Prepared for:
BASF Corporation
Florham Park, New Jersey

Appendix C

2007 Analytical Data

Part 1 – 2007 Sediment and Pore Water Analytical Data

Part 2 - Data Validation Memoranda and Forms

Hudson River Operable Unit 2 Investigation Report

BASF Rensselaer

Rensselaer, New York

Prepared for:
BASF Corporation
Florham Park, New Jersey

Appendix C, Part 1

2007 Sediment and Pore Water Analytical Data

Hudson River Operable Unit 2 Investigation Report

BASF Rensselaer

Rensselaer, New York

Prepared for:
BASF Corporation
Florham Park, New Jersey

Appendix C, Part 1

2007 Sediment and Pore Water Analytical Data

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Table 1
Inorganic Compounds in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

Analyte (mg/kg)	ADJACENT FAR FIELD SD118 11/14/2007 Sand 03SD118F-SC-A-1 0-0.5 ft	ADJACENT FAR FIELD SD120 11/14/2007 Sand 03SD120F-SC-A-1 0-0.5 ft	ADJACENT FAR FIELD SD132 11/14/2007 Gravelly Sand 03SD132W-SC-A-1 0-0.3 ft	ADJACENT NEARSHORE SD032 11/15/2007 Muddy Sand 03SD032N-SC-A-1 0-0.5 ft	ADJACENT NEARSHORE SD056 11/14/2007 Muddy Sand 03SD056N-SC-A-1 0-0.5 ft	ADJACENT NEARSHORE SD059 11/13/2007 Muddy Sand 03SD059N-SC-A-1 0-0.4 ft	ADJACENT NEARSHORE SD082 11/14/2007 Muddy Sand 03SD082N-SC-A-1 0-0.5 ft	ADJACENT NEARSHORE SD085 11/15/2007 Muddy Sand 03SD085N-SC-A-1 0-0.5 ft	ADJACENT NEARSHORE SD087 11/15/2007 Muddy Sand 03SD087N-SC-A-1 0-0.5 ft
ALUMINUM	8810	12200	5600	9440	7460	6120	11800	15800 J	10200
ANTIMONY	1 UJ	2.5 J	0.93 UJ	1.3 UJ	1.2 UJ	0.97 UJ	1.6 UJ	1.8 UJ	1.3 UJ
ARSENIC	4.4	8.2	125	6.2	8.1	2.2	8.4	15 J	6.8
BARIUM	50.5	157	73.9	72.9	61.6	32.8	127	170 J	95.6
BERYLLIUM	0.64 U	0.94 U	0.59 U	0.83 U	0.74 U	0.62 U	0.99 U	1.1 UJ	0.79 U
CADMIUM	0.64 U	9.6	0.59 U	1.1	0.74 U	0.62 U	4.7	6.6 J	2.4
CALCIUM METAL	2410 J	9640 J	6220 J	8880	9340 J	1600	7740 J	8220 J	6460
CHROMIUM, TOTAL	15.4	214	7.2	58.4	19.5	13.4	119	218 J	112
COBALT	7.6	10.4	5.9 U	8.8	7.4	6.2 U	12	18.5 J	10.3
COPPER	18	113	10	44.4	23	9.5 J	352	192 J	69
IRON, TOTAL	24500	24000	26300	20100	17800	14400	23900	30500 J	21100
LEAD	17.7	213	20.5	65	25.3	20	159	196 J	92.1
MAGNESIUM	5480	6380	4600	5580	6040	3390	5760	7220 J	5770
MANGANESE	436	547	219	560	449	290 J	649	892 J	416
MERCURY	0.04 U	1.3 J	0.05 J	0.48	0.11 J	0.07	0.71 J	1.1 J	0.35
NICKEL	19	25.4	10.6	19.8	15.9	12.8 J	28.2	37.5 J	22.9
POTASSIUM	1200	1820	740	1240	1050	920	1600	2150 J	1420
SELENIUM	0.63 U	0.9 U	0.58 U	0.81 UJ	0.72 U	0.62 UJ	0.97 U	1.1 UJ	0.8 UJ
SILVER	1.3 U	1.9 U	1.2 U	1.7 U	1.5 U	1.2 U	2 U	2.3 UJ	1.6 U
SODIUM	128 U	187 U	117 U	166	147 U	123 U	198 U	226 UJ	159 U
THALLIUM	1.3 U	1.9 U	1.2 U	1.7 U	1.5 U	1.2 U	2 U	2.3 UJ	1.6 U
VANADIUM	14.2	28.9	8.6	19.4	14.5	10.4	24.1	38.9 J	20.2
ZINC	112	323	60.8	163	93.7	67.6 J	319	491 J	201
SOLIDS, TOTAL (%)	77.3	52.9	82.7	60.2	66	78.7	49.5	44.2	61.7
TOTAL ORGANIC CARBON (mg/kg)	4140	17800	5870	19900	8130	1620 J	26600	37000 J	27800

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 1
Inorganic Compounds in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL
	SD094	SD094	SD097	SD097	SD100	SD123	SD129	SD011V	SD061
	11/15/2007	11/15/2007	11/15/2007	11/15/2007	11/13/2007	11/13/2007	11/13/2007	11/13/2007	11/13/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	03SD094N-SC-A-1	03SD094N-SC-A-2	03SD097N-SC-A-1	03SD097N-SC-A-2	03SD100N-SC-A-1	03SD123N-SC-A-1	03SD129N-SC-A-1	03SD11VC-SC-A-1	03SD061C-SC-A-1
Analyte (mg/kg)	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.4 ft	0-0.5 ft	#N/A	#N/A
ALUMINUM	17500 J	18200 J	10800	11100	7410	7600	5520	11700	7330
ANTIMONY	5.2 J	3.6 J	1.4 UJ	1.4 UJ	1.2 UJ	1.1 UJ	0.95 UJ	1.2 UJ	1.1 UJ
ARSENIC	13.1 J	15.7 J	5.7	6.6	2.8	2.9	2.2	11.1	3.5
BARIUM	294 J	292 J	137	165	55.8	50.1	28.7	153	72.3
BERYLLIUM	1.2 UJ	1.1 UJ	0.89 U	0.87 U	0.75 U	0.7 U	0.6 U	0.76 U	0.68 U
CADMIUM	27.2 J	27.5 J	9	6.8	0.75 U	0.93	0.6 U	6.1	2
CALCIUM METAL	6250 J	7070 J	5400	5210	4990	3430	1680	7350	3020
CHROMIUM, TOTAL	540 J	489 J	154	196	17.7	29.4	10.5	172	65
COBALT	12.4 J	14.6 J	10.3	9.9	7.9	7.3	6 U	10	6.8 U
COPPER	247 J	225 J	119	157	23.4 J	50.4 J	6.8 J	121 J	39.4 J
IRON, TOTAL	26300 J	30300 J	23700	22400	17100	17600	13400	23400	15300
LEAD	595 J	438 J	342	339	27.6	43.4	11.1	165	67.3
MAGNESIUM	6350 J	7200 J	5190	4890	4650	4200	3050	6140	3700
MANGANESE	539 J	617 J	601	583	452 J	341 J	278 J	475 J	299 J
MERCURY	3.2 J	3.1 J	0.54	0.71	0.1	0.19	0.04 U	0.81	0.4
NICKEL	36.5 J	40.9 J	26.1	26.6	15.9 J	16 J	10.9 J	28.2 J	15.3 J
POTASSIUM	1980 J	2240 J	1440	1410	1060	1060	795	1650	1050
SELENIUM	1.1 UJ	1.1 UJ	0.9 UJ	0.86 UJ	0.75 U	0.68 U	0.6 U	0.78 UJ	0.67 U
SILVER	2.3 UJ	2.4 J	1.8 U	1.7 U	1.5 U	1.4 U	1.2 U	1.5 U	1.4 U
SODIUM	231 UJ	227 UJ	178	175 U	151 U	139 U	121 U	152 U	136 U
THALLIUM	2.3 UJ	2.3 UJ	1.8 U	1.7 U	1.5 U	1.4 U	1.2 U	1.5 U	1.4 U
VANADIUM	49.5 J	49.6 J	21.4	23.1	13.7	14.1	8.6	25.1	13.8
ZINC	630 J	623 J	311	400	94.9 J	101 J	51.5 J	323 J	142 J
SOLIDS, TOTAL (%)	42.8	43.7	54.6	55.1	30.9	70.4	80.5	62.8	73.5
TOTAL ORGANIC CARBON (mg/kg)	67600 J	59000 J	21300	22000	7620 J	5220 J	3420 J	20200 J	9100 J

Notes:
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R = Rejected Value
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Table 1
Inorganic Compounds in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL
	SD064	SD067	SD069	SD069	SD071	SD124	SD125	SD126	SD127
	11/13/2007	11/13/2007	11/15/2007	11/15/2007	11/13/2007	11/13/2007	11/13/2007	11/13/2007	11/13/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	03SD064C-SC-A-1	03SD067C-SC-A-1	03SD069U-SC-A-1	03SD069U-SC-A-2	03SD071C-SC-A-1	03SD124C-SC-A-1	03SD125C-SC-A-1	03SD126C-SC-A-1	03SD127C-SC-A-1
Analyte (mg/kg)	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
ALUMINUM	7240	4690	11500	11400	7070	8030	6800	11100 J	6990
ANTIMONY	0.98 UJ	0.95 UJ	2.8 J	2 J	1.1 UJ	1.3 UJ	0.98 UJ	1.7 UJ	1.1 UJ
ARSENIC	2.4	3.3	11.1	9.9	2.5	3.1	2.5	5 J	3.9
BARIUM	39.4	28.4	216	196	43.7	63.4	36.9	102 J	42.3
BERYLLIUM	0.62 U	0.6 U	0.97 U	0.91 U	0.68 U	0.81 U	0.62 U	1.1 UJ	0.7 U
CADMIUM	0.62 U	0.6 U	7	8.7	0.68 U	0.81 U	0.62 U	1.1 UJ	0.7 U
CALCIUM METAL	2170	1020	5610	5520	2820	8100	2130	6580 J	2970
CHROMIUM, TOTAL	15.9	8.5	271	283	17.7	22.1	15.6	31.9 J	16.2
COBALT	6.9	6 U	9.7 U	9.1	6.8 U	8.5	6.5	10.8 UJ	7 U
COPPER	12.6 J	9.1 J	182	173	16.3 J	26.6 J	17.8 J	43.8 J	49.9 J
IRON, TOTAL	16400	11600	23600	21900	16100	18000	15400	23900 J	16100
LEAD	20.4	13.1	604 J	387 J	23.5	35.3	17.9	46.2 J	24.9
MAGNESIUM	3990	2920	4930	5070	3970	5600	3910	6180 J	3970
MANGANESE	327 J	177 J	558	524	414 J	456 J	307 J	1040 J	310 J
MERCURY	0.05	0.07	1.3	1	0.06	0.11	0.06	0.17 J	0.07
NICKEL	15.6 J	10.2 J	26.6	26.5	14.8	18.4 J	14.3 J	22.8 J	14.5 J
POTASSIUM	1080	625	1650	1290	994	1180	899	1740 J	991
SELENIUM	0.64 U	0.61 U	0.97 UJ	0.93 UJ	0.68 U	0.81 UJ	0.62 U	1.1 UJ	0.71 UJ
SILVER	1.2 U	1.2 U	2.6	2.2	1.4 U	1.6 U	1.2 U	2.2 UJ	1.4 U
SODIUM	125 U	121 U	195 U	181 U	137	161 U	124	216 UJ	140 U
THALLIUM	1.2 U	1.2 U	1.9 U	1.8 U	1.4 U	1.6 U	1.2 U	2.2 UJ	1.4 U
VANADIUM	11.7	7.9	30.4	29.3	11.9	16	11.3	22.9 J	12.9
ZINC	85.1 J	44 J	573	512	83.2 J	107 J	78.9 J	158 J	81.6 J
SOLIDS, TOTAL (%)	77.1	80.5	50.4	53.1	70.9	60.2	77.4	44.5	70.8
TOTAL ORGANIC CARBON (mg/kg)	2890 J	2000 J	47100	33500	4290 J	14100 J	2750 J	22900 J	5450 J

Notes:
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Table 1
Inorganic Compounds in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	UPPER NAVIGATIONAL CHANNEL	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	WESTERN SHORELINE
	SD128	SD004	SD006	SD010	SD018	SD027	SD027	SD028	SD063
	11/13/2007	11/14/2007	11/15/2007	11/14/2007	11/14/2007	11/15/2007	11/15/2007	11/14/2007	11/13/2007
	Muddy Sand	Sandy Mud	Muddy Sand	Sandy Mud	Muddy Sand	Gravelly Sand	Gravelly Sand	Sand	Muddy Sand
	03SD128C-SC-A-1	03SD004U-SC-A-1	03SD006U-SC-A-1	03SD010U-SC-A-1	03SD018U-SC-A-1	03SD027U-SC-A-1	03SD027U-SC-A-2	03SD028U-SC-A-1	03SD063W-SC-A-1
Analyte (mg/kg)	#N/A	0-0.5 ft	0-0.4 ft	0-0.3 ft	0-0.5 ft	0-0.4 ft	0-0.4 ft	0-0.4 ft	0-0.5 ft
ALUMINUM	5820	8080	10400	12300	8380	6130	5120	17000	4630
ANTIMONY	1 UJ	1.3 UJ	1.3 UJ	0.86 UJ	1.3 UJ	1 UJ	1 UJ	1 UJ	0.93 UJ
ARSENIC	2.1	3.4	5.8	5.7	3.5	2.9	2.1	8.5	5
BARIUM	36.9	68.5	79.4	139	68.3	44.1	48.2	96.6	39.8
BERYLLIUM	0.66 U	0.85 U	0.85 U	2	0.84 U	0.66 U	0.64 U	0.73	0.59 U
CADMIUM	0.84	0.85 U	4.9	0.55 U	0.84 U	0.66 U	0.64 U	0.66 U	0.59 U
CALCIUM METAL	2440	7960 J	7450	47200 J	9150 J	R	R	5440 J	2180
CHROMIUM, TOTAL	20	21	97.8	13	22.7	17.4	16.3	26.3	9.2
COBALT	6.6 U	8.5 U	9	6.9	8.7	6.6 U	6.4 U	14.5	5.9 U
COPPER	15.4 J	34.4	61.2	23.8	25.8	21.7	19.7	40	16.1 J
IRON, TOTAL	13300	19100	21600	20600	19600	17900	13100	52400	15700
LEAD	32.1	43.6	109	35.1	29.8	35.4 J	22.7 J	24.2	25.7
MAGNESIUM	3120	5530	6040	8350	5950	3870	2960	10000	2690
MANGANESE	305 J	464	461	938	553	403	429	1300	220 J
MERCURY	0.05	0.1 J	0.59	0.05 J	0.1 J	0.06	0.05	0.04 U	0.04
NICKEL	11.7 J	17.9	20.6	16.5	16.9	18.3	15.9	35.9	12.1 J
POTASSIUM	825	1170	1280	1450	1280	963	825	1700	448
SELENIUM	0.67 U	0.85 U	0.89 UJ	0.55 U	0.84 U	0.66 UJ	0.62 UJ	0.63 U	0.59 U
SILVER	1.3 U	1.7 U	1.7 U	1.1 U	1.7 U	1.3 U	1.3 U	1.3 U	1.2 U
SODIUM	132 U	171 U	169 U	984	167 U	131 U	188	132 U	118 U
THALLIUM	1.3 U	1.7 U	1.7 U	2.7	1.7 U	1.3 U	1.3 U	1.3 U	1.2 U
VANADIUM	9.9	16	21.4	15.1	15.5	11.5	9.7	30.8	8.6
ZINC	84 J	105	182	105	103	75.6	68.6	116	62.3 J
SOLIDS, TOTAL (%)	72.9	58.5	56.3	88.6	58.6	73.9	77.4	75.8	85.1
TOTAL ORGANIC CARBON (mg/kg)	8460 J	13800	31300	3900	12800	11200	13200	12300	1670 J

Notes:
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Table 1
Inorganic Compounds in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

Analyte (mg/kg)	WESTERN SHORELINE SD130 11/14/2007 Gravelly Sand 03SD130W-SC-A-1 0-0.4 ft	WESTERN SHORELINE SD131 11/14/2007 Gravelly Sand 03SD131W-SC-A-1 0-0.3 ft	WESTERN SHORELINE SD133 11/15/2007 Muddy Sand 03SD133W-SC-A-1 0-0.4 ft	WESTERN SHORELINE SD134 11/13/2007 Muddy Sand 03SD134W-SC-A-1 0-0.5 ft
ALUMINUM	5480	6150	5810	5260
ANTIMONY	4.9 J	0.89 UJ	0.93 UJ	1 UJ
ARSENIC	12.5	2.6	7.3	3.6
BARIUM	119	24.5	53.1	66.4
BERYLLIUM	0.67 U	0.57 U	0.59 U	0.64 U
CADMIUM	0.67 U	0.57 U	0.59 U	0.64 U
CALCIUM METAL	7050 J	2150 J	1480	3680
CHROMIUM, TOTAL	10.5	8.8	11.7	18.1
COBALT	6.7 U	5.7 U	6	6.4 U
COPPER	16.1	9.4	22.2	21.3 J
IRON, TOTAL	29500	15900	24100	14300
LEAD	32.4	12	117	45.5
MAGNESIUM	3740	3730	3440	3380
MANGANESE	300	258	365	263 J
MERCURY	0.07 J	0.04 J	0.04 U	0.08
NICKEL	10.8	12.8	17.7	11.6 J
POTASSIUM	901	683	730	672
SELENIUM	1.2	0.58 U	0.59 UJ	0.62 U
SILVER	1.3 U	1.1 U	1.2 U	1.3 U
SODIUM	134 U	113 U	118 U	127 U
THALLIUM	1.3 U	1.1 U	1.2 U	1.3 U
VANADIUM	10.8	9	10.9	9.7
ZINC	78.5	55	86.4	98.4 J
SOLIDS, TOTAL (%)	73.3	84.9	84.4	77
TOTAL ORGANIC CARBON (mg/kg)	8550	1140	2420	5310 J

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 2
Inorganic Compounds in Sub-Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

Analyte (mg/kg)	ADJACENT FAR FIELD SD117 12/11/2007 Sand 04SD117F-SC-C-1 0.5-2 ft	ADJACENT FAR FIELD SD117 12/11/2007 Sand 04SD117F-SC-D-1 2-4 ft	ADJACENT FAR FIELD SD117 12/11/2007 Sand 04SD117F-SC-E-1 4-6 ft	ADJACENT FAR FIELD SD117 12/11/2007 Sand 04SD117F-SC-F-1 6-6.67 ft	ADJACENT FAR FIELD SD118 12/11/2007 Sand 04SD118F-SC-C-1 0.5-2 ft	ADJACENT FAR FIELD SD118 12/11/2007 Sand 04SD118F-SC-D-1 2-4 ft	ADJACENT FAR FIELD SD118 12/11/2007 Sand 04SD118F-SC-E-1 4-6 ft	ADJACENT FAR FIELD SD118 12/11/2007 Sand 04SD118F-SC-F-1 6-7.5 ft	ADJACENT FAR FIELD SD118 12/11/2007 Sand 04SD118F-SC-F-2 6-7.5 ft
ALUMINUM	6920	6900	6570	7250	6280	5910	7450	15200	14400
ANTIMONY	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.8 U	1.7 U
ARSENIC	4	3.1	2.5	3.5	2.1	1.5	2.7	7.9	8
BARIUM	32.8	34.7	36.7	37.2	31.5	26.8	57.1	162	132
BERYLLIUM	0.57 U	0.61 U	0.62 U	0.62 U	0.6 U	0.62 U	0.65 U	0.88 U	0.84 U
CADMIUM	0.57 U	0.61 U	0.62 U	0.62 U	0.6 UJ	0.62 UJ	0.65 UJ	5.8 J	4.7 J
CALCIUM METAL	4110	3500	30400	6820	7860	2340	7880	9810	8450
CHROMIUM	10.5	12.5	13.8	14.7	13.3	11.5	20.7	179	134
COBALT	5.7 U	6.1	6.2 U	6.2 U	6 U	6.2 U	7.2	14.1	13.5
COPPER	18.6 J	12.7 J	15.1 J	17.4 J	44.4	9.9	26	106	111
IRON	18000	17300	16500	16900	15200	14000	19800	28600	28500
LEAD	15.1	13.8	16.2	19.7	49.1	12.5	76.5	178	140
MAGNESIUM	4140	4050	3920	3970	4140	3370	4280	7300	6830
MANGANESE	242	289	209	249	288	230	367	578	638
MERCURY	0.04 U	0.04 U	0.06	0.05	0.09	0.04 U	0.07	R	R
NICKEL	15.5	14.1	13.3	15.2	13	12.3	17	39.3	33.9
POTASSIUM	884	943	1030	1110	985	815	1210	1990	1940
SELENIUM	0.57 UJ	0.61 UJ	1.3 UJ	0.63 UJ	0.61 UJ	0.62 UJ	0.65 UJ	0.86 UJ	0.82 UJ
SILVER	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.8 U	1.7 U
SODIUM	113 U	122 U	196	124 U	121 U	124 U	141	282	246
THALLIUM	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.8 U	1.7 U
VANADIUM	12.7	10.7	11.3	11.7	10	8.8	12.7	30.7	27.9
ZINC	60.9	83	75.6	77.3	92.1	60.4	98.5	342	307
SOLIDS, TOTAL (%)	85.6	82	78.5	79	80.4	79.7	75.4	56.6	59.2
TOTAL ORGANIC CARBON (m	1860	2640	3920	3850	1660	1300	2830	31800	23400

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Table 2
Inorganic Compounds in Sub-Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

