State Form 4336

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
INDIANAPOLIS

OFFICE MEMORANDUM

***Not for Public Release**

Date: November 17, 2009

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Site Investigation Section

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Subject: Key Findings Lists for SDG E2QQ1
Gary Development
Gary, Lake Co., Indiana
Site # L58QW (200511336)

Key Findings Lists of Sample Delivery Group (SDG) E2QQ1 (comprised of samples E2QR1 – E2QR9, ME2QR1 – ME2QR9, E2QS0 – E2QS2, and ME2QS0 – ME2QS2) for SVOC, Pesticides, PCB, and Metals analysis were developed. The lists are included as attachments to this memorandum and are formatted for use in the HRS document record that will be completed later.

The lists were developed by first determining what contaminants were detected in the background samples collected (shallow samples E2QQ1, 3, 5, and 7, and deep samples E2QQ2, 4, 6, and 8) and calculating concentrations that are 3 times the highest levels of those contaminants in the shallow and deep background samples. The analytical results submitted by the CLP lab were used to determine what contaminants were found in the background samples. Once the concentrations that are 3 times highest shallow and deep background levels were calculated, they were compared to the sample results. See the attached table "Background Concentration Table". The contaminants that are above 3 times respective background levels were placed in the Key Findings Lists that are included as attachments to this memorandum.

A number of the sample results included in the Key Findings List are qualified with a "J" flag. This "J" flag is defined as: "The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample." More detailed explanation as to the specific reason(s) that a particular analyte concentration has a "J" flag can be provided upon request.

Attachments

*Not For Public Release (Protected Internal Communication Under IC 5-14-3-4(b)(6) or Information Not Obtained Under Authority of, Nor Required, By State Law).

Metal Background Study (ME2QQ1 - ME2QQ8)

Background Sample Results (mg/Kg)

Sample #	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
SDA1	8,740	4.4	18.5	152	2.3	0	19,500	185	5.6	200	79,000	291	5,660	890	0.53	71.4	745	4.4	4.6	2,310	11.6	49.6	1,020
SDA2	4,520	29.3	155	179	1.3	0.091	13,000	472	23.6	2120	143,000	1,690	2,210	767	0.51	413	495	9.1	2.6	1,300	2.4	27.7	1,080
SDB1	6,130	3.5	5	207	1.8	0.88	15,000	38.1	2.7	81.4	16,500	324	4,070	345	0.51	17.7	389	12.4	3.5	1,770	0	24	439
SDB2	14,400	17.8	71.4	160	1.7	7	25,800	240	15.4	270	278,000	784	7,850	2,530	0.55	96.5	1,040	12	3.8	1,720	4.7	53.6	2,810
SDC1	3,280	3.4	8.9	55.3	1.1	0	6,680	17.3	1.2	28.4	12,900	83.5	1,050	159	0.19	12	188	7.4	2.1	1,050	0	13	223
SDC2	5,320	2.5	10.9	105	1.4	0	10,000	15.2	1.7	27.4	14,500	65.2	1,460	187	1.4	15.2	469	10	2.8	1,420	0	16.1	183
SDD1	7,650	4.4	10.9	234	2.9	1.2	21,600	42.2	4.7	94.8	28,100	362	4,680	332	0.17	27.3	558	20.1	5.7	2,870	0	29.5	643
SDD2	13,000	6.9	35.7	197	2.6	0	70,200	100	16	132	12,400	341	22,700	1770	0	76.1	1,400	18.4	5.3	2,630	3.2	46.4	1,060

3X Background Sample Results (mg/Kg)

