4		<1.5		<3.0	
gamma-BHC (Lindane)	<2.4		<1.5		<3.0	
Chlordane	<59.0		<37.0		<75.0	
Dieldrin	<2.4		<1.5		<3.0	
4,4'-DDD	8.7		3.3		9.4	
4,4'-DDE	14.2		8.4		12.9	
4,4'-DDT	<2.4		<1.5		<3.0	
Endrin	<2.4		<1.5		<3.0	
Endosulfan sulfate	<2.4		<1.5		<3.0	
Endrin aldehyde	<2.4		<1.5		<3.0	
Endosulfan-I	<2.4		<1.5		<3.0	
Endosulfan-II	<2.4		<1.5		<3.0	
Heptachlor	<2.4		<1.5		<3.0	
Heptachlor epoxide	<2.4		<1.5		<3.0	
Methoxychlor	<5.9		<3.7		<7.5	
Toxaphene	<29.0		<19.0		<38.0	
Aroclor 1016	<12.0		<7.5		<15.0	
Aroclor 1221	<12.0		<7.5		<15.0	
Aroclor 1232	<12.0		<7.5		<15.0	
Aroclor 1242	<12.0		<7.5		<15.0	
Aroclor 1248	400		124		160	
Aroclor 1254	<12.0		<7.5		<15.0	
Aroclor 1260	77.7		41		48.3	
TOTAL TARGETED GC Semi-volatiles (500.6		176.7		230.6	

Metals Analysis (ppm)	Conc	Q
Arsenic	19.3	
General Chemistry		
Solids, Percent (%)	28.3	

Q = Qualified associated with reported result.
 < = less than detection limit reported

Meadowlands Wetland Ecological Risk Assessment Project
Sediment Chemistry
Analyses by Meadowlands Environmental Research Institute Laboratory

	Client ID: KM-SP-01		KM-SP-02		KM-SP-03 DUP		KM-SP-03		OM-SP-01		OM-SP-02		RM-SD-01		RM-SD-02	
	Sample Depth:	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lab ID:	N48587-3	N48587-3	N48587-5	N48587-4	N48587-4	N48587-4	N48587-1	N48587-2	N48587-1	N48587-2	N48587-2	N48587-2	N48587-1	N48587-1	N48587-1	N48587-1
Date Sampled:	9/17/03	9/17/03	9/17/03	9/17/03	9/17/03	9/17/03	9/17/03	9/17/03	9/17/03	9/17/03	9/17/03	9/17/03	9/15/03	9/15/03	9/15/03	9/15/03
Matrix:	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
Metals Analysis (ppm)																
Cadmium	2.44		2.23		3.42		3.35		7.80		6.73		2.89		3.51	
Chromium	19.1		49.0		38.7		43.2		510		238		202		238	
Copper	60.6		149		136		105		185		156		143		150	
Iron	8714		14184		16890		17426		46016		17822		33667		52026	
Mercury	0.52		0.44		0.57		0.06		6.16		2.35		4.44		3.85	
Nickel	23.5		57.0		57.0		45.0		83.8		92.4		51.2		53.2	
Lead	147		557		391		270		207		356		190		175	
Zinc	187		232		359		349		687		674		321		362	
General Chemistry																
Grain Size Analysis	0.00%		0.00%		0.00%		0.00%		3.50%		0.00%		0.00%		0.00%	
% Gravel	0.39%		0.26%		0.12%		0.34%		0.33%		0.31%		0.26%		0.30%	
% Coarse Sand	7.00%		9.36%		8.36%		14.77%		8.70%		5.20%		1.87%		4.07%	
% Medium Sand	27.5%		36.2%		42.1%		48.6%		26.3%		26.1%		11.7%		11.5%	
% Fine Sand	45.7%		37.9%		33.6%		24.6%		39.0%		46.0%		56.2%		47.2%	
% Silt	17.2%		13.7%		10.5%		8.7%		20.1%		19.9%		29.0%		36.2%	
% Clay																
Organic Material, Percent	47.9		69.8		78.1		77.3		21.6		22.0		20.9		17.2	
Moisture, Percent	91.1		91.0		94.5		94.1		66.6		88.5		71.8		78.0	

Q column = Qualifier (e.g., <)
for reported result
< = below detection limits

Meadowlands Wetland Ecological Risk Assessment Project
Sediment Chemistry
Analyses by Meadowlands Environmental Research Institute Laboratory

Sample Depth: Lab ID: Date Sampled: Matrix:	SHSM-SD-01		SHSM-SD-02		SHSM-SD-03		SAW-SD-01		SAW-SD-02	
	9/15/03 Sediment	Q	9/15/03 Sediment	Q	9/15/03 Sediment	Q	9/16/03 Sediment	Q	9/16/03 Sediment	Q
Metals Analysis (ppm)										
Cadmium	2.34		3.74		4.15		2.87		1.94	
Chromium	226		221		280		156		120	
Copper	122		179		140		121		71.7	
Iron	33964		44829		37436		40589		32916	
Mercury	0.74		3.62		3.08		1.14		1.02	
Nickel	49.8		55.9		66.8		45.8		37.4	
Lead	168		168		183		149		71.6	
Zinc	251		396		383		269		190	
General Chemistry										
Grain Size Analysis										
% Gravel	0.00%		0.00%		0.81%		0.00%		0.00%	
% Coarse Sand	0.24%		0.20%		2.03%		0.04%		0.18%	
% Medium Sand	1.93%		1.35%		7.60%		0.80%		1.75%	
% Fine Sand	6.61%		8.28%		17.0%		9.02%		5.53%	
% Silt	64.8%		60.0%		53.1%		63.6%		64.2%	
% Clay	25.7%		28.5%		18.7%		25.7%		27.8%	
Organic Material, Percent	24.9		15.6		20.5		24.7		10.1	
Moisture, Percent	70.0		79.3		79.5		70.5		62.0	

Q column = Qualifier (e.g., <)
for reported result
< = below detection limits