Analyte (mg/kg)	ADJACENT FAR FIELD SD118 12/11/2007 Sand 04SD118F-SC-G-1 7.5-8.5 ft	ADJACENT FAR FIELD SD119 12/11/2007 Sand 04SD119F-SC-C-1 0.5-2 ft	ADJACENT FAR FIELD SD119 12/11/2007 Sand 04SD119F-SC-D-1 2-3.08 ft	ADJACENT FAR FIELD SD119 12/11/2007 Sand 04SD119F-SC-E-1 3.08-7.08 ft	ADJACENT FAR FIELD SD119 12/11/2007 Sand 04SD119F-SC-F-1 7.08-7.83 ft	ADJACENT FAR FIELD SD120 12/12/2007 Sand 04SD120F-SC-C-1 0.5-2 ft	ADJACENT FAR FIELD SD120 12/12/2007 Sand 04SD120F-SC-D-1 3.5-5.5 ft	ADJACENT FAR FIELD SD120 12/12/2007 Sand 04SD120F-SC-E-1 6.67-8.67 ft	ADJACENT FAR FIELD SD120 12/12/2007 Sand 04SD120F-SC-E-2 6.67-8.67 ft
ALUMINUM	21000	7470	9120	20400 J	6840	13500	15700	12500	14400
ANTIMONY	5.6	1.3 U	1.5 U	11.1 J	1.3 U	1.3 UJ	1.4 UJ	1.3 UJ	1.3 UJ
ARSENIC	16.3	2.8	3.7	21.4 J	4.2	8.3	9.6	7.9	9.9
BARIUM	234	41.9	94.6	311 J	59.4	99.6	129	90.9	118
BERYLLIUM	0.81 U	0.63 U	0.74 U	1.1 UJ	0.64 U	0.77	0.9	0.7	0.83
CADMIUM	10 J	0.63 UJ	0.74 UJ	37.5 J	0.64 UJ	0.63 U	0.68 U	0.63 U	0.65 U
CALCIUM METAL	4730	3260	11200	7770 J	3460	37200	42000	42200	37500
CHROMIUM	373	14.7	27.5	657 J	29.8	20	22.4	18.5	20.5
COBALT	8.1 U	7.2	9	12.6 J	6.6	14.9	15.7	14.2	14.9
COPPER	3040	17.5	64	233 J	36.9	36.2	39.3	35	36.3
IRON	16400	18700	24200	31400 J	15800	31400 J	34200 J	30300 J	32200 J
LEAD	392	21	61.8	663 J	52.6	15.9	16.3	14.5	15.4
MAGNESIUM	3480	4350	5170	7120 J	3880	12100	14000	12400	12600
MANGANESE	214	317	620	648 J	215	705	757	733	712
MERCURY	1.9	0.05	0.08	6.2 J	0.37	0.04 U	0.05 U	0.04 U	0.04 U
NICKEL	29.3	16.4	20.6	40.8 J	14.7	33.1	35.7	31.1	33.4
POTASSIUM	1330	1050	1520	2510 J	1050	2290 J	2640 J	2100 J	2490 J
SELENIUM	0.82 UJ	0.65 UJ	0.75 UJ	1.1 UJ	0.65 UJ	0.61 U	0.69 U	0.63 U	0.65 U
SILVER	1.8	1.3 U	1.5 U	2.5 J	1.3 U	1.3 U	1.4 U	1.3 U	1.3 U
SODIUM	414	125 U	174	454 J	205	242	326	301	298
THALLIUM	1.6 U	1.3 U	1.5 U	2.2 UJ	1.3 U	1.3 U	1.4 U	1.3 U	1.3 U
VANADIUM	32	12.6	15.9	68.7 J	12.1	25.9	29.7	25	26.9
ZINC	397	87.9	134	874 J	118	65.1	74.8	60.6	69
SOLIDS, TOTAL (%)	60.2	76.9	64.9	46.1	76.9	78	69.9	77.4	75.8
TOTAL ORGANIC CARBON (m	59200	3010	18500	62400	5500	4280	3980	3220	3650

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Table 2
Inorganic Compounds in Sub-Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD032	SD056	SD056	SD080	SD082	SD085	SD098	SD115	SD115
	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/13/2007	12/13/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD032N-SC-B-1	04SD056N-SC-B-1	04SD056N-SC-B-2	04SD080N-SC-B-1	04SD082N-SC-B-1	04SD085N-SC-B-1	04SD098N-SC-B-1	04SD115N-SC-C-1	04SD115N-SC-D-1
Analyte (mg/kg)	0.5-2 ft	0.5-2 ft	0.5-2 ft	0.5-2 ft	0.5-2 ft	0.5-2 ft	0.5-2 ft	0.5-2 ft	2-4 ft
ALUMINUM	11500	8790	9550	10300	17500 J	18300 J	13100	13800	16400 J
ANTIMONY	1.6 UJ	1.3 UJ	1.4 UJ	4.7 J	4.3 J	4.1 J	1.7 UJ	2.9	2.6 J
ARSENIC	11.1	18.4 J	30.3 J	22.3	14 J	14.8 J	7.2	11	14.9 J
BARIUM	132	99.6	97.9	148	282 J	257 J	130	168	263 J
BERYLLIUM	0.81 U	0.66 U	0.69 U	0.76 U	1.1 UJ	1.1 UJ	0.87 U	0.95 U	1 UJ
CADMIUM	1.6	6.4 J	1.5 J	32.5	26.6 J	16.5 J	0.98	9.5	21.4 J
CALCIUM METAL	6440	7470	5520	3950	9170 J	9680 J	10000	11500 J	9340 J
CHROMIUM	75.2	145 J	98 J	312	524 J	450 J	49.1	279	430 J
COBALT	11.4	7.4	8.3	9.7	13.3 J	14.5 J	13.6	14.4	13.8 J
COPPER	95.3 J	98.8 J	76.3 J	264 J	253 J	152 J	65.2 J	197	236 J
IRON	25400	16400	21000	18500	30300 J	30100 J	28300	27200	30700 J
LEAD	194	173 J	107 J	337	436 J	528 J	65.1	289	377 J
MAGNESIUM	6150	4060	4690	3960	7270 J	7760 J	6730	6830	7060 J
MANGANESE	413	301	407	252	607 J	788 J	1340	789 J	541 J
MERCURY	1.5	0.99	1	5.2	3.1 J	1.5 J	0.31	1	3.8 J
NICKEL	23	19.2	23.4	30.7	40.5 J	37.7 J	27.9	35	46.3 J
POTASSIUM	1570	1170	1370	1260	2380 J	2320 J	1830	1580	1960 J
SELENIUM	0.82 U	0.66 UJ	0.7 UJ	0.75 UJ	1.1 UJ	1.1 UJ	0.87 UJ	0.95 U	1 UJ
SILVER	1.6 U	1.3 U	1.4 U	1.5 U	3 J	2.2 UJ	1.7 U	1.9 U	2 UJ
SODIUM	259	132 U	170	159	220 UJ	220 UJ	175 U	189 U	229 J
THALLIUM	1.6 U	1.3 U	1.4 U	1.5 U	2.2 UJ	2.2 UJ	1.7 U	1.9 U	2 UJ
VANADIUM	19.7	18.3	17.6	36.7	45.5 J	42.6 J	23.6	30.6	41.2 J
ZINC	281	339	260	454	651 J	446 J	199	335	587 J
SOLIDS, TOTAL (%)	60.5	73.8	71.1	63.3	45	45.4	56.1	52.8	49.5
TOTAL ORGANIC CARBON (m	45000	18900	20300	47300	59700	46700	25300	53500	36500 J

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Table 2
Inorganic Compounds in Sub-Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD115	SD115	SD115	SD115	SD115	SD115	SD116	SD116	SD116
	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/12/2007	12/12/2007	12/12/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD115N-SC-E-1	04SD115N-SC-F-1	04SD115N-SC-F-2	04SD115N-SC-G-1	04SD115N-SC-H-1	04SD115N-SC-I-1	04SD116N-SC-C-1	04SD116N-SC-D-1	04SD116N-SC-D-2
Analyte (mg/kg)	4-6 ft	6-7.33 ft	6-7.33 ft	7.5-9.17 ft	10.17-11.5 ft	12.5-13.92 ft	0.5-2 ft	2-4 ft	2-4 ft
ALUMINUM	14500	12400	14100	12400	12100	11800	17700	16900	18800
ANTIMONY	8.3	1.8 U	1.9 U	2.1	1.2 U	1.3 U	3.7 J	1.8 UJ	3 J
ARSENIC	13.2	17.5 J	25.5 J	17.3	8.2	9.2	10.8	11.5	13.3
BARIUM	176	154	146	170	99.9	95.1	212	168	232
BERYLLIUM	0.96 U	0.9 U	0.97 U	0.88 U	0.7	0.67	0.99 U	0.91 U	0.94 U
CADMIUM	9.6	2.1	2.5	1.2	0.62 U	0.66 U	14.5	9.1 J	14.6 J
CALCIUM METAL	5850 J	8200 J	7270 J	6100 J	44900 J	42200 J	9770	7600	8820
CHROMIUM	324	138 J	218 J	61.1	17.7	17.6	350	246	332
COBALT	11.3	12	12.2	10.9	13.2	13.7	14.7	14.2	13.5
COPPER	151	123	148	105	29.1	32.5	130	211	228
IRON	23400	29900	28400	23300	28500	30400	31000	27200	29600
LEAD	374	309	241	186	12.7	14.7	396	247	329
MAGNESIUM	5420	5820	6080	6080	12600	13300	7710	7010	6940
MANGANESE	406 J	722 J	548 J	328 J	702 J	718 J	1080	666	950
MERCURY	3	18.2 J	5.6 J	2.1	0.05	0.04 U	1.2	0.85	1
NICKEL	34.1	26.8	31.8	23.5	26.3	27.8	34.6	38.2	33.8
POTASSIUM	1550	1590	1650	1570	1990	2080	2370	2290	2670
SELENIUM	0.96 U	0.9 U	0.97 U	0.88 U	0.62 U	0.66 U	0.99 U	0.92 U	0.92 U
SILVER	1.9 U	1.8 U	1.9 U	1.8 U	1.2 U	1.3 U	2.4	2.3	2.6
SODIUM	270	362	462	572	387	362	198 U	182 U	189 U
THALLIUM	1.9 U	1.8 U	1.9 U	1.8 U	1.2 U	1.3 U	2 U	1.8 U	1.9 U
VANADIUM	36.1	23.5	28.1	20.6	24.6	24	39.6	32.6	42
ZINC	599	356	462	318	62.6 J	62.4 J	421	442	554
SOLIDS, TOTAL (%)	51.7	54.4	51.3	56.2	77.8	75.9	50.6	54.4	52.5
TOTAL ORGANIC CARBON (m	83900	70300	66100	29500	3730	3650	42000	46200	38800

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Table 2
Inorganic Compounds in Sub-Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD116	SD116	SD116	SD116	SD121	SD121	SD121	SD121	SD121
	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD116N-SC-E-1	04SD116N-SC-F-1	04SD116N-SC-G-1	04SD116N-SC-H-1	04SD121N-SC-C-1	04SD121N-SC-D-1	04SD121N-SC-D-2	04SD121N-SC-E-1	04SD121N-SC-F-1
Analyte (mg/kg)	4-6.67 ft	6.67-8.5 ft	10-12 ft	14-15.83 ft	0.5-2 ft	2-3.5 ft	2-3.5 ft	3.5-5 ft	5-7.17 ft
ALUMINUM	18700	16500	16000	14500	15400	16500	16600	12300	15100
ANTIMONY	4.3 J	1.7 UJ	1.3 UJ	1.3 UJ	1.8 UJ	1.8 UJ	1.9 UJ	1.6 UJ	1.7 UJ
ARSENIC	21.8	19.2	11.1	8.9	14.3	23.5	19.9	10.2	17.1
BARIUM	258	159	109	106	155	182	160	124	206
BERYLLIUM	0.93 U	0.84	0.95	0.83	0.92 U	0.92 U	0.95 U	0.81 U	0.87 U
CADMIUM	20	2.2	0.67 U	0.67 U	3.1	3.1	2.1	1.5	2.3
CALCIUM METAL	8690	7110	30900	39400	6370	6580	7190	5890	7060
CHROMIUM	429	104	23.8	21.2	135	143	110	61.1	94.7
COBALT	12.6	13.9	15.9	15	12.8	13.2	13.5	10.9	12.6
COPPER	200	117	40.1	40	137	191	179	87.5	215
IRON	27700	29400	35500 J	33000 J	26500	30300	29100	23600	27100
LEAD	403	248	18.9	16.7	277	317	273	215	270
MAGNESIUM	6850	7450	12000	12800	6580	6860	7410	5830	6850
MANGANESE	538	718	654	715	655	627	570	478	527
MERCURY	3.5	4.7	0.06 J	0.05 J	2.3	3.9 J	2.4 J	1.4	2.4
NICKEL	41.7	29.6	36.6	34.3	28.4	30.1	29.7	22.6	27
POTASSIUM	2360	2160	2840 J	2620 J	2260	2350	2320	1760	2080
SELENIUM	0.94 U	0.83 U	0.67 U	0.65 U	0.93 U	0.91 U	0.93 U	0.78 U	0.85 U
SILVER	2.9	1.7 U	1.3 U	1.3 U	1.8 U	2.4	3	1.6 U	1.7 U
SODIUM	187 U	167 U	256	267	183 U	184 U	190 U	162 U	175 U
THALLIUM	1.9 U	1.7 U	1.3 U	1.3 U	1.8 U	1.8 U	1.9 U	1.6 U	1.7 U
VANADIUM	45.1	26.2	30.2	27.9	29.1	29.1	29.2	20.7	28.3
ZINC	743	311	74.8	67.9	337	491	426	254	347
SOLIDS, TOTAL (%)	52	58.7	74.6	74.2	52.4	52.9	51.2	61.8	56.6
TOTAL ORGANIC CARBON (m	54700	70100	4840	3730	51400	63900	56000	41900	72600

Notes:
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Table 2
Inorganic Compounds in Sub-Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD121	SD122	SD122	SD122	SD122	SD122	SD122	SD123	SD123
	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD121N-SC-G-1	04SD122N-SC-C-1	04SD122N-SC-D-1	04SD122N-SC-E-1	04SD122N-SC-E-2	04SD122N-SC-F-1	04SD122N-SC-G-1	04SD123N-SC-C-1	04SD123N-SC-D-1
Analyte (mg/kg)	8.67-10.67 ft	0.5-2 ft	2.33-3.75 ft	4.5-6.5 ft	4.5-6.5 ft	7-7.67 ft	7.67-8.17 ft	0.5-2 ft	3-5 ft
ALUMINUM	16500	15500	19200	12000	12800	19400 J	13000	13100	8430
ANTIMONY	1.2 UJ	1.8 UJ	3.3 J	1.5 UJ	1.5 UJ	3.2 J	1.7 UJ	3	1.5 U
ARSENIC	9.1	8.3	20.4	11.7	11.8	14.9 J	10	8.8	7
BARIUM	126	239	239	133	123	238 J	142	220	63.3
BERYLLIUM	0.91	0.92 U	0.93 U	0.77 U	0.77 U	1 UJ	0.84 U	0.91 U	0.77 U
CADMIUM	0.61 U	14.8	25.7	4.1	3	8.1 J	1.6	12.3	0.98
CALCIUM METAL	30300	7530	10300	4820	5640	7190 J	23000	18300 J	4030 J
CHROMIUM	23.1	414	439	216	183	463 J	44.7	270	62.7
COBALT	15.1	12.2	13.4	9.3	10	13 J	12.1	10.4	8.5
COPPER	39.6	207	202	140	151	301 J	86	160	56.6
IRON	31800	28500 J	34700 J	21300	23700	28200 J	59600	24900	18600
LEAD	17.6	434	525	355	379	398 J	102	270	152
MAGNESIUM	11900	6270	7960	4950	5430	6830 J	9080	6090	4430
MANGANESE	699	538	719	453	481	533 J	1930	473	302
MERCURY	0.07	1.6 J	3.8 J	1.8	1.3	3.3 J	1.2	1.8	1.7
NICKEL	33.6	34.7	37.5	24.8	25.7	38.7 J	25.8	28.8	18.4
POTASSIUM	3090	1940 J	2280 J	1530	1590	2480 J	2230	1590	1030
SELENIUM	3.1 U	0.95 U	0.93 U	0.77 U	0.79 U	0.99 UJ	4.3 U	0.91 U	0.76 U
SILVER	1.2 U	1.8 U	1.9 U	1.8	1.7	3.4 J	1.8	2.7	1.5 U
SODIUM	197	183 U	186 U	153 U	154 U	263 J	234	182 U	154 U
THALLIUM	1.2 U	1.8 U	1.9 U	1.5 U	1.5 U	2 UJ	1.7 U	1.8 U	1.5 U
VANADIUM	29.6	36.2	55.5	24.9	25	40.7 J	23.3	28.7	14.8
ZINC	76.5	536	595	537	404	1080 J	187	468	196
SOLIDS, TOTAL (%)	80.2	52	51.6	62.7	63	49.2	58.3	54.9	64.9
TOTAL ORGANIC CARBON (m	3240	37400	51400	27800	22500	56300	34400	24800	37600

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Table 2
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BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

Analyte (mg/kg)	ADJACENT NEARSHORE SD123 12/12/2007 Muddy Sand 04SD123N-SC-E-1 5-6.58 ft	ADJACENT NEARSHORE SD123 12/12/2007 Muddy Sand 04SD123N-SC-F-1 7-9 ft	ADJACENT NEARSHORE SD123 12/12/2007 Muddy Sand 04SD123N-SC-G-1 9.58-11.58 ft	ADJACENT NEARSHORE SD123 12/12/2007 Muddy Sand 04SD123N-SC-G-2 9.58-11.58 ft	ADJACENT NEARSHORE SD129 12/12/2007 Muddy Sand 04SD129N-SC-C-1 0.5-2 ft	ADJACENT NEARSHORE SD129 12/12/2007 Muddy Sand 04SD129N-SC-D-1 2-3.92 ft	ADJACENT NEARSHORE SD129 12/12/2007 Muddy Sand 04SD129N-SC-E-1 3.92-5 ft	ADJACENT NEARSHORE SD129 12/12/2007 Muddy Sand 04SD129N-SC-E-2 3.92-5 ft	ADJACENT NEARSHORE SD129 12/12/2007 Muddy Sand 04SD129N-SC-F-1 5-6.67 ft
ALUMINUM	8470	14100	10500	12200	6210	7770	17700	17700	9750
ANTIMONY	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	2	1.7 U	1.3 U
ARSENIC	5.1	7.4	8.5	7.2	1.9	3.7	14.9	14.3	8.3
BARIUM	66.9	137	76.2	94.3	36.4	64.7	188	174	84.7
BERYLLIUM	0.63 U	0.85	0.61 U	0.67	0.59 U	0.65 U	0.86 U	0.88	0.65 U
CADMIUM	0.63 U	0.62 U	0.61 U	0.6 U	0.59 U	1.8	5	4.1	0.93
CALCIUM METAL	10700 J	28700 J	35900 J	37300 J	8580 J	3870 J	9970 J	12100 J	5590 J
CHROMIUM	23.6	19.7	16.1	17.9	47.1	53.7	285	230	101
COBALT	9.3	14.3	13.4	13.3	6.1	7.4	12.7	14	9.1
COPPER	42	34.6	36.2	33	8.7	30.6	153	133	68
IRON	18600	29300	26400	27500	15500	16900	28200	30300	19600
LEAD	58.4	14.2	13.3	13	105	58.3	219	174	119
MAGNESIUM	6620	12400	13100	12700	3480	4170	6880	8170	5020
MANGANESE	355	665	732	707	318	324	475	610	327
MERCURY	0.22	0.04 U	0.04 U	0.04 U	0.04 U	0.06	1.4 J	0.91 J	0.35
NICKEL	18.8	31.3	28.6	29	13	17.1	34.7	36.7	21.4
POTASSIUM	1190	2340	1590	1900	805	983	1840	2080	1180
SELENIUM	0.63 U	0.64 U	0.63 U	0.61 U	0.6 U	0.65 U	0.86 U	0.85 U	0.65 U
SILVER	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	2.5	2.2	1.3 U
SODIUM	127 U	238	228	258	125	130 U	221	240	173
THALLIUM	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.7 U	1.7 U	1.3 U
VANADIUM	14.7	24.3	19.8	21.8	9.1	12.7	30.9	31.9	16.3
ZINC	124	77.3	71.9	66.7	68.9	131	525	457	216
SOLIDS, TOTAL (%)	75	77.8	79.4	79.5	81.9	75.7	58.2	56	73.6
TOTAL ORGANIC CARBON (m	13500	2350	2870 J	4590 J	1720	2070	45200	41800	19200

Notes:
J = Estimated Value
R = Rejected Value
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2 at end of sample ID indicate duplicate sample

Table 2
Inorganic Compounds in Sub-Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL
	SD129	SD129	SD069	SD069	SD069	SD069	SD069	SD069	SD124
	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/13/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD129N-SC-G-1	04SD129N-SC-H-1	04SD069C-SC-C-1	04SD069C-SC-D-1	04SD069C-SC-E-1	04SD069C-SC-F-1	04SD069C-SC-G-1	04SD069C-SC-G-2	04SD124C-SC-C-1
Analyte (mg/kg)	6.67-7.75 ft	8-9.17 ft	0.5-2 ft	2-3.5 ft	3.5-4.5 ft	5-6.5 ft	10.08-12.08 ft	10.08-12.08 ft	0.5-2 ft
ALUMINUM	9580	6530	10600	12100	10300	9190	11200	13600	7240
ANTIMONY	1.5 U	1.4 U	1.5 UJ	1.5 UJ	3.1 UJ	1.3 UJ	1.2 UJ	1.3 UJ	1.5 U
ARSENIC	11.5	4.2	9	6.8	10	4.3	7.5	8.5	8.5
BARIUM	143	54.6	105	75.8	142	67.7	80.9	98.6	86.2
BERYLLIUM	0.74 U	0.69 U	0.73 U	0.76 U	1.6 U	0.64 U	0.64	0.77	0.76 U
CADMIUM	1.4	0.69 U	2	0.76 U	1.6 U	0.64 U	0.62 U	0.63 U	2.3
CALCIUM METAL	8580 J	7390 J	4630	36700	23000	17200	38900	37700	4820 J
CHROMIUM	56.2	12.3	88.8	21.9	50.8	15.9	16.3	19.3	90.8
COBALT	8.9	7.3	9.2	12.4	15.5 U	9.1	12.3	14.2	9.5
COPPER	90.3	16	92.2	37.2	118	23.9	32.9	35.8	55.4 J
IRON	20700	13200	22700 J	49600 J	24800 J	22700 J	27700 J	30800 J	17000
LEAD	189	16.7	190	31.7	226	25.4	12.8	15	108 J
MAGNESIUM	4950	5210	5040	10700	8600	7320	12200	12600	3710
MANGANESE	390	227	324	1150	539	452	658	731	267 J
MERCURY	0.8	0.05	1.6 J	1.4 J	0.86 J	0.09 J	0.04 U	0.04 U	0.45
NICKEL	19.8	14.7	21.8	27.6	23.8	19.9	27	31.5	16.1
POTASSIUM	1280	841	1360 J	2040 J	2240 J	1540 J	2010 J	2300 J	953
SELENIUM	0.76 U	0.67 U	0.74 U	0.76 U	1.6 U	0.64 U	0.62 U	0.62 U	0.76 U
SILVER	1.5 U	1.4 U	1.5 U	1.5 U	3.1 U	1.3 U	1.2 U	1.3 U	1.5 U
SODIUM	278	148	145 U	283	529	175	314	324	151 U
THALLIUM	1.5 U	1.4 U	1.5 U	1.5 U	3.1 U	1.3 U	1.2 U	1.3 U	1.5 U
VANADIUM	17.3	13.9	18.8	23.2	21.7	16.6	22.4	24.8	18.2
ZINC	231	55.7	295	80.8	236	68.5	61.5	67.4	194
SOLIDS, TOTAL (%)	65.4	71.4	67.5	64.9	31.6	78.3	79.5	78	66.1
TOTAL ORGANIC CARBON (m	46800	10600	20000	63300	207000	5370	3060	2780	18600

Notes:
J = Estimated Value
R = Rejected Value
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2 at end of sample ID indicate duplicate sample