Sample #	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
SDA1	26,220	13.2	55.5	456	6.9	0	58,500	555	16.8	600	237,000	873	16,980	2,670	1.59	214.2	2,235	13.2	13.8	6,930	34.8	148.8	3,060
SDA2	13,560	87.9	465	537	3.9	0.273	39,000	1,416	70.8	6,360	429,000	5,070	6,630	2,301	1.53	1,239	1,485	27.3	7.8	3,900	7.2	83.1	3,240
SDB1	18,390	10.5	15	621	5.4	2.64	45,000	114.3	8.1	244.2	49,500	972	12,210	1,035	1.53	53.1	1,167	37.2	10.5	5,310	0	72	1,317
SDB2	43,200	53.4	214.2	480	5.1	21	77,400	720	46.2	810	834,000	2,352	23,550	7,590	1.65	289.5	3,120	36	11.4	5,160	14.1	160.8	8,430
SDC1	9,840	10.2	26.7	165.9	3.3	0	20,040	51.9	3.6	85.2	38,700	250.5	3,150	477	0.57	36	564	22.2	6.3	3,150	0	39	669
SDC2	15,960	7.5	32.7	315	4.2	0	30,000	45.6	5.1	82.2	43,500	195.6	4,380	561	4.2	45.6	1,407	30	8.4	4,260	0	48.3	549
SDD1	22,950	13.2	32.7	702	8.7	3.6	64,800	126.6	14.1	284.4	84,300	1,086	14,040	996	0.51	81.9	1,674	60.3	17.1	8,610	0	88.5	1,929
SDD2	39,000	20.7	107.1	591	7.8	0	210,600	300	48	396	37,200	1,023	68,100	5,310	0	228.3	4,200	55.2	15.9	7,890	9.6	139.2	3,180

Highest 3X Background Sample Results (mg/Kg)

Sample #	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
Shallow	26,220	13.2	55.5	702	8.7	3.6	64,800	555	16.8	600	237,000	1,086	16,980	2,670	1.6	214.2	2,235	60.3	17.1	8,610	34.8	148.8	3,060
Deep	43,200	87.9	465	591	7.8	21	210,600	1,416	70.8	6,360	834,000	5,070	68,100	7,590	4.2	1,239	4,200	55.2	15.9	7,890	14.1	160.8	8,430

Above 3X Background??

Sample #	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	V	Zn
Shallow	No	No	No	No	No	No	No	QR3; QR9	No	No	QR3;QR9	QR9	QR5;QR7	No	No	No	QR1;QR3;QR9;QS1	No	No	QR3	No	No	QR9
Deep	No	No	No	No	No	No	No	QR4;QS0	No	No	No	No	No	No	No	No	QR2;QR4	No	No	QR4	No	No	No