Table 2
Inorganic Compounds in Sub-Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL
	SD124	SD124	SD124	SD124	SD124	SD125	SD125	SD125	SD125
	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD124C-SC-C-2	04SD124C-SC-D-1	04SD124C-SC-E-1	04SD124C-SC-F-1	04SD124C-SC-G-1	04SD125C-SC-C-1	04SD125C-SC-D-1	04SD125C-SC-D-2	04SD125C-SC-E-1
Analyte (mg/kg)	0.5-2 ft	2-3.5 ft	3.58-5.5 ft	5.58-6.42 ft	6.42-8.25 ft	0.5-2 ft	3-5 ft	3-5 ft	6-8 ft
ALUMINUM	9470	5000	11100	12700	4780	14700	11900	12300	10000
ANTIMONY	1.4 U	1.2 U	1.6 U	1.4 U	1.4 U	4.8	1.6 U	1.6 U	1.2 U
ARSENIC	6.7	2.4	13.3	13.6	10.1	10	8.7	10.4	6.5
BARIUM	107	18.2	121	151	47	295	119	138	121
BERYLLIUM	0.71 U	0.61 U	0.8 U	0.72 U	0.68 U	0.93 U	0.78 U	0.82 U	0.62 U
CADMIUM	3.3	0.61 U	2	2.9	0.68 U	24.2	1.4	2	0.62 U
CALCIUM METAL	5660 J	1610 J	14400 J	17300 J	5450 J	8420 J	14400 J	15000 J	33100 J
CHROMIUM	118	11.7	55.9	64.9	10.1	379	41.5 J	61.8 J	15.5
COBALT	8.8	6.1 U	11.9	13.6	7.5	11.8	12	12.6	11.2
COPPER	81.8 J	8.4	99.5	114	13.9	186	71 J	110 J	33.1
IRON	20100	13000	25600	33000	15000	26300	27600	26100	24400
LEAD	168 J	15	197	212	10.5	341	123 J	197 J	11.9
MAGNESIUM	4840	2670	7350	8950	3600	6810	8010	8740	12000
MANGANESE	354 J	195 J	526 J	970 J	339 J	541	513	558	618
MERCURY	0.49	0.11	1.1	1.5	0.08	1.7	1.1	1.5	0.04 U
NICKEL	20.7	10.4	24.6	28.3	11.8	34.3	25.8	27	25.1
POTASSIUM	1140	557	1500	1760	685	1660	1860	1670	1700
SELENIUM	0.71 U	0.61 U	0.8 U	0.72 U	0.68 U	0.94 U	0.75 U	0.78 U	0.61 U
SILVER	1.4 U	1.2 U	1.6 U	1.4 U	1.4 U	3.4	1.6 U	1.7	1.2 U
SODIUM	142 U	121 U	160 U	182	137 U	186 U	187	170	203
THALLIUM	1.4 U	1.2 U	1.6 U	1.4 U	1.4 U	1.9 U	1.6 U	1.6 U	1.2 U
VANADIUM	20.3	9.2	21.1	24.2	12.9	37.8	20.7	21.5	19.5
ZINC	261	55.8	333	534	40.2	550	194 J	395 J	68.5
SOLIDS, TOTAL (%)	68.2	80.2	62.6	69	71.7	52.8	63.8	61.3	79
TOTAL ORGANIC CARBON (m	26000	2920	26700	43600	4380	41900	65400 J	30800 J	2270

Notes:
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Table 2
Inorganic Compounds in Sub-Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

Analyte (mg/kg)	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL
	SD125	SD135
	12/12/2007	12/11/2007
	Muddy Sand	Muddy Sand
	04SD125C-SC-F-1	04SD135N-SC-B-1
	11.17-13.17 ft	0.5-2 ft
ALUMINUM	11200	11300
ANTIMONY	1.2 U	1.7 UJ
ARSENIC	8.2	4.1
BARIUM	102	100
BERYLLIUM	0.61 U	0.85 U
CADMIUM	0.61 U	0.85 U
CALCIUM METAL	39400 J	8780
CHROMIUM	16.6	33
COBALT	13.9	11.3
COPPER	36.2	48.4 J
IRON	26700	25000
LEAD	13.8	43.9
MAGNESIUM	12900	6600
MANGANESE	736	906
MERCURY	0.04 U	0.19
NICKEL	29.3	23.9
POTASSIUM	1720	1650
SELENIUM	0.64 U	0.83 UJ
SILVER	1.2 U	1.7 U
SODIUM	249	170 U
THALLIUM	1.2 U	1.7 U
VANADIUM	20.3	21.2
ZINC	61.3	156
SOLIDS, TOTAL (%)	77.5	57.1
TOTAL ORGANIC CARBON (m	2880	17100

Notes:
J = Estimated Value
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Table 3
Organic Carbon-Normalized VOCs in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD118	SD120	SD132	SD032	SD056	SD059	SD082	SD085	SD087	SD094	SD094	SD097
	11/14/2007	11/14/2007	11/14/2007	11/15/2007	11/14/2007	11/13/2007	11/14/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007
	03SD118F-SC-A-1	03SD120F-SC-A-1	03SD132W-SC-A-1	03SD032N-SC-A-1	03SD056N-SC-A-1	03SD059N-SC-A-1	03SD082N-SC-A-1	03SD085N-SC-A-1	03SD087N-SC-A-1	03SD094N-SC-A-1	03SD094N-SC-A-2	03SD097N-SC-A-1
	Sand	Sand	Gravelly Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
Analyte (mg/kg OC)	0-0.5 ft	0-0.5 ft	0-0.3 ft	0-0.5 ft	0-0.5 ft	0-0.4 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft
1,1,1-TRICHLOROETHANE (TCA)	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,1,2,2-TETRACHLOROETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,1,2-TRICHLOROETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,1-DICHLOROETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,1-DICHLOROETHENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,2,3-TRICHLOROBENZENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,2,4-TRICHLOROBENZENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	1.6 U	67.42 UJ	0.92 U	0.65 U	0.86 U	4.4 U	45.11 UJ	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,2-DIBROMOETHANE (EDB)	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,2-DICHLOROBENZENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.047 J	22.19 UJ	0.22 UJ	0.45 U
1,2-DICHLOROETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	2.97 J	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,2-DICHLOROPROPANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,3-DICHLOROBENZENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
1,4-DICHLOROBENZENE	1.6 U	16.9 J	0.92 U	0.65 U	0.86 U	4.4 U	3.0 J	5.41 J	0.058 J	22.19 UJ	0.066 J	0.45 U
1,4-DIOXANE	128 UJ	5280.9 UJ	73.3 UJ	50.25 UJ	68.9 UJ	358 UJ	3721.8 UJ	3513.51 UJ	27.3 UJ	1775.15 UJ	16.95 UJ	36.2 UJ
2-BUTANONE (MEK)	3.1 U	129.2 U	1.9 U	1.3 U	1.7 U	1.4 J	93.98 U	83.78 UJ	0.68 U	45.86 UJ	0.42 UJ	0.89 U
2-HEXANONE	3.1 U	129.2 U	1.9 U	1.3 U	1.7 U	8.6 U	93.98 U	83.78 UJ	0.68 U	45.86 UJ	0.42 UJ	0.89 U
4-METHYL-2-PENTANONE (MIBK)	3.1 U	129.2 U	1.9 U	1.3 U	1.7 U	8.6 U	93.98 U	83.78 UJ	0.68 U	45.86 UJ	0.42 UJ	0.89 U
ACETONE	6.3 U	264.0 U	3.7 U	2.5 U	3.4 U	18 U	184.2 U	11.6 J	1.4 U	91.72 UJ	0.86 UJ	1.8 U
BENZENE	1.6 U	4.6 J	0.92 U	0.65 U	0.86 U	4.4 U	10.5 J	121.6 J	0.34 U	22.19 UJ	0.024 J	0.45 U
BROMODICHLOROMETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
BROMOFORM	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
BROMOMETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
CARBON DISULFIDE	3.1 U	129.2 U	1.9 U	1.3 U	1.7 U	8.6 U	93.98 U	83.78 UJ	0.68 U	45.86 UJ	0.42 UJ	0.89 U
CARBON TETRACHLORIDE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
CHLOROBENZENE	1.6 U	146.1	0.92 U	0.14 J	0.071 J	0.33 J	112.8	213.5 J	0.47	31.07 J	0.63 J	0.085 J
CHLOROBROMOMETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
CHLOROETHANE	3.1 U	129.2 U	1.9 U	1.3 U	1.7 U	8.6 U	93.98 U	83.78 UJ	0.68 U	45.86 UJ	0.42 UJ	0.89 U
CHLOROFORM	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
CHLOROMETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
CIS-1,2-DICHLOROETHENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
CIS-1,3-DICHLOROPROPENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
CYCLOHEXANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	0.31 J	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
DIBROMOCHLOROMETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
DICHLORODIFLUOROMETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
ETHYLBENZENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
ISOPROPYLBENZENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
M,P-XYLENES	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	5.41 J	0.34 U	22.19 UJ	0.22 UJ	0.45 U
METHYL ACETATE	3.1 U	9.55 J	1.9 U	1.3 U	1.7 U	8.6 U	9.02 J	5.14 J	0.68 U	1.63 J	0.42 UJ	0.89 U
METHYL TERT-BUTYL ETHER	1.6 UJ	67.42 U	0.92 U	0.65 U	0.86 UJ	4.4 UJ	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
METHYLCYLOHEXANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	4.32 J	0.34 U	22.19 UJ	0.22 UJ	0.45 U
METHYLENE CHLORIDE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
O-XYLENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	4.86 J	0.34 U	22.19 UJ	0.22 UJ	0.45 U
STYRENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
TETRACHLOROETHENE (PCE)	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
TOLUENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
TRANS-1,2-DICHLOROETHENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
TRANS-1,3-DICHLOROPROPENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
TRICHLOROETHYLENE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
TRICHLOROFLUOROMETHANE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
VINYL CHLORIDE	1.6 U	67.42 U	0.92 U	0.65 U	0.86 U	4.4 U	45.11 U	43.24 UJ	0.34 U	22.19 UJ	0.22 UJ	0.45 U
SOLIDS, TOTAL (%)	77.3	52.9	82.7	60.2	66	78.7	49.5	44.2	61.7	42.8	43.7	54.6
TOTAL ORGANIC CARBON (mg/kg)	4140	17800	5870	19900	8130	1620 J	26600	37000 J	27800	67600 J	59000 J	21300

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 3
Organic Carbon-Normalized VOCs in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	WESTERN SHORELINE
	SD097	SD100	SD123	SD129	SD004	SD006	SD010	SD018	SD027	SD027	SD028	SD063
	11/15/2007	11/13/2007	11/13/2007	11/13/2007	11/14/2007	11/15/2007	11/14/2007	11/14/2007	11/15/2007	11/15/2007	11/14/2007	11/13/2007
	03SD097N-SC-A-2	03SD100N-SC-A-1	03SD123N-SC-A-1	03SD129N-SC-A-1	03SD004U-SC-A-1	03SD006U-SC-A-1	03SD010U-SC-A-1	03SD018U-SC-A-1	03SD027U-SC-A-1	03SD027U-SC-A-2	03SD028U-SC-A-1	03SD063W-SC-A-1
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Sandy Mud	Muddy Sand	Sandy Mud	Muddy Sand	Gravelly Sand	Gravelly Sand	Sand	Muddy Sand
Analyte (mg/kg OC)	0-0.5 ft	0-0.5 ft	0-0.4 ft	0-0.5 ft	0-0.5 ft	0-0.4 ft	0-0.3 ft	0-0.5 ft	0-0.4 ft	0-0.4 ft	0-0.4 ft	0-0.5 ft
1,1,1-TRICHLOROETHANE (TCA)	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,1,2,2-TETRACHLOROETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,1,2-TRICHLOROETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,1-DICHLOROETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,1-DICHLOROETHENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,2,3-TRICHLOROBENZENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,2,4-TRICHLOROBENZENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 UJ	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,2-DIBROMOETHANE (EDB)	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,2-DICHLOROBENZENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,2-DICHLOROETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,2-DICHLOROPROPANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,3-DICHLOROBENZENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 UJ	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,4-DICHLOROBENZENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 UJ	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
1,4-DIOXANE	31.8 UJ	117 UJ	102 UJ	155 UJ	61.6 UJ	31.0 UJ	151 UJ	75.0 UJ	49.1 UJ	46.2 UJ	67.5 UJ	389 UJ
2-BUTANONE (MEK)	0.77 U	0.64 J	2.5 U	3.8 U	0.94 J	0.77 U	3.8 U	1.9 U	1.3 U	1.1 U	1.7 U	9.6 U
2-HEXANONE	0.77 U	2.9 U	2.5 U	3.8 U	1.5 UJ	0.77 U	3.8 U	1.9 U	1.3 U	1.1 U	1.7 U	9.6 U
4-METHYL-2-PENTANONE (MIBK)	0.77 U	2.9 U	2.5 U	3.8 U	1.5 U	0.77 U	3.8 U	1.9 U	1.3 U	1.1 U	1.7 U	9.6 U
ACETONE	1.6 U	5.9 U	5.2 U	7.6 U	4.2 U	1.6 U	7.7 U	3.8 U	2.5 U	2.3 U	3.4 U	20 U
BENZENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
BROMODICHLOROMETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
BROMOFORM	0.40 U	1.4 U	1.3 U	1.9 U	0.80 UJ	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
BROMOMETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
CARBON DISULFIDE	0.77 U	0.26 J	0.16 J	3.8 U	0.14 J	0.77 U	3.8 U	1.9 U	1.3 U	1.1 U	1.7 U	9.6 U
CARBON TETRACHLORIDE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
CHLOROBENZENE	0.12 J	1.4 U	5.4	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
CHLOROBROMOMETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
CHLOROETHANE	0.77 U	2.9 U	2.5 U	3.8 U	1.5 U	0.77 U	3.8 U	1.9 U	1.3 U	1.1 U	1.7 U	9.6 U
CHLOROFORM	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
CHLOROMETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
CIS-1,2-DICHLOROETHENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
CIS-1,3-DICHLOROPROPENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 UJ	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
CYCLOHEXANE	0.40 U	0.11 J	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	0.40 J
DIBROMOCHLOROMETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
DICHLORODIFLUOROMETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
ETHYLBENZENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
ISOPROPYLBENZENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
M,P-XYLENES	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
METHYL ACETATE	0.77 U	2.9 U	2.5 U	3.8 U	1.5 UJ	0.77 U	3.8 U	1.9 U	1.3 U	1.1 U	1.7 U	9.6 U
METHYL TERT-BUTYL ETHER	0.40 U	1.4 UJ	1.3 U	1.9 UJ	0.80 UJ	0.38 U	1.9 UJ	0.94 UJ	0.62 U	0.58 U	0.81 U	4.9 UJ
METHYLCYLOHEXANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
METHYLENE CHLORIDE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.026 J	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
O-XYLENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
STYRENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 UJ	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
TETRACHLOROETHENE (PCE)	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
TOLUENE	0.40 U	0.13 J	0.14 J	1.9 U	0.080 J	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
TRANS-1,2-DICHLOROETHENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
TRANS-1,3-DICHLOROPROPENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 UJ	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
TRICHLOROETHYLENE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.026 J	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
TRICHLOROFLUOROMETHANE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
VINYL CHLORIDE	0.40 U	1.4 U	1.3 U	1.9 U	0.80 U	0.38 U	1.9 U	0.94 U	0.62 U	0.58 U	0.81 U	4.9 U
SOLIDS, TOTAL (%)	55.1	30.9	70.4	80.5	58.5	56.3	88.6	58.6	73.9	77.4	75.8	85.1
TOTAL ORGANIC CARBON (mg/kg)	22000	7620 J	5220 J	3420 J	13800	31300	3900	12800	11200	13200	12300	1670 J

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 3
Organic Carbon-Normalized VOCs in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	WESTERN SHORELINE	WESTERN SHORELINE	WESTERN SHORELINE	WESTERN SHORELINE
	SD130	SD131	SD133	SD134
	11/14/2007	11/14/2007	11/15/2007	11/13/2007
	03SD130W-SC-A-1	03SD131W-SC-A-1	03SD133W-SC-A-1	03SD134W-SC-A-1
	Gravelly Sand	Gravelly Sand	Muddy Sand	Muddy Sand
Analyte (mg/kg OC)	0-0.4 ft	0-0.3 ft	0-0.4 ft	0-0.5 ft
1,1,1-TRICHLOROETHANE (TCA)	0.77 U	5.4 U	2.9 U	1.5 U
1,1,2,2-TETRACHLOROETHANE	0.77 U	5.4 U	2.9 U	1.5 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.77 U	5.4 U	2.9 U	1.5 U
1,1,2-TRICHLOROETHANE	0.77 U	5.4 U	2.9 U	1.5 U
1,1-DICHLOROETHANE	0.77 U	5.4 U	2.9 U	1.5 U
1,1-DICHLOROETHENE	0.77 U	5.4 U	2.9 U	1.5 U
1,2,3-TRICHLOROBENZENE	0.77 U	5.4 U	2.9 U	1.5 U
1,2,4-TRICHLOROBENZENE	0.77 U	5.4 U	2.9 U	1.5 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	0.77 U	5.4 U	2.9 U	1.5 U
1,2-DIBROMOETHANE (EDB)	0.77 U	5.4 U	2.9 U	1.5 U
1,2-DICHLOROBENZENE	0.77 U	5.4 U	2.9 U	1.5 U
1,2-DICHLOROETHANE	0.77 U	5.4 U	2.9 U	1.5 U
1,2-DICHLOROPROPANE	0.77 U	5.4 U	2.9 U	1.5 U
1,3-DICHLOROBENZENE	0.77 U	5.4 U	2.9 U	1.5 U
1,4-DICHLOROBENZENE	0.77 U	5.4 U	2.9 U	1.5 U
1,4-DIOXANE	62.0 UJ	430 UJ	227 UJ	121 UJ
2-BUTANONE (MEK)	1.5 U	11 U	5.8 U	3.0 U
2-HEXANONE	1.5 U	11 U	5.8 U	3.0 U
4-METHYL-2-PENTANONE (MIBK)	1.5 U	11 U	5.8 U	3.0 U
ACETONE	3.0 U	21 U	11 U	6.0 U
BENZENE	0.77 U	5.4 U	2.9 U	1.5 U
BROMODICHLOROMETHANE	0.77 U	5.4 U	2.9 U	1.5 U
BROMOFORM	0.77 U	5.4 U	2.9 U	1.5 U
BROMOMETHANE	0.77 U	5.4 U	2.9 U	1.5 U
CARBON DISULFIDE	1.5 U	11 U	5.8 U	0.24 J
CARBON TETRACHLORIDE	0.77 U	5.4 U	2.9 U	1.5 U
CHLOROBENZENE	0.77 U	5.4 U	2.9 U	1.5 U
CHLOROBROMOMETHANE	0.77 U	5.4 U	2.9 U	1.5 U
CHLOROETHANE	1.5 U	11 U	5.8 U	3.0 U
CHLOROFORM	0.77 U	5.4 U	2.9 U	1.5 U
CHLOROMETHANE	0.77 U	5.4 U	2.9 U	1.5 U
CIS-1,2-DICHLOROETHENE	0.77 U	5.4 U	2.9 U	1.5 U
CIS-1,3-DICHLOROPROPENE	0.77 U	5.4 U	2.9 U	1.5 U
CYCLOHEXANE	0.77 U	5.4 U	2.9 U	1.5 U
DIBROMOCHLOROMETHANE	0.77 U	5.4 U	2.9 U	1.5 U
DICHLORODIFLUOROMETHANE	0.77 U	5.4 U	2.9 U	1.5 U
ETHYLBENZENE	0.77 U	5.4 U	2.9 U	1.5 U
ISOPROPYLBENZENE	0.77 U	5.4 U	2.9 U	1.5 U
M,P-XYLENES	0.77 U	5.4 U	2.9 U	1.5 U
METHYL ACETATE	1.5 U	11 U	5.8 U	3.0 U
METHYL TERT-BUTYL ETHER	0.77 U	5.4 U	2.9 U	1.5 U
METHYLCYLOHEXANE	0.77 U	5.4 U	2.9 U	1.5 U
METHYLENE CHLORIDE	0.77 U	5.4 U	2.9 U	1.5 U
O-XYLENE	0.77 U	5.4 U	2.9 U	1.5 U
STYRENE	0.77 U	5.4 U	2.9 U	1.5 U
TETRACHLOROETHENE (PCE)	0.77 U	5.4 U	2.9 U	1.5 U
TOLUENE	0.77 U	5.4 U	2.9 U	0.13 J
TRANS-1,2-DICHLOROETHENE	0.77 U	5.4 U	2.9 U	1.5 U
TRANS-1,3-DICHLOROPROPENE	0.77 U	5.4 U	2.9 U	1.5 U
TRICHLOROETHYLENE	0.77 U	5.4 U	2.9 U	1.5 U
TRICHLOROFLUOROMETHANE	0.77 U	5.4 U	2.9 U	1.5 U
VINYL CHLORIDE	0.77 U	5.4 U	2.9 U	1.5 U
SOLIDS, TOTAL (%)	73.3	84.9	84.4	77
TOTAL ORGANIC CARBON (mg/kg)	8550	1140	2420	5310 J

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 4
Organic Carbon-Normalized VOCs in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD
	SD117	SD117	SD117	SD117	SD118	SD118	SD118	SD118	SD118	SD118	SD119	SD119
	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007
	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
	04SD117F-SC-C-1	04SD117F-SC-D-1	04SD117F-SC-E-1	04SD117F-SC-F-1	04SD118F-SC-C-1	04SD118F-SC-D-1	04SD118F-SC-E-1	04SD118F-SC-F-1	04SD118F-SC-F-2	04SD118F-SC-G-1	04SD119F-SC-C-1	04SD119F-SC-D-1
Analyte (mg/kg OC)	0.5-2 ft	2-4 ft	4-6 ft	6-6.67 ft	0.5-2 ft	2-4 ft	4-6 ft	6-7.5 ft	6-7.5 ft	7.5-8.5 ft	0.5-2 ft	2-3.08 ft
1,1,1-TRICHLOROETHANE (TCA)	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,1,2,2-TETRACHLOROETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,1,2-TRICHLOROETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,1-DICHLOROETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,1-DICHLOROETHENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,2,3-TRICHLOROBENZENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 UJ	200.9 UJ	912.16 UJ	2.1 U	0.47 U
1,2,4-TRICHLOROBENZENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,2-DIBROMOETHANE (EDB)	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,2-DICHLOROBENZENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	270.27 J	0.14 J	0.47 U
1,2-DICHLOROETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,2-DICHLOROPROPANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,3-DICHLOROBENZENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
1,4-DICHLOROBENZENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	123.3 J	2.1 U	0.47 U
1,4-Dioxane	263 UJ	201 UJ	196 UJ	143 UJ	289 UJ	354 UJ	166 UJ	12578.6 UJ	16025.6 UJ	72635.14 UJ	166 UJ	37.8 UJ
2-BUTANONE (MEK)	2.6 J	0.76 J	4.3 J	1.0 J	2.5 J	2.0 J	0.85 J	314.47 U	401.7 U	1858.11 U	0.86 J	0.81 J
2-HEXANONE	6.5 U	4.9 U	4.8 U	3.6 U	7.2 U	9.2 U	4.2 U	314.47 U	401.7 U	1858.11 U	4.0 U	0.92 U
4-METHYL-2-PENTANONE (MIBK)	6.5 U	4.9 U	4.8 U	3.6 U	7.2 U	9.2 U	4.2 U	314.47 U	401.7 U	1858.11 U	4.0 U	0.92 U
ACETONE	22 U	9.8 UJ	24 U	8.3 U	16 U	18 U	12 U	628.93 U	811.97 U	3716.22 U	6.6 U	3.6 U
BENZENE	0.35 J	2.5 U	2.4 U	1.8 U	3.6 U	0.31 J	0.14 J	88.05 J	47.01 J	202.70 J	0.18 J	0.12 J
BROMODICHLOROMETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
BROMOFORM	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
BROMOMETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
CARBON DISULFIDE	0.37 J	0.16 J	0.43 J	0.23 J	0.30 J	9.2 U	0.13 J	314.47 U	401.7 U	1858.11 U	4.0 U	0.059 J
CARBON TETRACHLORIDE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
CHLOROBENZENE	16	0.16 J	0.28 J	0.31 J	0.28 J	4.5 U	0.39 J	4402.52	4273.5	28716.22	0.76 J	0.19 J
CHLOROBROMOMETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
CHLOROETHANE	6.5 U	4.9 U	4.8 U	3.6 U	7.2 U	9.2 U	4.2 U	314.47 U	401.7 U	1858.11 U	4.0 U	0.92 U
CHLOROFORM	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
CHLOROMETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
CIS-1,2-DICHLOROETHENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
CIS-1,3-DICHLOROPROPENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
CYCLOHEXANE	3.3 U	2.5 UJ	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
DIBROMOCHLOROMETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
DICHLORODIFLUOROMETHANE	3.3 U	2.5 UJ	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
ETHYLBENZENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
ISOPROPYLBENZENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
M,P-XYLENES	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	13.8 J	200.9 U	76.01 J	2.1 U	0.47 U
METHYL ACETATE	6.5 U	4.9 U	4.8 U	3.6 U	7.2 U	9.2 U	4.2 U	314.47 U	401.7 U	1858.11 U	4.0 U	0.92 U
METHYL TERT-BUTYL ETHER	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
METHYLCYLOHEXANE	3.3 U	2.5 UJ	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 UJ	200.9 UJ	912.16 UJ	2.1 U	0.47 U
METHYLENE CHLORIDE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
O-XYLENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
STYRENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
TETRACHLOROETHENE (PCE)	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
TOLUENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
TRANS-1,2-DICHLOROETHENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
TRANS-1,3-DICHLOROPROPENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
TRICHLOROETHYLENE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
TRICHLOROFLUOROMETHANE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
VINYL CHLORIDE	3.3 U	2.5 U	2.4 U	1.8 U	3.6 U	4.5 U	2.0 U	157.2 U	200.9 U	912.16 U	2.1 U	0.47 U
SOLIDS, TOTAL (%)	85.6	82	78.5	79	80.4	79.7	75.4	56.6	59.2	60.2	76.9	64.9
TOTAL ORGANIC CARBON (mg/kg)	1860	2640	3920	3850	1660	1300	2830	31800	23400	59200	3010	18500

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 4
Organic Carbon-Normalized VOCs in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD119	SD119	SD120	SD120	SD120	SD120	SD032	SD056	SD056	SD080	SD082	SD085
	12/11/2007	12/11/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007
	Sand	Sand	Sand	Sand	Sand	Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD119F-SC-E-1	04SD119F-SC-F-1	04SD120F-SC-C-1	04SD120F-SC-D-1	04SD120F-SC-E-1	04SD120F-SC-E-2	04SD032N-SC-B-1	04SD056N-SC-B-1	04SD056N-SC-B-2	04SD080N-SC-B-1	04SD082N-SC-B-1	04SD085N-SC-B-1
Analyte (mg/kg OC)	3.08-7.08 ft	7.08-7.83 ft	0.5-2 ft	3.5-5.5 ft	6.67-8.67 ft	6.67-8.67 ft	0.5-2 ft	0.5-2 ft	0.5-2 ft	0.5-2 ft	0.5-2 ft	0.5-2 ft
1,1,1-TRICHLOROETHANE (TCA)	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,1,2,2-TETRACHLOROETHANE	416.67 UJ	1.2 U	R	R	R	R	0.22 UJ	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,1,2-TRICHLOROETHANE	416.67 UJ	1.2 U	R	R	R	R	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,1-DICHLOROETHANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,1-DICHLOROETHENE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,2,3-TRICHLOROBENZENE	416.67 UJ	1.2 U	R	R	R	R	0.22 UJ	0.33 U	0.29 U	782.24 UJ	25.13 UJ	364.03 UJ
1,2,4-TRICHLOROBENZENE	416.67 UJ	1.2 U	R	R	R	R	0.22 UJ	0.33 U	0.29 U	465.12 J	25.13 UJ	364.03 UJ
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	416.67 UJ	1.2 U	R	R	R	R	0.22 UJ	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,2-DIBROMOETHANE (EDB)	416.67 UJ	1.2 U	R	R	R	R	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,2-DICHLOROBENZENE	416.67 UJ	0.53 J	R	R	R	R	0.22 UJ	0.29 J	0.22 J	11416.5	25.13 UJ	364.03 UJ
1,2-DICHLOROETHANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,2-DICHLOROPROPANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
1,3-DICHLOROBENZENE	416.67 UJ	0.87 J	R	R	R	R	0.22 UJ	0.53	0.49	143.8 J	25.13 UJ	364.03 UJ
1,4-DICHLOROBENZENE	68.91 J	4.0	R	R	R	R	0.22 UJ	2.0	1.9	1670.2	18.43 J	47.11 J
1,4-Dioxane	33653.85 UJ	98.2 UJ	R	R	R	200 UJ	18.4 UJ	26.5 UJ	23.2 UJ	61310.78 UJ	2010.05 UJ	27837.26 UJ
2-BUTANONE (MEK)	833.33 UJ	0.62 J	R	R	R	4.9 UJ	1.9	2.0	0.84	1564.5 U	48.58 UJ	706.64 UJ
2-HEXANONE	833.33 UJ	2.4 U	R	R	R	R	0.47 U	0.69 U	0.59 U	1564.5 U	48.58 UJ	706.64 UJ
4-METHYL-2-PENTANONE (MIBK)	833.33 UJ	2.4 U	R	R	R	R	0.47 U	0.69 U	0.59 U	1564.5 U	48.58 UJ	706.64 UJ
ACETONE	1602.56 UJ	6.5 U	13 UJ	17 UJ	26 UJ	25 UJ	7.33	7.41 J	3.8 UJ	3171.25 U	97.15 UJ	1434.7 UJ
BENZENE	89.74 J	14	R	R	R	2.5 UJ	0.22 U	0.85	1.2	359.41 J	140.7 J	2997.86 J
BROMODICHLOROMETHANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
BROMOFORM	416.67 UJ	1.2 U	R	R	R	R	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
BROMOMETHANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
CARBON DISULFIDE	833.33 UJ	0.71 J	0.56 J	0.73 J	0.68 J	0.60 J	0.089 J	0.12 J	0.064 J	1564.5 U	48.58 UJ	706.64 UJ
CARBON TETRACHLORIDE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
CHLOROBENZENE	10416.7 J	1509	2.3 J	R	0.96 J	R	0.22 U	952.38 J	463.1 J	17124.7	854.27 J	11349.0 J
CHLOROBROMOMETHANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
CHLOROETHANE	833.33 UJ	2.4 U	R	R	R	4.9 UJ	0.47 U	0.69 U	0.59 U	1564.5 U	48.58 UJ	706.64 UJ
CHLOROFORM	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
CHLOROMETHANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
CIS-1,2-DICHLOROETHENE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
CIS-1,3-DICHLOROPROPENE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
CYCLOHEXANE	416.67 UJ	0.089 J	R	R	R	2.5 UJ	0.014 J	0.12 J	0.074 J	782.24 U	25.13 UJ	364.03 UJ
DIBROMOCHLOROMETHANE	416.67 UJ	1.2 U	R	R	R	R	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
DICHLORODIFLUOROMETHANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
ETHYLBENZENE	416.67 UJ	0.31 J	R	R	R	R	0.22 U	0.13 J	0.12 J	782.24 U	10.1 J	23.55 J
ISOPROPYLBENZENE	416.67 UJ	0.080 J	R	R	R	R	0.22 U	0.20 J	0.16 J	782.24 U	25.13 UJ	364.03 UJ
M,P-XYLENES	52.88 J	0.65 J	R	R	R	R	0.22 U	0.30 J	0.27 J	114.2 J	35.18 J	66.38 J
METHYL ACETATE	833.33 UJ	2.4 U	R	R	R	4.9 UJ	0.47 U	0.69 U	0.59 U	1564.5 U	4.52 J	706.64 UJ
METHYL TERT-BUTYL ETHER	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
METHYLCYLOHEXANE	416.67 UJ	0.20 J	R	R	R	2.5 UJ	0.18 J	0.95	0.74	782.24 UJ	3.69 J	364.03 UJ
METHYLENE CHLORIDE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
O-XYLENE	416.67 UJ	0.29 J	R	R	R	R	0.22 U	0.58	0.59	782.24 U	8.54 J	364.03 UJ
STYRENE	416.67 UJ	1.2 U	R	R	R	R	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
TETRACHLOROETHENE (PCE)	416.67 UJ	1.2 U	R	R	R	R	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
TOLUENE	416.67 UJ	1.2 U	R	R	0.56 J	0.33 J	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
TRANS-1,2-DICHLOROETHENE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
TRANS-1,3-DICHLOROPROPENE	416.67 UJ	1.2 U	R	R	R	R	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
TRICHLOROETHYLENE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
TRICHLOROFLUOROMETHANE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
VINYL CHLORIDE	416.67 UJ	1.2 U	R	R	R	2.5 UJ	0.22 U	0.33 U	0.29 U	782.24 U	25.13 UJ	364.03 UJ
SOLIDS, TOTAL (%)	46.1	76.9	78	69.9	77.4	75.8	60.5	73.8	71.1	63.3	45	45.4
TOTAL ORGANIC CARBON (mg/kg)	62400	5500	4280	3980	3220	3650	45000	18900	20300	47300	59700	46700

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 4
Organic Carbon-Normalized VOCs in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD098	SD115	SD115	SD115	SD115	SD115	SD115	SD115	SD115	SD116	SD116	SD116
	12/11/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/12/2007	12/12/2007	12/12/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD098N-SC-B-1	04SD115N-SC-C-1	04SD115N-SC-D-1	04SD115N-SC-E-1	04SD115N-SC-F-1	04SD115N-SC-F-2	04SD115N-SC-G-1	04SD115N-SC-H-1	04SD115N-SC-I-1	04SD116N-SC-C-1	04SD116N-SC-D-1	04SD116N-SC-D-2
Analyte (mg/kg OC)	0.5-2 ft	0.5-2 ft	2-4 ft	4-6 ft	6-7.33 ft	6-7.33 ft	7.5-9.17 ft	10.17-11.5 ft	12.5-13.92 ft	0.5-2 ft	2-4 ft	2-4 ft
1,1,1-TRICHLOROETHANE (TCA)	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
1,1,2,2-TETRACHLOROETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	R	R	35.71 UJ	153.7 UJ	38.66 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
1,1,2-TRICHLOROETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
1,1-DICHLOROETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
1,1-DICHLOROETHENE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
1,2,3-TRICHLOROBENZENE	0.38 U	224.30 U	52.05 J	101.3	81.08 U	92.28 U	0.34 U	R	R	35.71 U	80.09 J	38.66 UJ
1,2,4-TRICHLOROBENZENE	0.38 U	224.30 U	232.9 J	488.68	11.0 J	4.39 J	0.34 U	R	R	35.71 U	367.97 J	38.66 UJ
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	0.38 U	224.30 UJ	180.8 UJ	83.43 UJ	81.08 UJ	92.28 UJ	0.34 U	R	R	35.71 U	153.7 UJ	38.66 UJ
1,2-DIBROMOETHANE (EDB)	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
1,2-DICHLOROBENZENE	0.38 U	14.2 J	931.51 J	595.95	93.88 J	13.3 J	0.34 U	R	R	35.71 U	5627.71 J	38.66 UJ
1,2-DICHLOROETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
1,2-DICHLOROPROPANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
1,3-DICHLOROBENZENE	0.38 U	91.59 J	657.53 J	226.46	62.59 J	16.64 J	0.34 U	R	R	2.86 J	389.61 J	38.66 UJ
1,4-DICHLOROBENZENE	0.38 U	560.75	1150.7 J	1311.08	469.42 J	136.2 J	0.34 U	R	R	30.95 J	1233.8 J	24.0 J
1,4-Dioxane	30.4 UJ	18317.8 UJ	14520.5 UJ	6674.61 UJ	6401.14 UJ	7413.01 UJ	27.5 UJ	131 UJ	R	2857.14 UJ	12337.7 UJ	3092.78 UJ
2-BUTANONE (MEK)	3.4	467.29 U	356.16 UJ	166.87 U	156.47 U	181.54 U	2.3	3.2 UJ	1.0 J	69.05 U	303.03 UJ	5.93 J
2-HEXANONE	0.75 U	467.29 U	356.16 UJ	166.87 U	156.47 U	181.54 U	0.68 U	3.2 UJ	R	69.05 U	303.03 UJ	74.74 UJ
4-METHYL-2-PENTANONE (MIBK)	0.75 U	467.29 U	356.16 UJ	166.87 U	156.47 U	181.54 U	0.68 U	3.2 UJ	R	69.05 U	303.03 UJ	74.74 UJ
ACETONE	14.2 J	915.89 U	712.33 UJ	333.73 U	327.17 U	378.21 U	9.15	6.4 UJ	26 J	140.5 U	606.06 UJ	149.5 UJ
BENZENE	0.38 U	785.05	520.55 J	154.95	83.93	99.85	0.044 J	1.6 UJ	0.88 J	57.14	3896.10 J	46.39 J
BROMODICHLOROMETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
BROMOFORM	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
BROMOMETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
CARBON DISULFIDE	0.11 J	467.29 U	356.16 UJ	166.87 U	156.47 U	181.54 U	0.14 J	0.11 J	0.55 J	69.05 U	303.03 UJ	74.74 UJ
CARBON TETRACHLORIDE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
CHLOROBENZENE	0.22 J	7476.64	35616.44 J	17878.43	8961.59	9077.16	0.61	0.75 J	12 J	1214.3	90909.09 J	1082.5 J
CHLOROBROMOMETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
CHLOROETHANE	0.75 U	467.29 U	356.16 UJ	166.87 U	156.47 U	181.54 U	0.68 U	3.2 UJ	R	69.05 U	303.03 UJ	74.74 UJ
CHLOROFORM	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 UJ	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
CHLOROMETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 UJ	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
CIS-1,2-DICHLOROETHENE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
CIS-1,3-DICHLOROPROPENE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
CYCLOHEXANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.10 J	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
DIBROMOCHLOROMETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
DICHLORODIFLUOROMETHANE	0.38 UJ	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	UJ	R	35.71 U	153.7 UJ	38.66 UJ
ETHYLBENZENE	0.38 U	12.3 J	54.79 J	64.36 J	41.25 J	55.98 J	0.34 U	1.6 UJ	R	9.52 J	114.7 J	8.25 J
ISOPROPYLBENZENE	0.38 U	224.30 U	180.8 UJ	3.46 J	3.98 J	24.21 J	0.34 U	1.6 UJ	R	2.38 J	153.7 UJ	38.66 UJ
M,P-XYLENES	0.38 U	46.73 J	183.6 J	274.14	312.94 J	499.24 J	0.078 J	1.6 UJ	R	23.6 J	367.97 J	22.7 J
METHYL ACETATE	0.75 U	18.69 J	356.16 UJ	3.22 J	4.41 J	4.69 J	0.12 J	3.2 UJ	R	5.24 J	303.03 UJ	8.76 J
METHYL TERT-BUTYL ETHER	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
METHYLCYLOHEXANE	0.030 J	224.30 U	17.8 J	83.43 U	81.08 U	4.08 J	0.10 J	1.6 UJ	R	6.67 J	25.97 J	5.41 J
METHYLENE CHLORIDE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	2.84 J
O-XYLENE	0.38 U	13.5 J	38.36 J	78.67 J	89.62	287.44 J	0.34 U	1.6 UJ	R	23.6 J	103.9 J	20.6 J
STYRENE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
TETRACHLOROETHENE (PCE)	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
TOLUENE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	1.5 UJ	35.71 U	1190.5 J	38.66 UJ
TRANS-1,2-DICHLOROETHENE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
TRANS-1,3-DICHLOROPROPENE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
TRICHLOROETHYLENE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 UJ	153.7 UJ	38.66 UJ
TRICHLOROFLUOROMETHANE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
VINYL CHLORIDE	0.38 U	224.30 U	180.8 UJ	83.43 U	81.08 U	92.28 U	0.34 U	1.6 UJ	R	35.71 U	153.7 UJ	38.66 UJ
SOLIDS, TOTAL (%)	56.1	52.8	49.5	51.7	54.4	51.3	56.2	77.8	75.9	50.6	54.4	52.5
TOTAL ORGANIC CARBON (mg/kg)	25300	53500	36500 J	83900	70300	66100	29500	3730	3650	42000	46200	38800

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 4
Organic Carbon-Normalized VOCs in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD116	SD116	SD116	SD116	SD121	SD121	SD121	SD121	SD121	SD121	SD122	SD122
	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD116N-SC-E-1	04SD116N-SC-F-1	04SD116N-SC-G-1	04SD116N-SC-H-1	04SD121N-SC-C-1	04SD121N-SC-D-1	04SD121N-SC-D-2	04SD121N-SC-E-1	04SD121N-SC-F-1	04SD121N-SC-G-1	04SD122N-SC-C-1	04SD122N-SC-D-1
Analyte (mg/kg OC)	4-6.67 ft	6.67-8.5 ft	10-12 ft	14-15.83 ft	0.5-2 ft	2-3.5 ft	2-3.5 ft	3.5-5 ft	5-7.17 ft	8.67-10.67 ft	0.5-2 ft	2.33-3.75 ft
1,1,1-TRICHLOROETHANE (TCA)	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
1,1,2,2-TETRACHLOROETHANE	122.5 UJ	0.14 UJ	1.0 UJ	R	0.25 U	0.25 U	0.23 UJ	0.26 U	0.18 U	R	26.74 UJ	21.40 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
1,1,2-TRICHLOROETHANE	122.5 U	0.14 U	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	R	26.74 U	21.40 U
1,1-DICHLOROETHANE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
1,1-DICHLOROETHENE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
1,2,3-TRICHLOROBENZENE	53.02 J	0.14 UJ	R	R	0.25 U	0.25 U	0.23 UJ	0.031 J	0.18 U	R	26.74 U	21.40 U
1,2,4-TRICHLOROBENZENE	201.1	0.14 UJ	R	R	0.25 U	0.25 U	0.23 UJ	0.26 U	0.18 U	R	26.74 U	21.40 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	122.5 U	0.14 UJ	1.0 UJ	R	0.25 U	0.25 U	0.23 UJ	0.26 U	0.18 U	R	26.74 UJ	21.40 UJ
1,2-DIBROMOETHANE (EDB)	122.5 U	0.14 U	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	R	26.74 U	21.40 U
1,2-DICHLOROBENZENE	137.1	2.43 J	1.0 UJ	R	0.089 J	0.17 J	0.23 UJ	0.26 U	0.18 U	R	2.1 J	1.4 J
1,2-DICHLOROETHANE	122.5 U	0.14 U	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
1,2-DICHLOROPROPANE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
1,3-DICHLOROBENZENE	201.1	1.0 J	1.0 UJ	R	0.14 J	0.25 U	0.23 UJ	0.26 U	0.18 U	R	2.94 J	15.2 J
1,4-DICHLOROBENZENE	566.73	185.45	1.0 UJ	R	0.25	0.030 J	0.23 UJ	0.26 U	0.18 U	R	2.94 J	9.14 J
1,4-Dioxane	9872.03 UJ	12.0 UJ	82.6 UJ	R	19.46 UJ	18.78 UJ	19.64 UJ	20.5 UJ	13.77 UJ	154 UJ	2246.0 UJ	1673.2 UJ
2-BUTANONE (MEK)	237.66 U	1.1 J	2.1 UJ	R	1.95	1.88	1.79	0.38 J	1.1	4.0 UJ	3.74 J	2.72 J
2-HEXANONE	237.66 U	0.30 U	2.1 UJ	R	0.51 U	0.49 U	0.48 U	0.53 U	0.36 U	R	56.15 U	42.80 UJ
4-METHYL-2-PENTANONE (MIBK)	237.66 U	0.30 U	2.1 UJ	R	0.51 U	0.49 U	0.48 U	0.53 U	0.36 U	R	56.15 UJ	42.80 UJ
ACETONE	493.60 U	4.85 J	4.1 UJ	19 UJ	7.39	7.36	6.96	2.1 U	4.82	18 UJ	112.3 U	83.66 U
BENZENE	1060.3	213.98	1.0 U	2.5 J	0.25 U	0.019 J	0.015 J	0.26 U	0.18 U	1.9 UJ	2.3 J	1.2 J
BROMODICHLOROMETHANE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
BROMOFORM	122.5 U	0.14 U	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	R	26.74 U	21.40 U
BROMOMETHANE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 UJ
CARBON DISULFIDE	237.66 U	0.080 J	2.1 U	0.91 J	0.086 J	0.089 J	0.080 J	0.045 J	0.061 J	0.74 J	56.15 U	42.80 U
CARBON TETRACHLORIDE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
CHLOROBENZENE	27422.3	3708.99	0.43 J	13 J	3.31	0.53	0.95	0.26 U	0.070 J	R	42.78	48.64
CHLOROBROMOMETHANE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
CHLOROETHANE	237.66 U	0.30 U	2.1 U	R	0.51 U	0.49 U	0.48 U	0.53 U	0.36 U	4.0 UJ	56.15 U	42.80 U
CHLOROFORM	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
CHLOROMETHANE	122.5 U	0.14 UJ	1.0 U	R	0.25 U	0.25 UJ	0.23 U	0.26 U	0.18 UJ	1.9 UJ	26.74 U	21.40 U
CIS-1,2-DICHLOROETHENE	122.5 U	0.029 J	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
CIS-1,3-DICHLOROPROPENE	122.5 U	0.14 U	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
CYCLOHEXANE	122.5 U	0.17 J	1.0 UJ	R	0.049 J	0.11 J	0.16 J	0.033 J	0.058 J	1.9 UJ	26.74 U	21.40 U
DIBROMOCHLOROMETHANE	122.5 U	0.14 U	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	R	26.74 U	21.40 U
DICHLORODIFLUOROMETHANE	122.5 U	0.14 U	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
ETHYLBENZENE	34.73 J	2.43 J	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	R	26.74 UJ	21.40 U
ISOPROPYLBENZENE	122.5 U	0.34 J	1.0 UJ	R	0.027 J	0.030 J	0.23 U	0.26 U	0.18 U	R	26.74 U	21.40 U
M,P-XYLENES	106.0 J	7.85 J	1.0 UJ	R	0.049 J	0.25 U	0.059 J	0.26 U	0.18 U	R	4.01 J	7.59 J
METHYL ACETATE	237.66 U	0.30 U	2.1 UJ	R	0.51 U	0.49 U	0.48 U	0.53 U	0.36 U	4.0 UJ	4.55 J	3.50 J
METHYL TERT-BUTYL ETHER	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
METHYLCYLOHEXANE	122.5 U	2.00 J	1.0 UJ	R	0.25	1.2	1.6	0.22 J	0.54	1.9 UJ	26.74 U	21.40 U
METHYLENE CHLORIDE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
O-XYLENE	31.08 J	4.14 J	1.0 UJ	R	0.10 J	0.056 J	0.11 J	0.26 U	0.18 U	R	4.55 J	1.8 J
STYRENE	122.5 U	0.14 U	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	R	26.74 U	21.40 U
TETRACHLOROETHENE (PCE)	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	R	26.74 U	21.40 U
TOLUENE	155.4	0.49 J	1.0 U	0.59 J	0.25 U	0.047 J	0.23 U	0.045 J	0.037 J	R	2.1 J	2.92 J
TRANS-1,2-DICHLOROETHENE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
TRANS-1,3-DICHLOROPROPENE	122.5 U	0.14 U	1.0 UJ	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	R	26.74 U	21.40 U
TRICHLOROETHYLENE	122.5 UJ	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
TRICHLOROFLUOROMETHANE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
VINYL CHLORIDE	122.5 U	0.14 U	1.0 U	R	0.25 U	0.25 U	0.23 U	0.26 U	0.18 U	1.9 UJ	26.74 U	21.40 U
SOLIDS, TOTAL (%)	52	58.7	74.6	74.2	52.4	52.9	51.2	61.8	56.6	80.2	52	51.6
TOTAL ORGANIC CARBON (mg/kg)	54700	70100	4840	3730	51400	63900	56000	41900	72600	3240	37400	51400