Shallow SVOC Background Study (E2QQ1 - E2QQ8) Highest Background Concentrations

IDEM ID #	ANALYTE	CONCENTRATION (µg/kg)	3X BACKGROUND CONCENTRATION (µg/kg)	Samples Detected above 3X Background
SDA1 (0-12 in)	1,2,4,5-Tetrachlorobenzene	5300	15900	No
SDA1 (0-12 in)	Caprolactam	5300	15900	No
SDA1 (0-12 in)	2, o-Nitroaniline	10000	30000	No
SDA1 (0-12 in)	2, o-Nitrophenol	5300	15900	No
SDA1 (0-12 in)	2,3,4,6-Tetrachlorophenol	5300	15900	No
SDA1 (0-12 in)	2,4,5-Trichlorophenol	5300	15900	No
SDA1 (0-12 in)	2,4,6-Trichlorophenol	5300	15900	No
SDA1 (0-12 in)	2,4-Dichlorophenol	5300	15900	No
SDA1 (0-12 in)	2,4-Dimethylphenol	5300	15900	No
SDA1 (0-12 in)	2,4-Dinitrophenol	10000	30000	No
SDA1 (0-12 in)	2,4-Dinitrotoluene	5300	15900	No
SDA1 (0-12 in)	2,6-Dinitrotoluene	5300	15900	No
SDA1 (0-12 in)	2-Chloronaphthalene	5300	15900	No
SDA1 (0-12 in)	2-Chlorophenol	5300	15900	No
SDA1 (0-12 in)	2-Methylnaphthalene	5300	15900	No
SDA1 (0-12 in)	3, m-Nitroaniline	10000	30000	No
SDA1 (0-12 in)	3,3'-Dichlorobenzidine	5300	15900	No
SDA1 (0-12 in)	4, p-Nitroaniline	10000	30000	No
SDA1 (0-12 in)	4, p-Nitrophenol	10000	30000	No
SDA1 (0-12 in)	4,6-Dinitro-2-methylphenol	10000	30000	No
SDA1 (0-12 in)	4-Bromophenyl phenyl ether	5300	15900	No
SDA1 (0-12 in)	4-Chlorophenyl phenyl ether	5300	15900	No
SDB1 (0-12 in)	Acenaphthene	810	2430	QR3
SDB1 (0-12 in)	Acenaphthylene	810	2430	QR3
SDA1 (0-12 in)	Acetophenone	5300	15900	No
SDA1 (0-12 in)	Anthracene	5300	15900	No
SDA1 (0-12 in)	Atrazine	5300	15900	No
SDA1 (0-12 in)	Benzaldehyde	5300	15900	No
SDA1 (0-12 in)	Benzo(a)anthracene	5300	15900	No
SDA1 (0-12 in)	Benzo(a)pyrene	1700	5100	QR3, QR9
SDA1 (0-12 in)	Benzo(b)fluoranthene	4000	12000	QR3
SDA1 (0-12 in)	Benzo(ghi)perylene	1400	4200	QR3
SDA1 (0-12 in)	Benzo(k)fluoranthene	2100	6300	QR3, QR9
SDA1 (0-12 in)	1,1'-Biphenyl	5300	15900	No
SDA1 (0-12 in)	2,2'-Oxybis(1-chloropropane)	5300	15900	No
SDA1 (0-12 in)	Bis(2-chloroethoxy) methane	5300	15900	No
SDA1 (0-12 in)	Bis(2-chloroethyl) ether	5300	15900	No
SDA1 (0-12 in)	Bis(2-ethylhexyl) phthalate	5300	15900	No
SDA1 (0-12 in)	Butylbenzylphthalate	5300	15900	No
SDA1 (0-12 in)	Carbazole	5300	15900	No
SDA1 (0-12 in)	Chrysene	2700	8100	QR3
SDA1 (0-12 in)	Dibenz(a,h)anthracene	5300	15900	No
SDA1 (0-12 in)	Dibenzofuran	5300	15900	No
SDA1 (0-12 in)	Diethylphthalate	5300	15900	No
SDA1 (0-12 in)	Dimethylphthalate	5300	15900	No
SDA1 (0-12 in)	Di-n-butyl phthalate	5300	15900	No
SDA1 (0-12 in)	Di-n-octyl phthalate	5300	15900	No
SDA1 (0-12 in)	Fluorene	5300	15900	No
SDA1 (0-12 in)	Fluoranthene	1700	5100	QR3
SDA1 (0-12 in)	Hexachlorobenzene	5300	15900	No
SDA1 (0-12 in)	Hexachlorobutadiene	5300	15900	No
SDA1 (0-12 in)	Hexachlorocyclopentadiene	5300	15900	No
SDA1 (0-12 in)	Hexachloroethane	5300	15900	No
SDA1 (0-12 in)	Indeno(1,2,3-cd)pyrene	1000	3000	QR3, QR9
SDA1 (0-12 in)	Isophorone	5300	15900	No
SDA1 (0-12 in)	Naphthalene	5300	15900	No
SDA1 (0-12 in)	Nitrobenzene	5300	15900	No
SDA1 (0-12 in)	N-Nitrosodiphenylamine	5300	15900	No
SDA1 (0-12 in)	N-Nitroso-di-n-propylamine	5300	15900	No
SDA1 (0-12 in)	2-Methylphenol	5300	15900	No
SDD1 (0-12 in)	4-Chloraniline	770	2310	No
SDD1 (0-12 in)	4-Chloro-3-Methylphenol	770	2310	No
SDD1 (0-12 in)	4-Methylphenol	770	2310	No
SDA1 (0-12 in)	Pentachlorophenol	10000	30000	No
SDA1 (0-12 in)	Phenanthrene	620	1860	QR3
SDA1 (0-12 in)	Phenol	5300	15900	No
SDA1 (0-12 in)	Pyrene	3300	9900	QR3

Deep SVOC Background Study (E2QQ1 - E2QQ8) Highest Background Concentrations

IDEM ID #	ANALYTE	CONCENTRATION (µg/kg)	3X BACKGROUND CONCENTRATION (µg/kg)	Samples Detected above 3X Background
SDA2 (12-24 in)	1,2,4,5-Tetrachlorobenzene	17000	51000	No
SDA2 (12-24 in)	Caprolactam	17000	51000	No
SDA2 (12-24 in)	2, o-Nitroaniline	34000	102000	No
SDA2 (12-24 in)	2, o-Nitrophenol	17000	51000	No
SDA2 (12-24 in)	2,3,4,6-Tetrachlorophenol	17000	51000	No
SDA2 (12-24 in)	2,4,5-Trichlorophenol	17000	51000	No
SDA2 (12-24 in)	2,4,6-Trichlorophenol	17000	51000	No
SDA2 (12-24 in)	2,4-Dichlorophenol	17000	51000	No
SDA2 (12-24 in)	2,4-Dimethylphenol	17000	51000	No
SDA2 (12-24 in)	2,4-Dinitrophenol	34000	102000	No
SDA2 (12-24 in)	2,4-Dinitrotoluene	17000	51000	No
SDA2 (12-24 in)	2,6-Dinitrotoluene	17000	51000	No
SDA2 (12-24 in)	2-Chloronaphthalene	17000	51000	No
SDA2 (12-24 in)	2-Chlorophenol	17000	51000	No
SDA2 (12-24 in)	2-Methylnaphthalene	17000	51000	No
SDA2 (12-24 in)	3, m-Nitroaniline	34000	102000	No
SDA2 (12-24 in)	3,3'-Dichlorobenzidine	17000	51000	No
SDA2 (12-24 in)	4, p-Nitroaniline	34000	102000	No
SDA2 (12-24 in)	4, p-Nitrophenol	34000	102000	No
SDA2 (12-24 in)	4,6-Dinitro-2-methylphenol	34000	102000	No
SDA2 (12-24 in)	4-Bromophenyl phenyl ether	17000	51000	No
SDA2 (12-24 in)	4-Chlorophenyl phenyl ether	17000	51000	No
SDA2 (12-24 in)	Acenaphthene	14000	42000	QS2
SDA2 (12-24 in)	Acenaphthylene	17000	51000	No
SDA2 (12-24 in)	Acetophenone	17000	51000	No
SDA2 (12-24 in)	Anthracene	17000	51000	QS2
SDA2 (12-24 in)	Atrazine	17000	51000	No
SDA2 (12-24 in)	Benzaldehyde	17000	51000	No
SDA2 (12-24 in)	Benzo(a)anthracene	17000	51000	QS2
SDC2 (12-24 in)	Benzo(a)pyrene	4700	14100	QR4, QS2
SDC2 (12-24 in)	Benzo(b)fluoranthene	7100	21300	QR4, QS2
SDA2 (12-24 in)	Benzo(ghi)perylene	17000	51000	QS2
SDC2 (12-24 in)	Benzo(k)fluoranthene	5700	17100	QR4, QS2
SDA2 (12-24 in)	1,1'-Biphenyl	17000	51000	No
SDA2 (12-24 in)	2,2'-Oxybis(1-chloropropane)	17000	51000	No
SDA2 (12-24 in)	Bis(2-chloroethoxy) methane	17000	51000	No
SDA2 (12-24 in)	Bis(2-chloroethyl) ether	17000	51000	No
SDA2 (12-24 in)	Bis(2-ethylhexyl) phthalate	17000	51000	No
SDA2 (12-24 in)	Butylbenzylphthalate	17000	51000	No
SDA2 (12-24 in)	Carbazole	17000	51000	No
SDA2 (12-24 in)	Chrysene	9000	27000	QS2
SDA2 (12-24 in)	Dibenz(a,h)anthracene	17000	51000	No
SDA2 (12-24 in)	Dibenzofuran	17000	51000	QS2
SDA2 (12-24 in)	Diethylphthalate	17000	51000	No
SDA2 (12-24 in)	Dimethylphthalate	17000	51000	No
SDA2 (12-24 in)	Di-n-butyl phthalate	17000	51000	No
SDA2 (12-24 in)	Di-n-octyl phthalate	17000	51000	No
SDA2 (12-24 in)	Fluorene	17000	51000	QS2
SDC2 (12-24 in)	Fluoranthene	15000	45000	QS2
SDA2 (12-24 in)	Hexachlorobenzene	17000	51000	No
SDA2 (12-24 in)	Hexachlorobutadiene	17000	51000	No
SDA2 (12-24 in)	Hexachlorocyclopentadiene	17000	51000	No
SDA2 (12-24 in)	Hexachloroethane	17000	51000	No
SDA2 (12-24 in)	Indeno(1,2,3-cd)pyrene	17000	51000	QS2
SDA2 (12-24 in)	Isophorone	17000	51000	No
SDA2 (12-24 in)	Naphthalene	17000	51000	No
SDA2 (12-24 in)	Nitrobenzene	17000	51000	No
SDA2 (12-24 in)	N-Nitrosodiphenylamine	17000	51000	No
SDA2 (12-24 in)	N-Nitroso-di-n-propylamine	17000	51000	No
SDA2 (12-24 in)	2-Methylphenol	17000	51000	No
SDA2 (12-24 in)	4-Chloraniline	17000	51000	No
SDA2 (12-24 in)	4-Chloro-3-Methylphenol	17000	51000	No
SDA2 (12-24 in)	4-Methylphenol	17000	51000	No
SDA2 (12-24 in)	Pentachlorophenol	34000	102000	No
SDA2 (12-24 in)	Phenanthrene	17000	51000	QS2
SDA2 (12-24 in)	Phenol	17000	51000	No
SDA2 (12-24 in)	Pyrene	11000	33000	QS2