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 4
Organic Carbon-Normalized VOCs in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD122	SD122	SD122	SD122	SD123	SD123	SD123	SD123	SD123	SD123	SD129	SD129
	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD122N-SC-E-1	04SD122N-SC-E-2	04SD122N-SC-F-1	04SD122N-SC-G-1	04SD123N-SC-C-1	04SD123N-SC-D-1	04SD123N-SC-E-1	04SD123N-SC-F-1	04SD123N-SC-G-1	04SD123N-SC-G-2	04SD129N-SC-C-1	04SD129N-SC-D-1
Analyte (mg/kg OC)	4.5-6.5 ft	4.5-6.5 ft	7-7.67 ft	7.67-8.17 ft	0.5-2 ft	3-5 ft	5-6.58 ft	7-9 ft	9.58-11.58 ft	9.58-11.58 ft	0.5-2 ft	2-3.92 ft
1,1,1-TRICHLOROETHANE (TCA)	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
1,1,2,2-TETRACHLOROETHANE	86.33 U	88.89 U	28.42 UJ	0.29 UJ	44.35 UJ	0.24 U	0.57 U	R	R	R	3.8 U	3.1 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
1,1,2-TRICHLOROETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
1,1-DICHLOROETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
1,1-DICHLOROETHENE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
1,2,3-TRICHLOROBENZENE	86.33 U	88.89 U	28.42 UJ	0.29 UJ	44.35 U	0.24 U	0.57 U	R	R	R	3.8 U	3.1 U
1,2,4-TRICHLOROBENZENE	19.1 J	21.8 J	10.1 J	0.29 UJ	44.35 U	0.24 U	0.57 U	R	R	R	3.8 U	3.1 U
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	86.33 U	88.89 U	28.42 UJ	0.29 UJ	44.35 UJ	0.24 U	0.57 U	R	R	R	3.8 U	3.1 U
1,2-DIBROMOETHANE (EDB)	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
1,2-DICHLOROBENZENE	11.9 J	12.0 J	2.49 J	0.29 UJ	44.35 U	0.24 U	0.57 U	R	R	R	3.8 U	3.1 U
1,2-DICHLOROETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 U	2.7 UJ	R	3.8 U	3.1 U
1,2-DICHLOROPROPANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 U	2.7 UJ	R	3.8 U	3.1 U
1,3-DICHLOROBENZENE	50.36 J	84.44 J	5.33 J	0.29 UJ	15.3 J	0.24 U	0.57 U	R	R	R	3.8 U	3.1 U
1,4-DICHLOROBENZENE	190.6	337.8	17.1 J	0.29 UJ	36.7 J	0.24 U	0.57 U	R	R	R	3.8 U	3.1 U
1,4-Dioxane	6834.53 UJ	7111.11 UJ	2309.06 UJ	23.3 UJ	3629.0 UJ	19.4 UJ	45.2 UJ	226 UJ	213 UJ	R	297 UJ	246 UJ
2-BUTANONE (MEK)	12.6 J	16.4 J	2.84 J	2.3	88.71 UJ	2.3	0.53 J	5.5 UJ	R	R	7.6 U	3.4 J
2-HEXANONE	172.7 U	177.8 U	58.61 UJ	0.58 U	88.71 UJ	0.48 U	1.1 U	5.5 UJ	R	R	7.6 U	6.3 U
4-METHYL-2-PENTANONE (MIBK)	172.7 U	177.8 U	58.61 UJ	0.58 U	88.71 UJ	0.48 U	1.1 U	5.5 UJ	R	R	7.6 U	6.3 U
ACETONE	341.7 U	351.1 U	9.06 J	9.59	181.5 U	11.2 J	3.8 U	11 UJ	34.8 UJ	26.1 UJ	15 U	25 U
BENZENE	86.33 U	6.67 J	1.78 J	0.29 U	7.26 J	0.020 J	0.57 U	2.9 U	2.7 UJ	R	3.8 U	3.1 U
BROMODICHLOROMETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 U	2.7 UJ	R	3.8 U	3.1 U
BROMOFORM	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
BROMOMETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
CARBON DISULFIDE	172.7 U	177.8 U	58.61 UJ	0.14 J	3.4 J	0.23 J	0.069 J	5.5 UJ	0.91 J	R	7.6 U	0.22 J
CARBON TETRACHLORIDE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 U	2.7 UJ	R	3.8 U	3.1 U
CHLOROBENZENE	647.48 J	1688.9 J	108.3 J	0.29 U	1330.6	0.45	0.81	2.9 UJ	R	R	3.8 U	0.77 J
CHLOROBROMOMETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
CHLOROETHANE	172.7 U	177.8 U	58.61 UJ	0.58 U	88.71 U	0.48 U	1.1 U	5.5 UJ	R	R	7.6 U	6.3 U
CHLOROFORM	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
CHLOROMETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
CIS-1,2-DICHLOROETHENE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
CIS-1,3-DICHLOROPROPENE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 U	2.7 UJ	R	3.8 U	3.1 U
CYCLOHEXANE	86.33 U	88.89 U	28.42 UJ	0.044 J	44.35 U	0.17 J	0.57 U	2.9 UJ	0.32 J	R	3.8 U	3.1 U
DIBROMOCHLOROMETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
DICHLORODIFLUOROMETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
ETHYLBENZENE	86.33 U	88.89 U	28.42 UJ	0.032 J	2.8 J	0.018 J	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
ISOPROPYLBENZENE	86.33 U	88.89 U	1.95 J	0.29 U	44.35 U	0.11 J	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
M,P-XYLENES	21.9 J	53.33 J	5.33 J	0.035 J	5.24 J	0.048 J	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
METHYL ACETATE	13.7 J	20.4 J	7.99 J	0.58 U	10.9 J	0.085 J	1.1 U	5.5 UJ	R	R	7.6 U	6.3 U
METHYL TERT-BUTYL ETHER	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
METHYLCYLOHEXANE	86.33 U	88.89 U	28.42 UJ	0.17 J	5.24 J	0.98	0.081 J	2.9 U	2.7 UJ	R	3.8 U	3.1 U
METHYLENE CHLORIDE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
O-XYLENE	6.83 J	14.7 J	5.33 J	0.29 U	5.65 J	0.18 J	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
STYRENE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
TETRACHLOROETHENE (PCE)	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
TOLUENE	11.5 J	19.6 J	2.66 J	0.11 J	44.35 U	0.11 J	0.053 J	0.25 J	0.52 J	R	0.37 J	0.32 J
TRANS-1,2-DICHLOROETHENE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
TRANS-1,3-DICHLOROPROPENE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
TRICHLOROETHYLENE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 U	2.7 UJ	R	3.8 U	3.1 U
TRICHLOROFLUOROMETHANE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
VINYL CHLORIDE	86.33 U	88.89 U	28.42 UJ	0.29 U	44.35 U	0.24 U	0.57 U	2.9 UJ	R	R	3.8 U	3.1 U
SOLIDS, TOTAL (%)	62.7	63	49.2	58.3	54.9	64.9	75	77.8	79.4	79.5	81.9	75.7
TOTAL ORGANIC CARBON (mg/kg)	27800	22500	56300	34400	24800	37600	13500	2350	2870 J	4590 J	1720	2070

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 4
Organic Carbon-Normalized VOCs in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	UPPER NAVIGATIONAL CHANNEL
	SD129	SD129	SD129	SD129	SD129	SD135
	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/11/2007
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
	04SD129N-SC-E-1	04SD129N-SC-E-2	04SD129N-SC-F-1	04SD129N-SC-G-1	04SD129N-SC-H-1	04SD135N-SC-B-1
Analyte (mg/kg OC)	3.92-5 ft	3.92-5 ft	5-6.67 ft	6.67-7.75 ft	8-9.17 ft	0.5-2 ft
1,1,1-TRICHLOROETHANE (TCA)	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
1,1,2,2-TETRACHLOROETHANE	26.55 UJ	33.49 U	0.34 U	0.28 U	0.94 U	0.58 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
1,1,2-TRICHLOROETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
1,1-DICHLOROETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
1,1-DICHLOROETHENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
1,2,3-TRICHLOROBENZENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 UJ
1,2,4-TRICHLOROBENZENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 UJ
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	26.55 UJ	33.49 U	0.34 U	0.28 U	0.94 U	0.58 UJ
1,2-DIBROMOETHANE (EDB)	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
1,2-DICHLOROBENZENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 UJ
1,2-DICHLOROETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
1,2-DICHLOROPROPANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
1,3-DICHLOROBENZENE	4.87 J	6.94 J	0.34 U	0.28 U	0.94 U	0.58 UJ
1,4-DICHLOROBENZENE	14.4 J	17.9 J	0.34 U	0.28 U	0.94 U	0.58 UJ
1,4-Dioxane	2168.1 UJ	2631.58 UJ	27.1 UJ	23.50 UJ	75.5 UJ	47.4 UJ
2-BUTANONE (MEK)	4.20 J	5.50 J	0.28 J	0.45 J	1.6 J	2.6
2-HEXANONE	55.31 UJ	64.59 U	0.68 U	0.58 U	1.9 U	1.2 U
4-METHYL-2-PENTANONE (MIBK)	55.31 UJ	64.59 U	0.68 U	0.58 U	1.9 U	1.2 U
ACETONE	108.4 U	129.2 U	1.8 U	2.78 U	10.4 U	11.1
BENZENE	26.55 U	33.49 U	0.34 U	0.024 J	0.94 U	0.58 U
BROMODICHLOROMETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
BROMOFORM	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
BROMOMETHANE	26.55 UJ	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
CARBON DISULFIDE	55.31 U	64.59 U	0.063 J	0.051 J	0.070 J	0.12 J
CARBON TETRACHLORIDE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
CHLOROBENZENE	42.04	40.67	0.033 J	0.045 J	0.94 U	0.64
CHLOROBROMOMETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
CHLOROETHANE	55.31 U	64.59 U	0.68 U	0.58 U	1.9 U	1.2 U
CHLOROFORM	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
CHLOROMETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
CIS-1,2-DICHLOROETHENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
CIS-1,3-DICHLOROPROPENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
CYCLOHEXANE	26.55 U	33.49 U	0.34 U	0.024 J	0.94 U	0.58 U
DIBROMOCHLOROMETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
DICHLORODIFLUOROMETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
ETHYLBENZENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
ISOPROPYLBENZENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
M,P-XYLENES	2.88 J	3.59 J	0.34 U	0.28 U	0.94 U	0.58 U
METHYL ACETATE	5.31 J	9.33 J	0.68 U	0.14 J	0.85 J	1.2 U
METHYL TERT-BUTYL ETHER	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
METHYLCYLOHEXANE	26.55 U	3.59 J	0.34 U	0.28 U	0.94 U	0.58 U
METHYLENE CHLORIDE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
O-XYLENE	26.55 U	2.63 J	0.34 U	0.28 U	0.94 U	0.58 U
STYRENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
TETRACHLOROETHENE (PCE)	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
TOLUENE	26.55 U	33.49 U	0.063 J	0.14 J	0.074 J	0.58 U
TRANS-1,2-DICHLOROETHENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
TRANS-1,3-DICHLOROPROPENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
TRICHLOROETHYLENE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
TRICHLOROFLUOROMETHANE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
VINYL CHLORIDE	26.55 U	33.49 U	0.34 U	0.28 U	0.94 U	0.58 U
SOLIDS, TOTAL (%)	58.2	56	73.6	65.4	71.4	57.1
TOTAL ORGANIC CARBON (mg/kg)	45200	41800	19200	46800	10600	17100

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 5
VOCs in Bulk Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD
	SD117	SD117	SD117	SD117	SD118	SD118	SD118	SD118	SD118	SD118	SD118	SD119	SD119	SD119
	12/11/2007	12/11/2007	12/11/2007	12/11/2007	11/14/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007
	04SD117F-SC-C-1	04SD117F-SC-D-1	04SD117F-SC-E-1	04SD117F-SC-F-1	03SD118F-SC-A-1	04SD118F-SC-C-1	04SD118F-SC-D-1	04SD118F-SC-E-1	04SD118F-SC-F-1	04SD118F-SC-F-2	04SD118F-SC-G-1	04SD119F-SC-C-1	04SD119F-SC-D-1	04SD119F-SC-E-1
	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Analyte (ug/kg)	0.5-2 ft	2-4 ft	4-6 ft	6-6.67 ft	0-0.5 ft	0.5-2 ft	2-4 ft	4-6 ft	6-7.5 ft	6-7.5 ft	7.5-8.5 ft	0.5-2 ft	2-3.08 ft	3.08-7.08 ft
1,1,1-TRICHLOROETHANE (TCA)	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,1,2,2-TETRACHLOROETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,1,2-TRICHLORO-1,2,2-TRIFLUOROE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,1,2-TRICHLOROETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,1-DICHLOROETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,1-DICHLOROETHENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,2,3-TRICHLOROBENZENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 UJ	4700 UJ	54000 UJ	6.2 U	8.7 U	26000 UJ
1,2,4-TRICHLOROBENZENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,2-DIBROMO-3-CHLOROPROPANE (D	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,2-DIBROMOETHANE (EDB)	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,2-DICHLOROBENZENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	16000 J	0.43 J	8.7 U	26000 UJ
1,2-DICHLOROETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,2-DICHLOROPROPANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,3-DICHLOROBENZENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
1,4-DICHLOROBENZENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	7300 J	6.2 U	8.7 U	4300 J
1,4-Dioxane	490 UJ	530 UJ	770 UJ	550 UJ	530 UJ	480 UJ	460 UJ	470 UJ	400000 UJ	375000 UJ	4300000 UJ	500 UJ	700 UJ	2100000 UJ
2-BUTANONE (MEK)	4.9 J	2 J	17 J	3.9 J	13 U	4.2 J	2.6 J	2.4 J	10000 U	9400 U	110000 U	2.6 J	15 J	52000 UJ
2-HEXANONE	12 U	13 U	19 U	14 U	13 U	12 U	12 U	12 U	10000 U	9400 U	110000 U	12 U	17 U	52000 UJ
4-METHYL-2-PENTANONE (MIBK)	12 U	13 U	19 U	14 U	13 U	12 U	12 U	12 U	10000 U	9400 U	110000 U	12 U	17 U	52000 UJ
ACETONE	40 U	26 UJ	96 U	32 U	26 U	27 U	23 U	34 U	20000 U	19000 U	220000 U	20 U	66 U	100000 UJ
BENZENE	0.65 J	6.6 U	9.6 U	6.8 U	6.6 U	6 U	0.4 J	0.4 J	2800 J	1100 J	12000 J	0.53 J	2.2 J	5600 J
BROMODICHLOROMETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
BROMOFORM	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
BROMOMETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
CARBON DISULFIDE	0.69 J	0.43 J	1.7 J	0.87 J	13 U	0.49 J	12 U	0.36 J	10000 U	9400 U	110000 U	12 U	1.1 J	52000 UJ
CARBON TETRACHLORIDE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
CHLOROBENZENE	30	0.41 J	1.1 J	1.2 J	6.6 U	0.46 J	5.8 U	1.1 J	140000	100000	1700000	2.3 J	3.5 J	650000 J
CHLOROBROMOMETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
CHLOROETHANE	12 U	13 U	19 U	14 U	13 U	12 U	12 U	12 U	10000 U	9400 U	110000 U	12 U	17 U	52000 UJ
CHLOROFORM	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
CHLOROMETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
CIS-1,2-DICHLOROETHENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
CIS-1,3-DICHLOROPROPENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
CYCLOHEXANE	6.1 U	6.6 UJ	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
DIBROMOCHLOROMETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
DICHLORODIFLUOROMETHANE	6.1 U	6.6 UJ	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
ETHYLBENZENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
ISOPROPYLBENZENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
M,P-XYLENES	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	440 J	4700 U	4500 J	6.2 U	8.7 U	3300 J
METHYL ACETATE	12 U	13 U	19 U	14 U	13 U	12 U	12 U	12 U	10000 U	9400 U	110000 U	12 U	17 U	52000 UJ
METHYL TERT-BUTYL ETHER	6.1 U	6.6 U	9.6 U	6.8 U	6.6 UJ	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
METHYLCYLOHEXANE	6.1 U	6.6 UJ	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 UJ	4700 UJ	54000 UJ	6.2 U	8.7 U	26000 UJ
METHYLENE CHLORIDE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
O-XYLENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
STYRENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
TETRACHLOROETHENE (PCE)	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
TOLUENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
TRANS-1,2-DICHLOROETHENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
TRANS-1,3-DICHLOROPROPENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
TRICHLOROETHYLENE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
TRICHLOROFLUOROMETHANE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
VINYL CHLORIDE	6.1 U	6.6 U	9.6 U	6.8 U	6.6 U	6 U	5.8 U	5.8 U	5000 U	4700 U	54000 U	6.2 U	8.7 U	26000 UJ
SOLIDS, TOTAL (%)	85.6	82	78.5	79	77.3	80.4	79.7	75.4	56.6	59.2	60.2	76.9	64.9	46.1
TOTAL ORGANIC CARBON (mg/kg)	1860	2640	3920	3850	4140	1660	1300	2830	31800	23400	59200	3010	18500	62400

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 5
VOCs in Bulk Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD119	SD120	SD120	SD120	SD120	SD120	SD132	SD032	SD032	SD056	SD056	SD056	SD059	SD080
	12/11/2007	11/14/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	11/14/2007	11/15/2007	12/11/2007	11/14/2007	12/11/2007	12/11/2007	11/13/2007	12/11/2007
	04SD119F-SC-F-1	03SD120F-SC-A-1	04SD120F-SC-C-1	04SD120F-SC-D-1	04SD120F-SC-E-1	04SD120F-SC-E-2	03SD132W-SC-A-1	03SD032N-SC-A-1	04SD032N-SC-B-1	03SD056N-SC-A-1	04SD056N-SC-B-1	04SD056N-SC-B-2	03SD059N-SC-A-1	04SD080N-SC-B-1
	Sand	Sand	Sand	Sand	Sand	Sand	Gravelly Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
Analyte (ug/kg)	7.08-7.83 ft	0-0.5 ft	0.5-2 ft	3.5-5.5 ft	6.67-8.67 ft	6.67-8.67 ft	0-0.3 ft	0-0.5 ft	0.5-2 ft	0-0.5 ft	0.5-2 ft	0.5-2 ft	0-0.4 ft	0.5-2 ft
1,1,1-TRICHLOROETHANE (TCA)	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,1,2,2-TETRACHLOROETHANE	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 UJ	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,1,2-TRICHLOROETHANE	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,1-DICHLOROETHANE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,1-DICHLOROETHENE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,2,3-TRICHLOROBENZENE	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 UJ	7 U	6.3 U	5.8 U	7.2 U	37000 UJ
1,2,4-TRICHLOROBENZENE	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 UJ	7 U	6.3 U	5.8 U	7.2 U	22000 J
1,2-DIBROMO-3-CHLOROPROPANE (D	6.7 U	1200 UJ	R	R	R	R	5.4 U	13 U	10 UJ	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,2-DIBROMOETHANE (EDB)	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,2-DICHLOROBENZENE	2.9 J	1200 U	R	R	R	R	5.4 U	13 U	10 UJ	7 U	5.4 J	4.4 J	7.2 U	540000
1,2-DICHLOROETHANE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,2-DICHLOROPROPANE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
1,3-DICHLOROBENZENE	4.8 J	1200 U	R	R	R	R	5.4 U	13 U	10 UJ	7 U	10	10	7.2 U	6800 J
1,4-DICHLOROBENZENE	22	300 J	R	R	R	R	5.4 U	13 U	10 UJ	7 U	38	38	7.2 U	79000
1,4-Dioxane	540 UJ	94000 UJ	R	R	R	730 UJ	430 UJ	1000 UJ	830 UJ	560 UJ	500 UJ	470 UJ	580 UJ	2900000 UJ
2-BUTANONE (MEK)	3.4 J	2300 U	R	R	R	18 UJ	11 U	25 U	84	14 U	37	17	2.3 J	74000 U
2-HEXANONE	13 U	2300 U	R	R	R	R	11 U	25 U	21 U	14 U	13 U	12 U	14 U	74000 U
4-METHYL-2-PENTANONE (MIBK)	13 U	2300 U	R	R	R	R	11 U	25 U	21 U	14 U	13 U	12 U	14 U	74000 U
ACETONE	36 U	4700 U	54 UJ	66 UJ	83 UJ	91 UJ	22 U	50 U	330	28 U	140 J	77 UJ	29 U	150000 U
BENZENE	78	81 J	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	16	24	7.2 U	17000 J
BROMODICHLOROMETHANE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
BROMOFORM	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
BROMOMETHANE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
CARBON DISULFIDE	3.9 J	2300 U	2.4 J	2.9 J	2.2 J	2.2 J	11 U	25 U	4 J	14 U	2.2 J	1.3 J	14 U	74000 U
CARBON TETRACHLORIDE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
CHLOROBENZENE	8300	2600	10 J	R	3.1 J	R	5.4 U	2.8 J	10 U	0.58 J	18000 J	9400 J	0.53 J	810000
CHLOROBROMOMETHANE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
CHLOROETHANE	13 U	2300 U	R	R	R	18 UJ	11 U	25 U	21 U	14 U	13 U	12 U	14 U	74000 U
CHLOROFORM	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
CHLOROMETHANE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
CIS-1,2-DICHLOROETHENE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
CIS-1,3-DICHLOROPROPENE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
CYCLOHEXANE	0.49 J	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	0.64 J	7 U	2.2 J	1.5 J	0.51 J	37000 U
DIBROMOCHLOROMETHANE	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
DICHLORODIFLUOROMETHANE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
ETHYLBENZENE	1.7 J	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	2.4 J	2.4 J	7.2 U	37000 U
ISOPROPYLBENZENE	0.44 J	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	3.8 J	3.2 J	7.2 U	37000 U
M,P-XYLENES	3.6 J	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	5.6 J	5.5 J	7.2 U	5400 J
METHYL ACETATE	13 U	170 J	R	R	R	18 UJ	11 U	25 U	21 U	14 U	13 U	12 U	14 U	74000 U
METHYL TERT-BUTYL ETHER	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 UJ	6.3 U	5.8 U	7.2 UJ	37000 U
METHYLCYLOHEXANE	1.1 J	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	8.3 J	7 U	18	15	7.2 U	37000 UJ
METHYLENE CHLORIDE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
O-XYLENE	1.6 J	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	11	12	7.2 U	37000 U
STYRENE	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
TETRACHLOROETHENE (PCE)	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
TOLUENE	6.7 U	1200 U	R	R	1.8 J	1.2 J	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
TRANS-1,2-DICHLOROETHENE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
TRANS-1,3-DICHLOROPROPENE	6.7 U	1200 U	R	R	R	R	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
TRICHLOROETHYLENE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
TRICHLOROFLUOROMETHANE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
VINYL CHLORIDE	6.7 U	1200 U	R	R	R	9.1 UJ	5.4 U	13 U	10 U	7 U	6.3 U	5.8 U	7.2 U	37000 U
SOLIDS, TOTAL (%)	76.9	52.9	78	69.9	77.4	75.8	82.7	60.2	60.5	66	73.8	71.1	78.7	63.3
TOTAL ORGANIC CARBON (mg/kg)	5500	17800	4280	3980	3220	3650	5870	19900	45000	8130	18900	20300	1620 J	47300

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 5
VOCs in Bulk Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD082	SD082	SD085	SD085	SD087	SD094	SD094	SD097	SD097	SD098	SD100	SD115	SD115	SD115
	11/14/2007	12/11/2007	11/15/2007	12/11/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007	12/11/2007	11/13/2007	12/13/2007	12/13/2007	12/13/2007
	03SD082N-SC-A-1	04SD082N-SC-B-1	03SD085N-SC-A-1	04SD085N-SC-B-1	03SD087N-SC-A-1	03SD094N-SC-A-1	03SD094N-SC-A-2	03SD097N-SC-A-1	03SD097N-SC-A-2	04SD098N-SC-B-1	03SD100N-SC-A-1	04SD115N-SC-C-1	04SD115N-SC-D-1	04SD115N-SC-E-1
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
Analyte (ug/kg)	0-0.5 ft	0.5-2 ft	0-0.5 ft	0.5-2 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0-0.5 ft	0.5-2 ft	0-0.5 ft	0.5-2 ft	2-4 ft	4-6 ft
1,1,1-TRICHLOROETHANE (TCA)	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
1,1,2,2-TETRACHLOROETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
1,1,2-TRICHLOROETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
1,1-DICHLOROETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
1,1-DICHLOROETHENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
1,2,3-TRICHLOROBENZENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	1900 J	8500
1,2,4-TRICHLOROBENZENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	8500 J	41000
1,2-DIBROMO-3-CHLOROPROPANE (D	1200 UJ	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 UJ	6600 UJ	7000 UJ
1,2-DIBROMOETHANE (EDB)	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
1,2-DICHLOROBENZENE	1200 U	1500 UJ	1600 UJ	17000 UJ	1.3 J	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	760 J	34000 J	50000
1,2-DICHLOROETHANE	1200 U	1500 UJ	110 J	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
1,2-DICHLOROPROPANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
1,3-DICHLOROBENZENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	4900 J	24000 J	19000
1,4-DICHLOROBENZENE	79 J	1100 J	200 J	2200 J	1.6 J	1500 UJ	3.9 J	9.6 U	8.7 U	9.6 U	11 U	30000	42000 J	110000
1,4-Dioxane	99000 UJ	120000 UJ	130000 UJ	1300000 UJ	760 UJ	120000 UJ	1000 UJ	770 UJ	700 UJ	770 UJ	890 UJ	980000 UJ	530000 UJ	560000 UJ
2-BUTANONE (MEK)	2500 U	2900 UJ	3100 UJ	33000 UJ	19 U	3100 UJ	25 UJ	19 U	17 U	87	4.9 J	25000 U	13000 UJ	14000 U
2-HEXANONE	2500 U	2900 UJ	3100 UJ	33000 UJ	19 U	3100 UJ	25 UJ	19 U	17 U	19 U	22 U	25000 U	13000 UJ	14000 U
4-METHYL-2-PENTANONE (MIBK)	2500 U	2900 UJ	3100 UJ	33000 UJ	19 U	3100 UJ	25 UJ	19 U	17 U	19 U	22 U	25000 U	13000 UJ	14000 U
ACETONE	4900 U	5800 UJ	430 J	67000 UJ	38 U	6200 UJ	51 UJ	38 U	35 U	360 J	45 U	49000 U	26000 UJ	28000 U
BENZENE	280 J	8400 J	4500 J	140000 J	9.5 U	1500 UJ	1.4 J	9.6 U	8.7 U	9.6 U	11 U	42000	19000 J	13000
BROMODICHLOROMETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
BROMOFORM	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
BROMOMETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
CARBON DISULFIDE	2500 U	2900 UJ	3100 UJ	33000 UJ	19 U	3100 UJ	25 UJ	19 U	17 U	2.9 J	2 J	25000 U	13000 UJ	14000 U
CARBON TETRACHLORIDE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
CHLOROBENZENE	3000	51000 J	7900 J	530000 J	13	2100 J	37 J	1.8 J	2.7 J	5.5 J	11 U	400000	1300000 J	1500000
CHLOROBROMOMETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
CHLOROETHANE	2500 U	2900 UJ	3100 UJ	33000 UJ	19 U	3100 UJ	25 UJ	19 U	17 U	19 U	22 U	25000 U	13000 UJ	14000 U
CHLOROFORM	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
CHLOROMETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
CIS-1,2-DICHLOROETHENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
CIS-1,3-DICHLOROPROPENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
CYCLOHEXANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	0.82 J	12000 U	6600 UJ	7000 U
DIBROMOCHLOROMETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
DICHLORODIFLUOROMETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 UJ	11 U	12000 U	6600 UJ	7000 U
ETHYLBENZENE	1200 U	600 J	1600 UJ	1100 J	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	660 J	2000 J	5400 J
ISOPROPYLBENZENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	290 J
M,P-XYLENES	1200 U	2100 J	200 J	3100 J	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	2500 J	6700 J	23000
METHYL ACETATE	240 J	270 J	190 J	33000 UJ	19 U	110 J	25 UJ	19 U	17 U	19 U	22 U	1000 J	13000 UJ	270 J
METHYL TERT-BUTYL ETHER	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 UJ	12000 U	6600 UJ	7000 U
METHYLCYLOHEXANE	1200 U	220 J	160 J	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	0.77 J	11 U	12000 U	650 J	7000 U
METHYLENE CHLORIDE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
O-XYLENE	1200 U	510 J	180 J	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	720 J	1400 J	6600 J
STYRENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
TETRACHLOROETHENE (PCE)	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
TOLUENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	0.99 J	12000 U	6600 UJ	7000 U
TRANS-1,2-DICHLOROETHENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
TRANS-1,3-DICHLOROPROPENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
TRICHLOROETHYLENE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
TRICHLOROFLUOROMETHANE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
VINYL CHLORIDE	1200 U	1500 UJ	1600 UJ	17000 UJ	9.5 U	1500 UJ	13 UJ	9.6 U	8.7 U	9.6 U	11 U	12000 U	6600 UJ	7000 U
SOLIDS, TOTAL (%)	49.5	45	44.2	45.4	61.7	42.8	43.7	54.6	55.1	56.1	30.9	52.8	49.5	51.7
TOTAL ORGANIC CARBON (mg/kg)	26600	59700	37000 J	46700	27800	67600 J	59000 J	21300	22000	25300	7620 J	53500	36500 J	83900

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 5
VOCs in Bulk Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD115	SD115	SD115	SD115	SD115	SD116	SD116	SD116	SD116	SD116	SD116	SD116	SD121	SD121
	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
	04SD115N-SC-F-1	04SD115N-SC-F-2	04SD115N-SC-G-1	04SD115N-SC-H-1	04SD115N-SC-I-1	04SD116N-SC-C-1	04SD116N-SC-D-1	04SD116N-SC-D-2	04SD116N-SC-E-1	04SD116N-SC-F-1	04SD116N-SC-G-1	04SD116N-SC-H-1	04SD121N-SC-C-1	04SD121N-SC-D-1
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
Analyte (ug/kg)	6-7.33 ft	6-7.33 ft	7.5-9.17 ft	10.17-11.5 ft	12.5-13.92 ft	0.5-2 ft	2-4 ft	2-4 ft	4-6.67 ft	6.67-8.5 ft	10-12 ft	14-15.83 ft	0.5-2 ft	2-3.5 ft
1,1,1-TRICHLOROETHANE (TCA)	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
1,1,2,2-TETRACHLOROETHANE	5700 U	6100 U	10 U	R	R	1500 UJ	7100 UJ	1500 UJ	6700 UJ	10 UJ	5 UJ	R	13 U	16 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
1,1,2-TRICHLOROETHANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 UJ	R	13 U	16 U
1,1-DICHLOROETHANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
1,1-DICHLOROETHENE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
1,2,3-TRICHLOROBENZENE	5700 U	6100 U	10 U	R	R	1500 U	3700 J	1500 UJ	2900 J	10 UJ	R	R	13 U	16 U
1,2,4-TRICHLOROBENZENE	770 J	290 J	10 U	R	R	1500 U	17000 J	1500 UJ	11000	10 UJ	R	R	13 U	16 U
1,2-DIBROMO-3-CHLOROPROPANE (D	5700 UJ	6100 UJ	10 U	R	R	1500 U	7100 UJ	1500 UJ	6700 U	10 UJ	5 UJ	R	13 U	16 U
1,2-DIBROMOETHANE (EDB)	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 UJ	R	13 U	16 U
1,2-DICHLOROBENZENE	6600 J	880 J	10 U	R	R	1500 U	260000 J	1500 UJ	7500	170 J	5 UJ	R	4.6 J	11 J
1,2-DICHLOROETHANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 UJ	R	13 U	16 U
1,2-DICHLOROPROPANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
1,3-DICHLOROBENZENE	4400 J	1100 J	10 U	R	R	120 J	18000 J	1500 UJ	11000	72 J	5 UJ	R	7.1 J	16 U
1,4-DICHLOROBENZENE	33000 J	9000 J	10 U	R	R	1300 J	57000 J	930 J	31000	13000	5 UJ	R	13	1.9 J
1,4-Dioxane	450000 UJ	490000 UJ	810 UJ	490 UJ	R	120000 UJ	570000 UJ	120000 UJ	540000 UJ	840 UJ	400 UJ	R	1000 UJ	1200 UJ
2-BUTANONE (MEK)	11000 U	12000 U	69	12 UJ	3.8 J	2900 U	14000 UJ	230 J	13000 U	80 J	10 UJ	R	100	120
2-HEXANONE	11000 U	12000 U	20 U	12 UJ	R	2900 U	14000 UJ	2900 UJ	13000 U	21 U	10 UJ	R	26 U	31 U
4-METHYL-2-PENTANONE (MIBK)	11000 U	12000 U	20 U	12 UJ	R	2900 U	14000 UJ	2900 UJ	13000 U	21 U	10 UJ	R	26 U	31 U
ACETONE	23000 U	25000 U	270	24 UJ	96 J	5900 U	28000 UJ	5800 UJ	27000 U	340 J	20 UJ	70 UJ	380	470
BENZENE	5900	6600	1.3 J	6.1 UJ	3.2 J	2400	180000 J	1800 J	58000	15000	5 U	9.2 J	13 U	1.2 J
BROMODICHLOROMETHANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
BROMOFORM	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 UJ	R	13 U	16 U
BROMOMETHANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
CARBON DISULFIDE	11000 U	12000 U	4.1 J	0.42 J	2 J	2900 U	14000 UJ	2900 UJ	13000 U	5.6 J	10 U	3.4 J	4.4 J	5.7 J
CARBON TETRACHLORIDE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
CHLOROBENZENE	630000	600000	18	2.8 J	42 J	51000	4200000 J	42000 J	1500000	260000	2.1 J	49 J	170	34
CHLOROBROMOMETHANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
CHLOROETHANE	11000 U	12000 U	20 U	12 UJ	R	2900 U	14000 UJ	2900 UJ	13000 U	21 U	10 U	R	26 U	31 U
CHLOROFORM	5700 U	6100 U	10 UJ	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
CHLOROMETHANE	5700 U	6100 U	10 UJ	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 UJ	5 U	R	13 U	16 UJ
CIS-1,2-DICHLOROETHENE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	2 J	5 U	R	13 U	16 U
CIS-1,3-DICHLOROPROPENE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 UJ	R	13 U	16 U
CYCLOHEXANE	5700 U	6100 U	3 J	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	12 J	5 UJ	R	2.5 J	7.2 J
DIBROMOCHLOROMETHANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 UJ	R	13 U	16 U
DICHLORODIFLUOROMETHANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 UJ	R	13 U	16 U
ETHYLBENZENE	2900 J	3700 J	10 U	6.1 UJ	R	400 J	5300 J	320 J	1900 J	170 J	5 UJ	R	13 U	16 U
ISOPROPYLBENZENE	280 J	1600 J	10 U	6.1 UJ	R	100 J	7100 UJ	1500 UJ	6700 U	24 J	5 UJ	R	1.4 J	1.9 J
M,P-XYLENES	22000 J	33000 J	2.3 J	6.1 UJ	R	990 J	17000 J	880 J	5800 J	550 J	5 UJ	R	2.5 J	16 U
METHYL ACETATE	310 J	310 J	3.4 J	12 UJ	R	220 J	14000 UJ	340 J	13000 U	21 U	10 UJ	R	26 U	31 U
METHYL TERT-BUTYL ETHER	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
METHYLCYLOHEXANE	5700 U	270 J	3 J	6.1 UJ	R	280 J	1200 J	210 J	6700 U	140 J	5 UJ	R	13	76
METHYLENE CHLORIDE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	110 J	6700 U	10 U	5 U	R	13 U	16 U
O-XYLENE	6300	19000 J	10 U	6.1 UJ	R	990 J	4800 J	800 J	1700 J	290 J	5 UJ	R	5.2 J	3.6 J
STYRENE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 UJ	R	13 U	16 U
TETRACHLOROETHENE (PCE)	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
TOLUENE	5700 U	6100 U	10 U	6.1 UJ	5.6 UJ	1500 U	55000 J	1500 UJ	8500	34 J	5 U	2.2 J	13 U	3 J
TRANS-1,2-DICHLOROETHENE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
TRANS-1,3-DICHLOROPROPENE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 UJ	R	13 U	16 U
TRICHLOROETHYLENE	5700 U	6100 U	10 U	6.1 UJ	R	1500 UJ	7100 UJ	1500 UJ	6700 UJ	10 U	5 U	R	13 U	16 U
TRICHLOROFLUOROMETHANE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
VINYL CHLORIDE	5700 U	6100 U	10 U	6.1 UJ	R	1500 U	7100 UJ	1500 UJ	6700 U	10 U	5 U	R	13 U	16 U
SOLIDS, TOTAL (%)	54.4	51.3	56.2	77.8	75.9	50.6	54.4	52.5	52	58.7	74.6	74.2	52.4	52.9
TOTAL ORGANIC CARBON (mg/kg)	70300	66100	29500	3730	3650	42000	46200	38800	54700	70100	4840	3730	51400	63900

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 5
VOCs in Bulk Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

Analyte (ug/kg)	ADJACENT NEARSHORE SD121 12/12/2007 04SD121N-SC-D-2 Muddy Sand 2-3.5 ft	ADJACENT NEARSHORE SD121 12/12/2007 04SD121N-SC-E-1 Muddy Sand 3.5-5 ft	ADJACENT NEARSHORE SD121 12/12/2007 04SD121N-SC-F-1 Muddy Sand 5-7.17 ft	ADJACENT NEARSHORE SD121 12/12/2007 04SD121N-SC-G-1 Muddy Sand 8.67-10.67 ft	ADJACENT NEARSHORE SD122 12/12/2007 04SD122N-SC-C-1 Muddy Sand 0.5-2 ft	ADJACENT NEARSHORE SD122 12/12/2007 04SD122N-SC-D-1 Muddy Sand 2.33-3.75 ft	ADJACENT NEARSHORE SD122 12/12/2007 04SD122N-SC-E-1 Muddy Sand 4.5-6.5 ft	ADJACENT NEARSHORE SD122 12/12/2007 04SD122N-SC-E-2 Muddy Sand 4.5-6.5 ft	ADJACENT NEARSHORE SD122 12/12/2007 04SD122N-SC-F-1 Muddy Sand 7-7.67 ft	ADJACENT NEARSHORE SD122 12/12/2007 04SD122N-SC-G-1 Muddy Sand 7.67-8.17 ft	ADJACENT NEARSHORE SD123 11/13/2007 03SD123N-SC-A-1 Muddy Sand 0-0.4 ft	ADJACENT NEARSHORE SD123 12/12/2007 04SD123N-SC-C-1 Muddy Sand 0.5-2 ft	ADJACENT NEARSHORE SD123 12/12/2007 04SD123N-SC-D-1 Muddy Sand 3-5 ft	ADJACENT NEARSHORE SD123 12/12/2007 04SD123N-SC-E-1 Muddy Sand 5-6.58 ft
1,1,1-TRICHLOROETHANE (TCA)	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
1,1,2,2-TETRACHLOROETHANE	13 UJ	11 U	13 U	R	1000 UJ	1100 UJ	2400 U	2000 U	1600 UJ	10 UJ	6.7 U	1100 UJ	9.2 U	7.7 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
1,1,2-TRICHLOROETHANE	13 U	11 U	13 U	R	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
1,1-DICHLOROETHANE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
1,1-DICHLOROETHENE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
1,2,3-TRICHLOROBENZENE	13 UJ	1.3 J	13 U	R	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 UJ	6.7 U	1100 U	9.2 U	7.7 U
1,2,4-TRICHLOROBENZENE	13 UJ	11 U	13 U	R	1000 U	1100 U	530 J	490 J	570 J	10 UJ	6.7 U	1100 U	9.2 U	7.7 U
1,2-DIBROMO-3-CHLOROPROPANE (D	13 UJ	11 U	13 U	R	1000 UJ	1100 UJ	2400 U	2000 U	1600 UJ	10 UJ	6.7 U	1100 UJ	9.2 U	7.7 U
1,2-DIBROMOETHANE (EDB)	13 U	11 U	13 U	R	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
1,2-DICHLOROBENZENE	13 UJ	11 U	13 U	R	77 J	70 J	330 J	270 J	140 J	10 UJ	6.7 U	1100 U	9.2 U	7.7 U
1,2-DICHLOROETHANE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
1,2-DICHLOROPROPANE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
1,3-DICHLOROBENZENE	13 UJ	11 U	13 U	R	110 J	780 J	1400 J	1900 J	300 J	10 UJ	6.7 U	380 J	9.2 U	7.7 U
1,4-DICHLOROBENZENE	13 UJ	11 U	13 U	R	110 J	470 J	5300	7600	960 J	10 UJ	6.7 U	910 J	9.2 U	7.7 U
1,4-Dioxane	1100 UJ	860 UJ	1000 UJ	500 UJ	84000 UJ	86000 UJ	190000 UJ	160000 UJ	130000 UJ	800 UJ	530 UJ	90000 UJ	730 UJ	610 UJ
2-BUTANONE (MEK)	100	16 J	80	13 UJ	140 J	140 J	350 J	370 J	160 J	79	13 U	2200 UJ	86	7.1 J
2-HEXANONE	27 U	22 U	26 U	R	2100 U	2200 UJ	4800 U	4000 U	3300 UJ	20 U	13 U	2200 UJ	18 U	15 U
4-METHYL-2-PENTANONE (MIBK)	27 U	22 U	26 U	R	2100 UJ	2200 UJ	4800 U	4000 U	3300 UJ	20 U	13 U	2200 UJ	18 U	15 U
ACETONE	390	86 U	350	57 UJ	4200 U	4300 U	9500 U	7900 U	510 J	330	27 U	4500 U	420 J	51 U
BENZENE	0.82 J	11 U	13 U	6.3 UJ	85 J	64 J	2400 U	150 J	100 J	10 U	6.7 U	180 J	0.74 J	7.7 U
BROMODICHLOROMETHANE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
BROMOFORM	13 U	11 U	13 U	R	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
BROMOMETHANE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 UJ	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
CARBON DISULFIDE	4.5 J	1.9 J	4.4 J	2.4 J	2100 U	2200 U	4800 U	4000 U	3300 UJ	4.8 J	0.84 J	84 J	8.8 J	0.93 J
CARBON TETRACHLORIDE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
CHLOROBENZENE	53	11 U	5.1 J	R	1600	2500	18000 J	38000 J	6100 J	10 U	28	33000	17	11
CHLOROBROMOMETHANE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
CHLOROETHANE	27 U	22 U	26 U	13 UJ	2100 U	2200 U	4800 U	4000 U	3300 UJ	20 U	13 U	2200 U	18 U	15 U
CHLOROFORM	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
CHLOROMETHANE	13 U	11 U	13 UJ	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
CIS-1,2-DICHLOROETHENE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
CIS-1,3-DICHLOROPROPENE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
CYCLOHEXANE	9 J	1.4 J	4.2 J	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	1.5 J	6.7 U	1100 U	6.3 J	7.7 U
DIBROMOCHLOROMETHANE	13 U	11 U	13 U	R	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
DICHLORODIFLUOROMETHANE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
ETHYLBENZENE	13 U	11 U	13 U	R	1000 UJ	1100 U	2400 U	2000 U	1600 UJ	1.1 J	6.7 U	69 J	0.68 J	7.7 U
ISOPROPYLBENZENE	13 U	11 U	13 U	R	1000 U	1100 U	2400 U	2000 U	110 J	10 U	6.7 U	1100 U	4 J	7.7 U
M,P-XYLENES	3.3 J	11 U	13 U	R	150 J	390 J	610 J	1200 J	300 J	1.2 J	6.7 U	130 J	1.8 J	7.7 U
METHYL ACETATE	27 U	22 U	26 U	13 UJ	170 J	180 J	380 J	460 J	450 J	20 U	13 U	270 J	3.2 J	15 U
METHYL TERT-BUTYL ETHER	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
METHYLCYLOHEXANE	90	9.2 J	39	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	5.8 J	6.7 U	130 J	37	1.1 J
METHYLENE CHLORIDE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
O-XYLENE	5.9 J	11 U	13 U	R	170 J	91 J	190 J	330 J	300 J	10 U	6.7 U	140 J	6.8 J	7.7 U
STYRENE	13 U	11 U	13 U	R	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
TETRACHLOROETHENE (PCE)	13 U	11 U	13 U	R	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
TOLUENE	13 U	1.9 J	2.7 J	R	77 J	150 J	320 J	440 J	150 J	3.9 J	0.74 J	1100 U	4 J	0.72 J
TRANS-1,2-DICHLOROETHENE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
TRANS-1,3-DICHLOROPROPENE	13 U	11 U	13 U	R	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
TRICHLOROETHYLENE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
TRICHLOROFLUOROMETHANE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
VINYL CHLORIDE	13 U	11 U	13 U	6.3 UJ	1000 U	1100 U	2400 U	2000 U	1600 UJ	10 U	6.7 U	1100 U	9.2 U	7.7 U
SOLIDS, TOTAL (%)	51.2	61.8	56.6	80.2	52	51.6	62.7	63	49.2	58.3	70.4	54.9	64.9	75
TOTAL ORGANIC CARBON (mg/kg)	56000	41900	72600	3240	37400	51400	27800	22500	56300	34400	5220 J	24800	37600	13500