PCB Background Study (E2QQ1 - E2QQ8)

Background Sample Results (μg/Kg)

Sample #	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1262	Arochlor 1268
SDA1	3100	3100	3100	3100	21000	11000	1400	3100	3100
SDA2	3400	3400	3400	3400	25000	12000	1100	3400	3400
SDB1	160	160	160	160	110	250	91	160	160
SDB2	110	110	110	110	97	200	57	110	110
SDC1	79	79	79	79	32	170	34	79	79
SDC2	84	84	84	84	84	84	84	84	84
SDD1	150	150	150	150	98	210	37	150	150
SDD2	160	160	160	160	160	97	160	160	160

3X Background Sample Results (μg/Kg)

Sample #	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1262	Arochlor 1268
SDA1	9,300	9,300	9,300	9,300	63,000	33,000	4,200	9,300	9,300
SDA2	10,200	10,200	10,200	10,200	75,000	36,000	3,300	10,200	10,200
SDB1	480	480	480	480	330	750	273	480	480
SDB2	330	330	330	330	291	600	171	330	330
SDC1	237	237	237	237	96	510	102	237	237
SDC2	252	252	252	252	252	252	252	252	252
SDD1	450	450	450	450	294	630	111	450	450
SDD2	480	480	480	480	480	291	480	480	480

Highest 3X Background Sample Results (μg/Kg)

Sample #	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1262	Arochlor 1268
Shallow	9,300	9,300	9,300	9,300	63,000	33,000	4,200	9,300	9,300
Deep	10,200	10,200	10,200	10,200	75,000	36,000	3,300	10,200	10,200

Above 3X Background??

Sample #	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1262	Arochlor 1268
Shallow	No	No	No	No	No	No	No	No	No
Deep	No	No	No	No	QS2	QS2	QS2	No	No

Pesticide Background Study (E2QQ1 - E2QQ8)

Background Sample Results (µg/Kg)

Sample #	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	4,4'-DDD	4,4'-DDE	4,4'-DDT	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Lindane	Methoxychlor	Toxaphene
SDA1	38.0	11.0	6.1	11.0	51.0	21.0	34.0	11.0	16.0	9.0	21.0	34.0	21.0	18.0	22.0	32.0	17.0	8.5	6.5	77.0	1100.0
SDA2	91.0	17.0	16.0	24.0	100.0	75.0	69.0	24.0	41.0	23.0	85.0	59.0	25.0	67.0	55.0	120.0	57.0	190.0	19.0	180.0	2400.0
SDB1	8.0	8.0	4.2	8.0	160.0	150.0	57.0	8.0	15.0	8.0	15.0	15.0	15.0	15.0	15.0	8.0	8.0	8.5	8.0	80.0	800.0
SDB2	5.5	5.5	5.5	5.5	100.0	53.0	28.0	5.5	11.0	5.5	11.0	11.0	11.0	11.0	11.0	5.5	5.5	3.4	5.5	55.0	550.0
SDC1	4.1	4.1	4.1	4.1	7.9	7.9	7.9	4.1	7.9	4.1	7.9	7.9	7.9	7.9	7.9	4.8	4.1	4.1	4.1	41.0	410.0
SDC2	4.3	4.3	4.3	4.3	8.3	8.3	8.3	4.3	8.3	4.3	8.3	4.5	8.3	5.4	4.4	3.5	4.3	4.3	4.3	43.0	430.0
SDD1	7.7	7.7	7.7	7.7	15.0	15.0	15.0	7.7	15.0	7.7	15.0	15.0	15.0	15.0	15.0	7.7	7.7	7.7	7.7	77.0	770.0
SDD2	8.4	8.4	8.4	8.4	16.0	16.0	16.0	8.4	16.0	8.4	16.0	16.0	16.0	16.0	16.0	8.4	8.4	8.4	8.4	84.0	840.0

3X Background Sample Results (µg/Kg)

Sample #	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	4,4'-DDD	4,4'-DDE	4,4'-DDT	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Lindane	Methoxychlor	Toxaphene
SDA1	114.0	33.0	18.3	33.0	153.0	63.0	102.0	33.0	48.0	27.0	63.0	102.0	63.0	54.0	66.0	96.0	51.0	25.5	19.5	231.0	3300.0
SDA2	273.0	51.0	48.0	72.0	300.0	225.0	207.0	72.0	123.0	69.0	255.0	177.0	75.0	201.0	165.0	360.0	171.0	570.0	57.0	540.0	7200.0
SDB1	24.0	24.0	12.6	24.0	480.0	450.0	171.0	24.0	45.0	24.0	45.0	45.0	45.0	45.0	45.0	24.0	24.0	25.5	24.0	240.0	2400.0
SDB2	16.5	16.5	16.5	16.5	300.0	159.0	78.0	16.5	33.0	16.5	33.0	33.0	33.0	33.0	33.0	16.5	16.5	10.2	16.5	165.0	1650.0
SDC1	12.3	12.3	12.3	12.3	23.7	23.7	23.7	12.3	23.7	12.3	23.7	23.7	23.7	23.7	23.7	14.4	12.3	12.3	12.3	123.0	1230.0
SDC2	12.9	12.9	12.9	12.9	24.9	24.9	24.9	12.9	24.9	12.9	24.9	13.5	24.9	16.2	13.2	10.5	12.9	12.9	12.9	129.0	1290.0
SDD1	23.1	23.1	23.1	23.1	45.0	45.0	45.0	23.1	45.0	23.1	45.0	45.0	45.0	45.0	45.0	23.1	23.1	23.1	23.1	231.0	2310.0
SDD2	25.2	25.2	25.2	25.2	48.0	48.0	48.0	25.2	48.0	25.2	48.0	48.0	48.0	48.0	48.0	25.2	25.2	25.2	25.2	252.0	2520.0

Highest 3X Background Sample Results (µg/Kg)

Sample #	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	4,4'-DDD	4,4'-DDE	4,4'-DDT	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Lindane	Methoxychlor	Toxaphene
Shallow	114.0	33.0	23.1	33.0	480.0	450.0	171.0	33.0	48.0	27.0	63.0	102.0	63.0	54.0	66.0	96.0	51.0	25.5	24.0	240.0	3,300.0
Deep	273.0	51.0	48.0	72.0	300.0	225.0	207.0	72.0	123.0	69.0	255.0	177.0	75.0	201.0	165.0	360.0	171.0	570.0	57.0	540.0	7,200.0

Above 3X Background??