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 5
VOCs in Bulk Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	UPPER NAVIGATIONAL CHANNEL	UPSTREAM	UPSTREAM
	SD123	SD123	SD123	SD129	SD129	SD129	SD129	SD129	SD129	SD129	SD129	SD135	SD004	SD006
	12/12/2007	12/12/2007	12/12/2007	11/13/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/11/2007	11/14/2007	11/15/2007
	04SD123N-SC-F-1	04SD123N-SC-G-1	04SD123N-SC-G-2	03SD129N-SC-A-1	04SD129N-SC-C-1	04SD129N-SC-D-1	04SD129N-SC-E-1	04SD129N-SC-E-2	04SD129N-SC-F-1	04SD129N-SC-G-1	04SD129N-SC-H-1	04SD135N-SC-B-1	03SD004U-SC-A-1	03SD006U-SC-A-1
	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Sandy Mud	Muddy Sand
Analyte (ug/kg)	7-9 ft	9.58-11.58 ft	9.58-11.58 ft	0-0.5 ft	0.5-2 ft	2-3.92 ft	3.92-5 ft	3.92-5 ft	5-6.67 ft	6.67-7.75 ft	8-9.17 ft	0.5-2 ft	0-0.5 ft	0-0.4 ft
1,1,1-TRICHLOROETHANE (TCA)	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
1,1,2,2-TETRACHLOROETHANE	R	R	R	6.6 U	6.5 U	6.4 U	1200 UJ	1400 U	6.5 U	13 U	10 U	10 UJ	11 U	12 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
1,1,2-TRICHLOROETHANE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
1,1-DICHLOROETHANE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
1,1-DICHLOROETHENE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
1,2,3-TRICHLOROBENZENE	R	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 UJ	11 U	12 U
1,2,4-TRICHLOROBENZENE	R	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 UJ	11 UJ	12 U
1,2-DIBROMO-3-CHLOROPROPANE (D	R	R	R	6.6 U	6.5 U	6.4 U	1200 UJ	1400 U	6.5 U	13 U	10 U	10 UJ	11 U	12 U
1,2-DIBROMOETHANE (EDB)	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
1,2-DICHLOROBENZENE	R	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 UJ	11 U	12 U
1,2-DICHLOROETHANE	6.7 U	7.7 UJ	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
1,2-DICHLOROPROPANE	6.7 U	7.7 UJ	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
1,3-DICHLOROBENZENE	R	R	R	6.6 U	6.5 U	6.4 U	220 J	290 J	6.5 U	13 U	10 U	10 UJ	11 UJ	12 U
1,4-DICHLOROBENZENE	R	R	R	6.6 U	6.5 U	6.4 U	650 J	750 J	6.5 U	13 U	10 U	10 UJ	11 UJ	12 U
1,4-Dioxane	530 UJ	610 UJ	R	530 UJ	510 UJ	510 UJ	98000 UJ	110000 UJ	520 UJ	1100 UJ	800 UJ	810 UJ	850 UJ	970 UJ
2-BUTANONE (MEK)	13 UJ	R	R	13 U	13 U	7.1 J	190 J	230 J	5.3 J	21 J	17 J	44	13 J	24 U
2-HEXANONE	13 UJ	R	R	13 U	13 U	13 U	2500 UJ	2700 U	13 U	27 U	20 U	20 U	21 UJ	24 U
4-METHYL-2-PENTANONE (MIBK)	13 UJ	R	R	13 U	13 U	13 U	2500 UJ	2700 U	13 U	27 U	20 U	20 U	21 U	24 U
ACETONE	27 UJ	100 UJ	120 UJ	26 U	26 U	52 U	4900 U	5400 U	35 U	130 U	110 U	190	58 U	49 U
BENZENE	6.7 U	7.7 UJ	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	1.1 J	10 U	10 U	11 U	12 U
BROMODICHLOROMETHANE	6.7 U	7.7 UJ	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
BROMOFORM	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 UJ	12 U
BROMOMETHANE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 UJ	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
CARBON DISULFIDE	13 UJ	2.6 J	R	13 U	13 U	0.46 J	2500 U	2700 U	1.2 J	2.4 J	0.74 J	2.1 J	1.9 J	24 U
CARBON TETRACHLORIDE	6.7 U	7.7 UJ	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
CHLOROBENZENE	6.7 UJ	R	R	6.6 U	6.5 U	1.6 J	1900	1700	0.63 J	2.1 J	10 U	11	11 U	12 U
CHLOROBROMOMETHANE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
CHLOROETHANE	13 UJ	R	R	13 U	13 U	13 U	2500 U	2700 U	13 U	27 U	20 U	20 U	21 U	24 U
CHLOROFORM	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
CHLOROMETHANE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
CIS-1,2-DICHLOROETHENE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
CIS-1,3-DICHLOROPROPENE	6.7 U	7.7 UJ	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 UJ	12 U
CYCLOHEXANE	6.7 UJ	0.92 J	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	1.1 J	10 U	10 U	11 U	12 U
DIBROMOCHLOROMETHANE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
DICHLORODIFLUOROMETHANE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
ETHYLBENZENE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
ISOPROPYLBENZENE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
M,P-XYLENES	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	130 J	150 J	6.5 U	13 U	10 U	10 U	11 U	12 U
METHYL ACETATE	13 UJ	R	R	13 U	13 U	13 U	240 J	390 J	13 U	6.4 J	9 J	20 U	21 UJ	24 U
METHYL TERT-BUTYL ETHER	6.7 UJ	R	R	6.6 UJ	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 UJ	12 U
METHYLCYLOHEXANE	6.7 U	7.7 UJ	R	6.6 U	6.5 U	6.4 U	1200 U	150 J	6.5 U	13 U	10 U	10 U	11 U	12 U
METHYLENE CHLORIDE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	0.8 J
O-XYLENE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	110 J	6.5 U	13 U	10 U	10 U	11 U	12 U
STYRENE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 UJ	12 U
TETRACHLOROETHENE (PCE)	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
TOLUENE	0.58 J	1.5 J	R	6.6 U	0.63 J	0.67 J	1200 U	1400 U	1.2 J	6.7 J	0.78 J	10 U	1.1 J	12 U
TRANS-1,2-DICHLOROETHENE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
TRANS-1,3-DICHLOROPROPENE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 UJ	12 U
TRICHLOROETHYLENE	6.7 U	7.7 UJ	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	0.8 J
TRICHLOROFLUOROMETHANE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
VINYL CHLORIDE	6.7 UJ	R	R	6.6 U	6.5 U	6.4 U	1200 U	1400 U	6.5 U	13 U	10 U	10 U	11 U	12 U
SOLIDS, TOTAL (%)	77.8	79.4	79.5	80.5	81.9	75.7	58.2	56	73.6	65.4	71.4	57.1	58.5	56.3
TOTAL ORGANIC CARBON (mg/kg)	2350	2870 J	4590 J	3420 J	1720	2070	45200	41800	19200	46800	10600	17100	13800	31300

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 5
VOCs in Bulk Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	WESTERN SHORELINE	WESTERN SHORELINE	WESTERN SHORELINE	WESTERN SHORELINE	WESTERN SHORELINE
	SD010	SD018	SD027	SD027	SD028	SD063	SD130	SD131	SD133	SD134
	11/14/2007	11/14/2007	11/15/2007	11/15/2007	11/14/2007	11/13/2007	11/14/2007	11/14/2007	11/15/2007	11/13/2007
	03SD010U-SC-A-1	03SD018U-SC-A-1	03SD027U-SC-A-1	03SD027U-SC-A-2	03SD028U-SC-A-1	03SD063W-SC-A-1	03SD130W-SC-A-1	03SD131W-SC-A-1	03SD133W-SC-A-1	03SD134W-SC-A-1
	Sandy Mud	Muddy Sand	Gravelly Sand	Gravelly Sand	Sand	Muddy Sand	Gravelly Sand	Gravelly Sand	Muddy Sand	Muddy Sand
Analyte (ug/kg)	0-0.3 ft	0-0.5 ft	0-0.4 ft	0-0.4 ft	0-0.4 ft	0-0.5 ft	0-0.4 ft	0-0.3 ft	0-0.4 ft	0-0.5 ft
1,1,1-TRICHLOROETHANE (TCA)	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,1,2,2-TETRACHLOROETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,1,2-TRICHLOROETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,1-DICHLOROETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,1-DICHLOROETHENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,2,3-TRICHLOROBENZENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,2,4-TRICHLOROBENZENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,2-DIBROMO-3-CHLOROPROPANE (D	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,2-DIBROMOETHANE (EDB)	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,2-DICHLOROBENZENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,2-DICHLOROETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,2-DICHLOROPROPANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,3-DICHLOROBENZENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,4-DICHLOROBENZENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
1,4-Dioxane	590 UJ	960 UJ	550 UJ	610 UJ	830 UJ	650 UJ	530 UJ	490 UJ	550 UJ	640 UJ
2-BUTANONE (MEK)	15 U	24 U	14 U	15 U	21 U	16 U	13 U	12 U	14 U	16 U
2-HEXANONE	15 U	24 U	14 U	15 U	21 U	16 U	13 U	12 U	14 U	16 U
4-METHYL-2-PENTANONE (MIBK)	15 U	24 U	14 U	15 U	21 U	16 U	13 U	12 U	14 U	16 U
ACETONE	30 U	48 U	28 U	30 U	42 U	33 U	26 U	24 U	27 U	32 U
BENZENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
BROMODICHLOROMETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
BROMOFORM	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
BROMOMETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
CARBON DISULFIDE	15 U	24 U	14 U	15 U	21 U	16 U	13 U	12 U	14 U	1.3 J
CARBON TETRACHLORIDE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
CHLOROBENZENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
CHLOROBROMOMETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
CHLOROETHANE	15 U	24 U	14 U	15 U	21 U	16 U	13 U	12 U	14 U	16 U
CHLOROFORM	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
CHLOROMETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
CIS-1,2-DICHLOROETHENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
CIS-1,3-DICHLOROPROPENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
CYCLOHEXANE	7.4 U	12 U	6.9 U	7.6 U	10 U	0.66 J	6.6 U	6.1 U	6.9 U	8.1 U
DIBROMOCHLOROMETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
DICHLORODIFLUOROMETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
ETHYLBENZENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
ISOPROPYLBENZENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
M,P-XYLENES	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
METHYL ACETATE	15 U	24 U	14 U	15 U	21 U	16 U	13 U	12 U	14 U	16 U
METHYL TERT-BUTYL ETHER	7.4 UJ	12 UJ	6.9 U	7.6 U	10 U	8.2 UJ	6.6 U	6.1 U	6.9 U	8.1 U
METHYLCYLOHEXANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
METHYLENE CHLORIDE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
O-XYLENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
STYRENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
TETRACHLOROETHENE (PCE)	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
TOLUENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	0.68 J
TRANS-1,2-DICHLOROETHENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
TRANS-1,3-DICHLOROPROPENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
TRICHLOROETHYLENE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
TRICHLOROFLUOROMETHANE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
VINYL CHLORIDE	7.4 U	12 U	6.9 U	7.6 U	10 U	8.2 U	6.6 U	6.1 U	6.9 U	8.1 U
SOLIDS, TOTAL (%)	88.6	58.6	73.9	77.4	75.8	85.1	73.3	84.9	84.4	77
TOTAL ORGANIC CARBON (mg/kg)	3900	12800	11200	13200	12300	1670 J	8550	1140	2420	5310 J

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 6
Simultaneously Extracted Metals and Acid Volatile Sulfides in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD118	SD120	SD132	SD032	SD056	SD059	SD082	SD085	SD087	SD094	SD094	SD097	SD097
	03SD118F-SC-A-1	03SD120F-SC-A-1	03SD132W-SC-A-1	03SD032N-SC-A-1	03SD056N-SC-A-1	03SD059N-SC-A-1	03SD082N-SC-A-1	03SD085N-SC-A-1	03SD087N-SC-A-1	03SD094N-SC-A-1	03SD094N-SC-A-2	03SD097N-SC-A-1	03SD097N-SC-A-2
	11/14/2007	11/14/2007	11/14/2007	11/15/2007	11/14/2007	11/13/2007	11/14/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007
Analyte (umoles/g)	Sand	Sand	Gravelly Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand
SULFIDE, ACID-VOLATILE	0.129 U	0.474	0.121 U	1.21	0.152 U	0.127 U	0.335 J	4.21 J	0.324	2.73 J	1.41 J	0.183 U	0.181 U
CADMIUM	0.00142	0.0552	0.00169	0.00534 J	0.00142	0.00169	0.0151 J	0.112 J	0.00311 J	0.0418 J	0.048 J	0.00329 J	0.00365 J
COPPER	0.121	0.795	0.143	0.268	0.129	0.11	0.592 J	1.22 J	0.228	0.777 J	0.61 J	0.222	0.234
LEAD	0.0642	0.849	0.132	0.194	0.0502	0.0569	0.241 J	2.24 J	0.105	0.705 J	0.719 J	0.114	0.121
NICKEL	0.0698	0.145	0.0596	0.0903	0.0528	0.063	0.114 J	0.196 J	0.075	0.223 J	0.191 J	0.0954	0.0937
ZINC	0.792	5.35	0.691	1.45	0.61	0.73	2.03 J	6.82 J	0.895	4.79 J	4.97 J	1.31	1.32

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 6
Simultaneously Extracted Metals and Acid Volatile Sulfides in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPSTREAM	UPSTREAM
	SD100	SD011V	SD061	SD064	SD067	SD069	SD069	SD071	SD124	SD125	SD126	SD004	SD006
	03SD100N-SC-A-1	03SD11VC-SC-A-1	03SD061C-SC-A-1	03SD064C-SC-A-1	03SD067C-SC-A-1	03SD069U-SC-A-1	03SD069U-SC-A-2	03SD071C-SC-A-1	03SD124C-SC-A-1	03SD125C-SC-A-1	03SD126C-SC-A-1	03SD004U-SC-A-1	03SD006U-SC-A-1
	11/13/2007	11/13/2007	11/13/2007	11/13/2007	11/13/2007	11/15/2007	11/15/2007	11/13/2007	11/13/2007	11/13/2007	11/13/2007	11/14/2007	11/15/2007
Analyte (umoles/g)	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Muddy Sand	Sandy Mud	Muddy Sand
SULFIDE, ACID-VOLATILE	0.35 J	4.87	0.136 U	0.13 U	0.124 U	1.68	0.247	0.141 U	0.176	0.129 U	0.225 UJ	5.08	0.645
CADMIUM	0.00534 J	0.048	0.0024	0.00205	0.00276	0.048 J	0.024 J	0.00231	0.00347	0.00231	0.00978 J	0.00347	0.0032 J
COPPER	0.469 J	0.632	0.159	0.132	0.343	1.01 J	0.508 J	0.135	0.197	0.146	0.225 J	0.247	0.238
LEAD	0.185 J	0.579	0.0825	0.0777	0.135	0.55 J	0.343 J	0.0782	0.0989	0.0743	0.172 J	0.12	0.11
NICKEL	0.134 J	0.0869	0.0784	0.0732	0.0596	0.134	0.114	0.0681	0.0698	0.0613	0.114 J	0.0784	0.0835
ZINC	1.76 J	3.07	1.13	0.902	1.04	3.88 J	2.29 J	0.879	1.08	0.803	1.44 J	0.938	0.916

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 6
Simultaneously Extracted Metals and Acid Volatile Sulfides in Surficial Sediment
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	WESTERN SHORELINE	WESTERN SHORELINE	WESTERN SHORELINE	WESTERN SHORELINE	WESTERN SHORELINE
	SD010	SD018	SD027	SD027	SD028	SD063	SD130	SD131	SD133	SD134
	03SD010U-SC-A-1	03SD018U-SC-A-1	03SD027U-SC-A-1	03SD027U-SC-A-2	03SD028U-SC-A-1	03SD063W-SC-A-1	03SD130W-SC-A-1	03SD131W-SC-A-1	03SD133W-SC-A-1	03SD134W-SC-A-1
	11/14/2007	11/14/2007	11/15/2007	11/15/2007	11/14/2007	11/13/2007	11/14/2007	11/14/2007	11/15/2007	11/13/2007
Analyte (umoles/g)	Sandy Mud	Muddy Sand	Gravelly Sand	Gravelly Sand	Sand	Muddy Sand	Gravelly Sand	Gravelly Sand	Muddy Sand	Muddy Sand
SULFIDE, ACID-VOLATILE	0.113 U	0.171 U	0.135 U	0.581	0.132 U	0.118 UJ	0.136 U	0.118 U	0.118 U	0.13 UJ
CADMIUM	0.00285	0.00356	0.016 J	0.0258 J	0.00249	0.00178	0.00222	0.00142	0.00196 J	0.0024
COPPER	0.231	0.194	0.488 J	0.725 J	0.181	0.241	0.182	0.102	0.496	0.194
LEAD	0.128	0.0936	0.288	0.406	0.0796	0.0888	0.148	0.0536	0.135	0.0864
NICKEL	0.0801	0.075	0.0954	0.112	0.0562	0.123	0.0494	0.075	0.237	0.0647
ZINC	0.934	0.93	1.48 J	2.14 J	0.759	1.04	0.757	0.541	1.87	0.835

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD
	SD117	SD117	SD117	SD117	SD118	SD118	SD118	SD118	SD118	SD118	SD118	SD119	SD119
	04SD117F-SC-C-1	04SD117F-SC-D-1	04SD117F-SC-E-1	04SD117F-SC-F-1	03SD118F-SC-A-1	04SD118F-SC-C-1	04SD118F-SC-D-1	04SD118F-SC-E-1	04SD118F-SC-F-1	04SD118F-SC-G-1	04SD118F-SC-F-2	04SD119F-SC-C-1	04SD119F-SC-D-1
	0.5 - 2 ft	2 - 4 ft	4 - 6 ft	6 - 6.67 ft	0 - 0.5 ft	0.5 - 2 ft	2 - 4 ft	4 - 6 ft	6 - 7.5 ft	7.5 - 8.5 ft	6 - 7.5 ft	0.5 - 2 ft	2 - 3.08 ft
Grain Size (%)	12/11/2007	12/11/2007	12/11/2007	12/11/2007	11/14/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007	12/11/2007
Coarse Sand	24.2	17.1	15.1	8	6.9	10.7	7.7	7.1	0	12.6	0.1	3.6	3.6
Medium Sand	48.6	52.3	48.9	55	50.2	20.2	35.9	31	6.4	10.9	4.4	25.7	14.3
Fine Sand	9	20.1	25.4	28.6	34.1	54.2	41.6	51.5	20.6	28.1	22.6	64.3	72.4
Total Clay	0.8	0.6	1	0.7	3.2	0.5	0.3	2.5	20.3	1	12.9	0.1	0.8
Total Silt	0.5	1.4	2.8	2.7	3.6	2.1	2.1	2.9	52.7	35.8	60	3.4	7.1
Total Sand	81.8	89.5	89.4	91.6	91.2	85.1	85.2	89.6	27	51.6	27.1	93.6	90.3
Total Fines	1.3	2	3.8	3.4	6.8	2.6	2.4	5.4	73	36.8	72.9	3.5	7.9

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT FAR FIELD	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD119	SD119	SD120	SD120	SD120	SD120	SD120	SD132	SD032	SD032	SD056	SD056	SD056
	04SD119F-SC-E-1	04SD119F-SC-F-1	03SD120F-SC-A-1	04SD120F-SC-C-1	04SD120F-SC-D-1	04SD120F-SC-E-1	04SD120F-SC-E-2	03SD132W-SC-A-1	03SD032N-SC-A-1	04SD032N-SC-B-1	03SD056N-SC-A-1	04SD056N-SC-B-1	04SD056N-SC-B-2
	3.08 - 7.08 ft	7.08 - 7.83 ft	0 - 0.5 ft	0.5 - 2 ft	3.5 - 5.5 ft	6.67 - 8.67 ft	6.67 - 8.67 ft	0 - 0.5 ft	0 - 0.5 ft	0.5 - 2 ft	0 - 0.5 ft	0.5 - 2 ft	0.5 - 2 ft
Grain Size (%)	12/11/2007	12/11/2007	11/14/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	11/14/2007	11/15/2007	12/11/2007	11/14/2007	12/11/2007	12/11/2007
Coarse Sand	0	2.6	4.6	0	0	0	0	23.1	5.4	0.8	0.4	7.9	6.8
Medium Sand	17.6	14.1	9.1	0.2	0.2	0.2	0	40.8	3.6	4.4	1.4	29	28.9
Fine Sand	10.1	68.9	33.5	0.2	0	0	0.2	16.5	35.6	40.6	52.5	39.1	39.3
Total Clay	20.2	2.8	14.4	59.6	54.8	58.9	54.5	0.9	6.2	15.2	8.7	6.9	4.8
Total Silt	52.1	10.1	33.5	40	45	40.9	45.3	3.5	20.4	38.8	37	12	14.9
Total Sand	27.7	85.6	47.2	0.4	0.2	0.2	0.2	80.4	44.6	45.8	54.3	76	75
Total Fines	72.3	12.9	47.9	99.6	99.8	99.8	99.8	4.4	26.6	54	45.7	18.9	19.7

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD059	SD080	SD082	SD082	SD085	SD085	SD087	SD094	SD094	SD097	SD097	SD098	SD100
	03SD059N-SC-A-1	04SD080N-SC-B-1	03SD082N-SC-A-1	04SD082N-SC-B-1	03SD085N-SC-A-1	04SD085N-SC-B-1	03SD087N-SC-A-1	03SD094N-SC-A-1	03SD094N-SC-A-2	03SD097N-SC-A-1	03SD097N-SC-A-2	04SD098N-SC-B-1	03SD100N-SC-A-1
	0 - 0.5 ft	0.5 - 2 ft	0 - 0.5 ft	0.5 - 2 ft	0 - 0.5 ft	0.5 - 2 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0.5 - 2 ft	0 - 0.5 ft
Grain Size (%)	11/13/2007	12/11/2007	11/14/2007	12/11/2007	11/15/2007	12/11/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007	12/11/2007	11/13/2007
Coarse Sand	1.6	3.2	3.8	0	1.6	1.1	1.5	0	5.8	8.5	5.7	0.1	0.3
Medium Sand	28	43.2	3.5	15.3	2.8	14.3	4.2	4.8	15.7	6.8	6.6	2.6	2.4
Fine Sand	65.9	18.4	32.4	13.6	10.7	18.9	43.9	12.5	13.4	56.8	49.2	37.8	76.3
Total Clay	2.3	9.3	15.8	15.5	25.5	19.6	9.5	17.8	14.2	7.6	10.4	20.1	4
Total Silt	0.9	25.2	44.5	55.6	59.4	46	40.8	64.9	50.4	18.2	27.2	39.4	17
Total Sand	95.5	64.8	39.7	28.9	15.1	34.3	49.6	17.3	34.9	72.1	61.5	40.5	79
Total Fines	3.2	34.5	60.3	71.1	84.9	65.6	50.3	82.7	64.6	25.8	37.6	59.5	21

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD115	SD115	SD115	SD115	SD115	SD115	SD115	SD115	SD116	SD116	SD116	SD116	SD116
	04SD115N-SC-C-1	04SD115N-SC-H-1	04SD115N-SC-I-1	04SD115N-SC-D-1	04SD115N-SC-E-1	04SD115N-SC-F-1	04SD115N-SC-G-1	04SD115N-SC-F-2	04SD116N-SC-C-1	04SD116N-SC-G-1	04SD116N-SC-H-1	04SD116N-SC-D-1	04SD116N-SC-E-1
	0.5 - 2 ft	10.17 - 11.5 ft	12.5 - 13.92 ft	2 - 4 ft	4 - 6 ft	6 - 7.33 ft	7.5 - 9.17 ft	6 - 7.33 ft	0.5 - 2 ft	10 - 12 ft	14 - 15.83 ft	2 - 4 ft	4 - 6.67 ft
Grain Size (%)	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
Coarse Sand	0.1	0	0	0	0.1	1.5	1.2	0.8	0.7	0	0	3.3	2.4
Medium Sand	4.2	0.2	0	9.5	11.7	11.9	8.1	12.8	4.4	0	0	2.1	7.1
Fine Sand	22.2	0	0	18.6	24	39.3	38.6	35.3	28.2	2	0.2	13.4	19
Total Clay	16.3	57.7	50.7	15	12.8	10.5	13.1	11.8	10.7	77.5	66.2	27.3	16.7
Total Silt	57.2	42.1	49.3	56.9	51.4	36.7	38.4	39	55.8	20.5	33.6	53	54.4
Total Sand	26.5	0.2	0	28.1	35.8	52.7	47.9	48.9	33.3	2	0.2	18.8	28.5
Total Fines	73.5	99.8	100	71.9	64.2	47.2	51.5	50.8	66.5	98	99.8	80.3	71.1