Sample #	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	4,4'-DDD	4,4'-DDE	4,4'-DDT	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Lindane	Methoxychlor	Toxaphene
Shallow	QR3, QR9	No	QR3	QR3, QR9	No	No	No	QR3, QR9	QR3	QR3, QR9	No	No	No	No	No	QR3, QR9	QR3	QR9	No	No	No
Deep	No	No	No	No	No	No	No	QR4, QR6, QS2	No	No	No	No	No	No	No	No	QS2	No	No	No	No

Sample ID	Sample Type	Date	Hazardous Substance	Background Concentration* (Adjusted Concentration)	Hazardous Substance Concentration (Adjusted Concentration)	Dilution Factor
E2QR3	Sediment	5/5/09	Fluoranthene 1700	~~4,600~~ ug/Kg (J) **(5,300 ug/Kg)***	28,000 ug/Kg	4x
			Pyrene	3,300 ug/Kg (J) **(5,300 ug/Kg)***	22,000 ug/Kg	
E2QS2	Sediment	5/5/09	Acenaphthene	14,000 ug/Kg (J) **(17,000 ug/Kg)***	480,000 ug/Kg	20x
			Anthracene	17,000 ug/Kg	270,000 ug/Kg	
			Benzo(a)Anthracene	17,000 ug/Kg	600,000 ug/Kg	
			Benzo(a)Pyrene	4,700 ug/Kg	540,000 ug/Kg	
			Benzo(b)Fluoranthene	7,100 ug/Kg	700,000 ug/Kg	
			Benzo(g,h,i)Perylene	17,000 ug/Kg	130,000 ug/Kg (J) **(130,000 ug/Kg)***	
			Benzo(k)Fluoranthene	5,700 ug/Kg	500,000 ug/Kg	
			Chrysene	9,000 ug/Kg (J) **(17,000 ug/Kg)***	630,000 ug/Kg	
			Dibenzofuran	17,000 ug/Kg	220,000 ug/Kg (J) **(220,000 ug/Kg)***	
			Fluoranthene	15,000 ug/Kg	2,000,000 ug/Kg	
			Fluorene	17,000 ug/Kg	440,000 ug/Kg	
			Indeno(1,2,3-cd)Pyrene	17,000 ug/Kg	160,000 ug/Kg (J) **(160,000ug/Kg)***	
			Phenanthrene	17,000 ug/Kg	460,000 ug/Kg	
			Pyrene	11,000 ug/Kg (J) **(17,000ug/Kg)***	1,100,000 ug/Kg	

* Background concentrations used in sample E2QR3 were derived from background sample E2QQ1. Background concentrations used in sample E2QS2 were derived from background sample E2QQ2 except for Benzo(a)Pyrene, Benzo(b)Fluoranthene, Benzo(k)Fluoranthene, and Fluoranthene that were derived from background sample E2QQ6.

(J) The concentration is estimated

* E2QR3 Fluoranthene Background Concentration was adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* E2QR3 Pyrene Background Concentration was adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* E2QS2 Acenaphthene Background Concentration was adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* E2QS2 Chrysene Background Concentration was adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* E2QS2 Pyrene Background Concentration was adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* E2QS2 Benzo(g,h,i)Perylene Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* E2QS2 Dibenzofuran Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* E2QS2 Indeno(1,2,3-cd)Pyrene Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

GARY DEVELOPMENT SDG E2QQ1
TABLE FOR PCBs KEY FINDINGS

Sample ID	Sample Type	Date	Hazardous Substance	Background Concentration* (Adjusted Concentration)	Hazardous Substance Concentration	Dilution Factor

After adjusting results when using the procedure described in EPA 540-F-94-028, Using Qualified Data to Document an Observed Release and Observed Contamination, November 1996, no PCBs were detected above 3X background.

* Background concentrations for samples E2QR1, E2QR3, E2QR5, E2QR7, E2QS9, and E2QS1 were derived from background sample E2QQ1. Background concentrations for samples E2QR2, E2QR4, E2QR6, E2QR8, E2QS0, and E2QS2 were derived from background sample E2QQ2.

(J) The concentration is estimated

GARY DEVELOPMENT SDG E2QQ1
TABLE FOR PESTICIDES KEY FINDINGS

Sample ID	Sample Type	Date	Hazardous Substance	Background Concentration* **(Adjusted Concentration)**	Hazardous Substance Concentration **(Adjusted Concentration)**	Dilution Factor
E2QR3	Sediment	5/5/09	beta-BHC Endosulfan I	11 ug/Kg 9 ug/Kg (J) **(11 ug/Kg)** *	52 ug/Kg (J) **(52 ug/Kg)** * 38 ug/Kg (J) **(38 ug/Kg)** *	10x Dilution
E2QS2	Sediment	5/5/09	delta-BHC	24 ug/Kg	450 ug/Kg	10x Dilution

* Background concentrations used in sample E2QR3 was derived from background sample E2QQ1. Background concentration used in sample E2QS2 was derived from background sample E2QQ2.

(J) The concentration is estimated

* E2QR3 endosulfan I Background Result was adjusted using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* E2QR3 beta-BHC Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* E2QR3 endosulfan I Concentration was not adjusted when using the procedure described in EPA 540-F-94-028. *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

GARY DEVELOPMENT SDG ME2QQ1
TABLE FOR METALS KEY FINDINGS

Sample ID	Sample Type	Date	Hazardous Substance	Background Concentration* (Adjusted Concentration)	Hazardous Substance Concentration (Adjusted Concentration)	Dilution Factor
ME2QR1	Sediment	5/5/09	Potassium	745 mg/Kg (J) **(745 mg/Kg)***	9,630 mg/Kg	1x
ME2QR2	Sediment	5/5/09	Potassium	1,400 mg/Kg (J) **(1,400 mg/Kg)***	10,700 mg/Kg	1x
ME2QR3	Sediment	5/5/09	Chromium Iron Potassium	185 mg/Kg 79,000 mg/Kg 745 mg/Kg (J) **(745 mg/Kg)***	1,580 mg/Kg (J) **(1,225 mg/Kg)*** 262,000 mg/Kg 9,250 mg/Kg	1x
ME2QR4	Sediment	5/5/09	Potassium	1,400 mg/Kg (J) **(1,400 mg/Kg)***	7,950 mg/Kg	1x
ME2QR5	Sediment	5/5/09	Magnesium	5,660 mg/Kg	18,600 mg/Kg	1x
ME2QR7	Sediment	5/5/09	Magnesium	5,660 mg/Kg	18,700 mg/Kg	1x
ME2QR9	Sediment	5/5/09	Chromium Iron Lead Potassium Zinc	185 mg/Kg 79,000 mg/Kg 362 mg/Kg 745 mg/Kg (J) **(745 mg/Kg)*** 1,020 mg/Kg	1,720 mg/Kg (J) **(1,333 mg/Kg)*** 242,000 mg/Kg 1,740 mg/Kg 3,530 mg/Kg 6,340 mg/Kg	1x
ME2QS0	Sediment	5/5/09	Chromium	472 mg/Kg (J) **(472 mg/Kg)***	2,030 mg/Kg (J) **(1,574 mg/Kg)***	1x
ME2QS1	Sediment	5/5/09	Potassium	745 mg/Kg (J) **(745 mg/Kg)***	8,950 mg/Kg	1x

* The background concentration used for Potassium in samples ME2QR1, ME2QR3, ME2QR9, and ME2QS1 were derived from background sample ME2QQ1. The background concentration used for Potassium in samples ME2QR2, and ME2QR4 were derived from background sample ME2QQ8. The background concentration used for Chromium in samples ME2QR3, and ME2QR9 was derived from background sample ME2QQ1. The background concentration used for Chromium in sample ME2QS0 was derived from background sample ME2QQ2. The background concentration used for Iron in samples ME2QR3 and ME2QR9 were derived from background sample ME2QQ1. The background concentration used for Magnesium in samples ME2QR5 and ME2QR7 were derived from background sample ME2QQ1. The background concentration used for Lead in sample ME2QR9 was derived from background sample ME2QQ7. The background concentration used for Zinc in sample ME2QR9 was derived from background sample ME2QQ1.

(J) The concentration is estimated

* ME2QR1 Potassium Background Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* ME2QR2 Potassium Background Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* ME2QR3 Potassium Background Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* ME2QR3 Chromium Result Biased High and adjusted using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* ME2QR4 Potassium Background Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* ME2QR9 Potassium Background Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* ME2QR9 Chromium Result Biased High and adjusted using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* ME2QS0 Chromium Background Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* ME2QS0 Chromium Result Biased High and adjusted using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.

* ME2QS1 Potassium Background Concentration was not adjusted when using the procedure described in EPA 540-F-94-028, *Using Qualified Data to Document an Observed Release and Observed Contamination*, November 1996.