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD116	SD116	SD121	SD121	SD121	SD121	SD121	SD121	SD122	SD122	SD122	SD122	SD122
	04SD116N-SC-F-1	04SD116N-SC-D-2	04SD121N-SC-C-1	04SD121N-SC-D-1	04SD121N-SC-E-1	04SD121N-SC-F-1	04SD121N-SC-G-1	04SD121N-SC-D-2	04SD122N-SC-C-1	04SD122N-SC-D-1	04SD122N-SC-E-1	04SD122N-SC-F-1	04SD122N-SC-G-1
	6.67 - 8.5 ft	2 - 4 ft	0.5 - 2 ft	2 - 3.5 ft	3.5 - 5 ft	5 - 7.17 ft	8.67 - 10.67 ft	2 - 3.5 ft	0.5 - 2 ft	2.33 - 3.75 ft	4.5 - 6.5 ft	7 - 7.67 ft	7.67 - 8.17 ft
Grain Size (%)	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
Coarse Sand	1	0.9	1.7	0.4	1.2	1.9	0	0.3	1.4	0.7	2.7	2.5	9.9
Medium Sand	3.6	3.4	4.5	6.8	7.4	3.9	0.4	5.8	12.7	10.4	11.7	19.4	22.8
Fine Sand	24.3	33	35.7	22.9	34.1	33.9	0.4	25.1	27.5	15.4	47.3	31.6	26.5
Total Clay	16.6	10.6	19.2	22.7	11.3	21.6	64.8	15.3	16	17.8	10.8	6.5	4.3
Total Silt	54.2	52.1	38.4	47.2	46	38.2	34.4	53.1	42.4	55.7	27.1	39.7	26.7
Total Sand	28.9	37.3	41.9	30.1	42.7	39.7	0.8	31.2	41.6	26.5	61.7	53.5	59.2
Total Fines	70.8	62.7	57.6	69.9	57.3	59.8	99.2	68.4	58.4	73.5	37.9	46.2	31

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE
	SD122	SD123	SD123	SD123	SD123	SD123	SD123	SD123	SD129	SD129	SD129	SD129	SD129
	04SD122N-SC-E-2	03SD123N-SC-A-1	04SD123N-SC-C-1	04SD123N-SC-D-1	04SD123N-SC-E-1	04SD123N-SC-F-1	04SD123N-SC-G-1	04SD123N-SC-G-2	03SD129N-SC-A-1	04SD129N-SC-C-1	04SD129N-SC-D-1	04SD129N-SC-E-1	04SD129N-SC-F-1
	4.5 - 6.5 ft	0 - 0.5 ft	0.5 - 2 ft	3 - 5 ft	5 - 6.58 ft	7 - 9 ft	9.58 - 11.58 ft	9.58 - 11.58 ft	0 - 0.5 ft	0.5 - 2 ft	2 - 3.92 ft	3.92 - 5 ft	5 - 6.67 ft
Grain Size (%)	12/12/2007	11/13/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	11/13/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
Coarse Sand	0.8	1.9	0.2	1.4	2.7	0.1	0	0	6.1	11.6	4.5	0.1	2.5
Medium Sand	14	7.2	14.9	11.5	7.4	0.2	0	0.2	54.3	46	26.3	6.2	17.9
Fine Sand	50.4	71.3	37.1	44.3	43.3	0.6	0.6	0.2	26.8	32.7	63.1	15.9	59.6
Total Clay	11.4	4.6	6.7	13.2	20.5	66.1	41.5	33.7	2.4	1.2	4	40.1	7
Total Silt	23.4	13.9	41.1	29.5	25.2	33	57.9	65.9	2.3	0.3	0.4	37.7	11.7
Total Sand	65.2	80.4	52.2	57.2	53.4	0.9	0.6	0.4	87.2	90.3	93.9	22.2	80
Total Fines	34.8	18.5	47.8	42.7	45.7	99.1	99.4	99.6	4.7	1.5	4.4	77.8	18.7

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL
	SD129	SD129	SD129	SD011-INV	SD061	SD064	SD067	SD069	SD069	SD069	SD069	SD069	SD069	SD069
	04SD129N-SC-G-1	04SD129N-SC-H-1	04SD129N-SC-E-2	03SD11VC-SC-A-1	03SD061C-SC-A-1	03SD064C-SC-A-1	03SD067C-SC-A-1	03SD069U-SC-A-1	04SD069C-SC-C-1	04SD069C-SC-G-1	04SD069C-SC-D-1	04SD069C-SC-E-1	04SD069C-SC-F-1	03SD069U-SC-A-2
	6.67 - 7.75 ft	8 - 9.17 ft	3.92 - 5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0.5 - 2 ft	10.08 - 12.08 ft	2 - 3.5 ft	3.5 - 4.5 ft	5 - 6.5 ft	0 - 0.5 ft
Grain Size (%)	12/12/2007	12/12/2007	12/12/2007	11/13/2007	11/13/2007	11/13/2007	11/13/2007	11/15/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007	11/15/2007
Coarse Sand	0.9	0.5	0	1.8	5	0.5	12.4	3.4	5.8	0	6.9	11	0.2	8.6
Medium Sand	10.2	6.6	12.9	6.9	14.5	9.4	50.2	10.5	7	0.2	8.1	17.6	6.4	12.1
Fine Sand	58	60.6	19	25.9	64	83.9	23.6	42.9	57.3	0	34.3	24.6	31.3	43.4
Total Clay	7.5	9.7	26.1	20.5	4.2	0.6	1.4	11.8	9.2	40.2	23.2	19.2	41.7	9
Total Silt	23.4	22.5	42	44.6	10.5	5.4	1.7	29.4	19.8	59.6	25.4	25.5	20.4	25.5
Total Sand	69.1	67.7	31.9	34.6	83.5	93.8	86.2	56.8	70.1	0.2	49.3	53.2	37.9	64.1
Total Fines	30.9	32.2	68.1	65.1	14.7	6	3.1	41.2	29	99.8	48.6	44.7	62.1	34.5

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL
	SD069	SD071	SD124	SD124	SD124	SD124	SD124	SD124	SD124	SD125	SD125	SD125	SD125	SD125
	04SD069C-SC-G-2	03SD071C-SC-A-1	03SD124C-SC-A-1	04SD124C-SC-C-1	04SD124C-SC-D-1	04SD124C-SC-E-1	04SD124C-SC-F-1	04SD124C-SC-G-1	04SD124C-SC-C-2	03SD125C-SC-A-1	04SD125C-SC-C-1	04SD125C-SC-F-1	04SD125C-SC-D-1	04SD125C-SC-E-1
	10.08 - 12.08 ft	0 - 0.5 ft	0 - 0.5 ft	0.5 - 2 ft	2 - 3.5 ft	3.58 - 5.5 ft	5.58 - 6.42 ft	6.42 - 8.25 ft	0.5 - 2 ft	0 - 0.5 ft	0.5 - 2 ft	11.17 - 13.17 ft	3 - 5 ft	6 - 8 ft
Grain Size (%)	12/12/2007	11/13/2007	11/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	12/13/2007	11/13/2007	12/12/2007	12/12/2007	12/12/2007	12/12/2007
Coarse Sand	0	0.3	0.2	0.5	0.4	0.3	0.1	2.2	2.7	0.4	1.3	0	0	0
Medium Sand	0.2	15	1.4	10.2	10.4	4.4	1.8	12.1	9.9	27.2	8.6	0.2	2.4	0
Fine Sand	0.2	71.3	57.8	51.8	86.5	33.8	11.7	68.8	52.5	68.2	34.6	0	26	0.8
Total Clay	55.1	3.9	7.3	14.3	0.9	21.6	30.6	8.5	7.2	1.8	17.1	48.1	28.4	36.7
Total Silt	44.5	9.3	33.3	23.2	1.7	39.9	55.8	7.8	26.7	2.2	38.2	51.7	43.2	62.5
Total Sand	0.4	86.6	59.4	62.5	97.3	38.5	13.6	83.1	65.1	95.8	44.5	0.2	28.4	0.8
Total Fines	99.6	13.2	40.6	37.5	2.6	61.5	86.4	16.3	33.9	4	55.3	99.8	71.6	99.2

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	UPSTREAM	WESTERN SHORELINE	WESTERN SHORELINE
	SD125	SD126	SD127	SD128	SD135	SD004	SD006	SD010	SD018	SD027	SD027	SD028	SD063	SD130
	04SD125C-SC-D-2	03SD126C-SC-A-1	03SD127C-SC-A-1	03SD128C-SC-A-1	04SD135N-SC-B-1	03SD004U-SC-A-1	03SD006U-SC-A-1	03SD010U-SC-A-1	03SD018U-SC-A-1	03SD027U-SC-A-1	03SD027U-SC-A-2	03SD028U-SC-A-1	03SD063W-SC-A-1	03SD130W-SC-A-1
	3 - 5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0.5 - 2 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Grain Size (%)	12/12/2007	11/13/2007	11/13/2007	11/13/2007	12/11/2007	11/14/2007	11/15/2007	11/14/2007	11/14/2007	11/15/2007	11/15/2007	11/14/2007	11/13/2007	11/14/2007
Coarse Sand	0.1	0.8	0.5	3.6	0.5	5.2	4.2	26.6	0.5	14.4	14.3	16.8	21.9	12.9
Medium Sand	2	17.8	17.8	44.6	2.9	8.1	4.2	31.2	1.8	25.9	21.8	18.9	47.8	21.3
Fine Sand	23.8	69.1	66.1	38.2	44.3	40.8	38.9	7.6	52.5	12.7	11	24.4	13.3	20.7
Total Clay	33.2	0.6	4.5	2.2	15	7.5	10.7	0.2	9.1	3.6	3.7	5.5	1.8	2.6
Total Silt	40.9	10.5	10.9	9.6	34.6	34.5	40.3	1	36.1	8.1	6.5	7.6	0.2	5.7
Total Sand	25.9	87.7	84.4	86.4	47.7	54.1	47.3	65.4	54.8	53	47.1	60.1	83	54.9
Total Fines	74.1	11.1	15.4	11.8	49.6	42	51	1.2	45.2	11.7	10.2	13.1	2	8.3

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 7
Grain Size Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	WESTERN SHORELINE	WESTERN SHORELINE	WESTERN SHORELINE
	SD131	SD133	SD134
	03SD131W-SC-A-1	03SD133W-SC-A-1	03SD134W-SC-A-1
	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Grain Size (%)	11/14/2007	11/15/2007	11/13/2007
Coarse Sand	17.8	18.6	6
Medium Sand	42.8	54.3	43
Fine Sand	11.4	13.5	36.6
Total Clay	0.3	0.5	1.9
Total Silt	1.4	1.8	6.2
Total Sand	72	86.4	85.6
Total Fines	1.7	2.3	8.1

Notes:
Total Sand represents the sum of the Coarse, Medium, and Fine Sand Fractions.
Total Fines represents the sum of the Total Silt and Total Clay Fractions.

2 at end of sample ID indicate duplicate sample

Table 8
Total Recoverable Phase Pore Water Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPSTREAM	UPSTREAM	WESTERN SHORELINE
	SD032	SD085	SD087	SD087	SD094	SD097	SD069	SD126	SD006	SD027	SD133
	03PW032N-WC-A-1	03PW085N-WC-A-1	03PW087N-WC-A-1	03PW087N-WC-A-2	03PW094N-WC-A-1	03PW097N-WC-A-1	03PW069C-WC-A-1	03PW126C-WC-A-1	03PW006U-WC-A-1	03PW027U-WC-A-1	03PW133W-WC-A-1
Analyte	11/19/2007	11/19/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007	11/13/2007	11/15/2007	11/15/2007	11/19/2007
Chemistry (mg/L)											
TOTAL ORGANIC CARBON	15.8	61.4	R	11.9	26.4	13.8	31.9	6.32	7.93	22.6	5.57
TOTAL ORGANIC CARBON	15.1	62.6	R	11.4	26.7	13.1	30.5	5.85	7.63	21.9	5.58
TOTAL ORGANIC CARBON	15.2	64.8	R	11.2	26.6	13.3	32.6	6.3	8.34	24.6	5.6
TOTAL ORGANIC CARBON	15.6	66.5	R	11.9	28.1	13.8	32.5	6.35	8.4	23.4	5.66
SOLIDS, TOTAL SUSPENDED	10.1 U	124	9.18 J	13.4 J	63.6	10.4	110	12.4	12.1	117	24.5
Metals-Total (ug/L)											
ALUMINUM	636	10400	167 J	513	5600	560	25600	100 U	1350	18400	500 U
ANTIMONY	5 U	10.1	1 U	1 U	4.6	1.2	13.4	1 U	1 U	16.4	5 U
ARSENIC	7.8	21.4	10 U	10 U	10.9	10 U	32.4	10 U	10 U	19.3	5 U
BARIUM	95.5	583	84.5	110	293	116	1250	103	103	982	140
BERYLLIUM	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CADMIUM	5 U	7.2	1 U	1 U	3.5	1 U	17.1	1 U	1 U	15.3	5 U
CALCIUM METAL	54400	48800	46900	49000	74100	43800	60100	48000	56800	59400	41000
CHROMIUM, TOTAL	15 U	714	10 U	13.4	239	18.8	1220	10 U	10 U	1460	15 U
COBALT	5 U	7	5 U	5 U	5 U	5 U	6.8	5 U	5 U	7.5	5 U
COPPER	19	239	5 U	9.1	96.4	9.6	380	7.4	22.2	496	22.5
IRON, TOTAL	1270	16100	R	R	4470	726	17100	751	3080	19400	1470
LEAD	12.8 J	647 J	R	6.9	156	11.5	772	1.9	9.7	751	7 J
MAGNESIUM	6560	10500	5670	6710	8690	7200	7080	6740	12000	7280	7390
MANGANESE	1520	1240	2280 J	3480 J	2180	6770	2020	4660	5200	1720	32.5
MERCURY	0.2 U	0.374	0.2 U	0.2 U	0.2 U	0.2 U	0.842	0.2 U	0.2 U	1.2	0.2 U
NICKEL	5 U	21.6	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	5 U
POTASSIUM	10000 U	10000 U	3590	2880	3480	3120	4540	2090	3270	4380	10000 U
SELENIUM	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	5 U	5 U	1 U	1 U	1.5	1 U	8.7	1 U	1 U	10.3	5 U
SODIUM	25000 U	38700	15500	16700	17500	16000	16500	17100	27300	17300	25000 U
THALLIUM	5 U	5 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U	5 U
VANADIUM	5 U	25 U	5 U	5 U	11.2	5 U	5 U	5 U	5 U	5 U	5 U
ZINC	25 U	345	20 U	20 U	145	20 U	543	20 U	20 U	682	25 U
Soot Black Carbon (%)	0.57	0.36	0.49	0.98	0.53	0.36	0.73	0.26	0.39	0.61	0.12
Total Organic Carbon (%)	1.99	3.7	2.78	2.78	6.76	2.13	4.71	2.29	3.13	1.12	0.242

Notes:
Soot Black Carbon and TOC measured on bulk sediment submitted for pore water analyses.
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 8
Total Recoverable Phase Pore Water Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

Analyte	ADJACENT NEARSHORE SD032 03PW032N-WC-A-1 11/19/2007	ADJACENT NEARSHORE SD085 03PW085N-WC-A-1 11/19/2007	ADJACENT NEARSHORE SD087 03PW087N-WC-A-1 11/15/2007	ADJACENT NEARSHORE SD087 03PW087N-WC-A-2 11/15/2007	ADJACENT NEARSHORE SD094 03PW094N-WC-A-1 11/15/2007	ADJACENT NEARSHORE SD097 03PW097N-WC-A-1 11/15/2007	UPPER NAVIGATIONAL CHANNEL SD069 03PW069C-WC-A-1 11/15/2007	UPPER NAVIGATIONAL CHANNEL SD126 03PW126C-WC-A-1 11/13/2007	UPSTREAM SD006 03PW006U-WC-A-1 11/15/2007	UPSTREAM SD027 03PW027U-WC-A-1 11/15/2007	WESTERN SHORELINE SD133 03PW133W-WC-A-1 11/19/2007
VOCs (ug/L)											
1,1,1-TRICHLOROETHANE (TCA)	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,1,2,2-TETRACHLOROETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,1,2-TRICHLOROETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,1-DICHLOROETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,1-DICHLOROETHENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,2,3-TRICHLOROBENZENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,2,4-TRICHLOROBENZENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	2 UJ	100 UJ	2 UJ	4 UJ	4 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	--
1,2-DIBROMOETHANE (EDB)	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,2-DICHLOROBENZENE	1 UJ	50 UJ	0.4 J	0.5 J	0.7 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,2-DICHLOROETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,2-DICHLOROPROPANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,3-DICHLOROBENZENE	0.33 J	50 UJ	0.28 J	2 UJ	0.42 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,4-DICHLOROBENZENE	1.4 J	11 J	1.2 J	3.9 J	2.9 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
1,4-Dioxane	400 UJ	20000 UJ	400 UJ	800 UJ	800 UJ	400 UJ	400 UJ	400 UJ	400 UJ	400 UJ	--
2-BUTANONE (MEK)	2 J	250 UJ	5 UJ	10 UJ	2.6 J	0.72 J	1.6 J	0.86 J	5 UJ	0.7 J	--
2-HEXANONE	5 UJ	250 UJ	5 UJ	10 UJ	10 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	--
4-METHYL-2-PENTANONE (MIBK)	5 UJ	250 UJ	5 UJ	10 UJ	10 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	--
ACETONE	13 UJ	82 UJ	10 UJ	20 UJ	20 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	--
BENZENE	1 UJ	4200 J	0.26 J	18 J	26 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
BROMODICHLOROMETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
BROMOFORM	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
BROMOMETHANE	2 UJ	100 UJ	2 UJ	4 UJ	4 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	--
CARBON DISULFIDE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	0.22 J	1 UJ	1 UJ	1 UJ	1 UJ	--
CARBON TETRACHLORIDE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
CHLOROBENZENE	6.8 J	1200 J	180 J	780 J	680 J	1.1 J	1.9 J	1 UJ	1 UJ	0.45 J	--
CHLOROBROMOMETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
CHLOROETHANE	2 UJ	100 UJ	2 UJ	4 UJ	4 UJ	2 UJ	2 UJ	2 UJ	2 UJ	2 UJ	--
CHLOROFORM	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
CHLOROMETHANE	2 UJ	100 UJ	2 UJ	4 UJ	4 UJ	0.23 J	2 UJ	2 UJ	2 UJ	2 UJ	--
CIS-1,2-DICHLOROETHENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
CIS-1,3-DICHLOROPROPENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
CYCLOHEXANE	0.59 J	50 UJ	1.4 J	1.5 J	1 J	1 UJ	0.41 J	1.3 J	1.3 J	0.47 J	--
DIBROMOCHLOROMETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
DICHLORODIFLUOROMETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
ETHYLBENZENE	1 UJ	50 UJ	0.21 J	0.54 J	0.56 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
ISOPROPYLBENZENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
M,P-XYLENES	1 UJ	44 J	1 UJ	1.1 J	0.46 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
METHYL ACETATE	10 UJ	500 UJ	10 UJ	20 UJ	20 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	--
METHYL TERT-BUTYL ETHER	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
METHYLCYLOHEXANE	1 UJ	50 UJ	1 UJ	2 UJ	0.68 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
METHYLENE CHLORIDE	4 J	50 UJ	6.4 J	6.6 UJ	2 UJ	14 J	3.7 UJ	13 J	1 UJ	1 UJ	--
O-XYLENE	1 UJ	15 J	0.35 J	2.8 J	4.8 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
STYRENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
TETRACHLOROETHENE (PCE)	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
TOLUENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
TRANS-1,2-DICHLOROETHENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
TRANS-1,3-DICHLOROPROPENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
TRICHLOROETHYLENE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
TRICHLOROFLUOROMETHANE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--
VINYL CHLORIDE	1 UJ	50 UJ	1 UJ	2 UJ	2 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	--

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Table 9
Dissolved Phase Pore Water Data
BASF Corporation
Hudson River OU-2 Investigation
Rensselaer, New York

	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	ADJACENT NEARSHORE	UPPER NAVIGATIONAL CHANNEL	UPPER NAVIGATIONAL CHANNEL	UPSTREAM	UPSTREAM	WESTERN SHORELINE
	SD032	SD085	SD087	SD087	SD094	SD097	SD069	SD126	SD006	SD027	SD133
	03PW032N-WC-A-1-F	03PW085N-WC-A-1-F	03PW087N-WC-A-1-F	03PW087N-WC-A-2-F	03PW094N-WC-A-1-F	03PW097N-WC-A-1-F	03PW069C-WC-A-1-F	03PW126C-WC-A-1-F	03PW006U-WC-A-1-F	03PW027U-WC-A-1-F	03PW133W-WC-A-1-F
Analyte	11/19/2007	11/19/2007	11/19/2007	11/19/2007	11/19/2007	11/19/2007	11/19/2007	11/19/2007	11/19/2007	11/19/2007	11/19/2007
Chemistry (mg/L)											
DISSOLVED ORGANIC CARBON	11.6	8.17	R	9.14	12.2	7.41	8.59	4.8	4.93	10	4.78
DISSOLVED ORGANIC CARBON	11.3	7.7	R	8.54	11.6	6.82	8.41	4.57	4.88	9.68	4.52
DISSOLVED ORGANIC CARBON	12.3	7.49	R	9.14	12.3	7.4	9.03	4.97	4.81	9.9	4.84
DISSOLVED ORGANIC CARBON	12.4	8.22	R	9.21	12.5	7.36	8.88	4.66	5.01	10.3	5.04
Metals-Dissolved (ug/L)											
ALUMINUM	500 U	500 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	500 U
ANTIMONY	5 U	5 U	1 U	1 U	3	1 U	4.3	1 U	1 U	4.6	5 U
ARSENIC	5 U	5 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U
BARIUM	89.3	59.4	78.6	98.9	115	84.7	101	87.5	83.3	78.6	120
BERYLLIUM	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CADMIUM	5 U	5 U	1 U	1 U	1 U	1 U	1.2	1 U	1 U	1 U	5 U
CALCIUM METAL	53800	42400	44700	48100	72300	38800	49600	45400	56500	48600	44600
CHROMIUM, TOTAL	15 U	21.9	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	15 U
COBALT	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
COPPER	9.5	27.6	5 U	5 U	6.8	5 U	11.8	7.1	5	9.4	11.1
IRON, TOTAL	500 U	500 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	500 U
LEAD	5 U	5.6	1 U	1 U	2.2	1 U	3.3	1 U	1 U	1.6	5 U
MAGNESIUM	6500	9080	5330	6580	8220	6450	4940	6390	11800	5010	8420
MANGANESE	1440	638	2150 J	3310 J	1920	5850	1020	4160	4830	780	5 U
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	5 U	6.6	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	5 U
POTASSIUM	10000 U	10000 U	3530	2650	2860	2850	2000 U	2070	2990	2000 U	10000 U
SELENIUM	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SILVER	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U
SODIUM	25000 U	38300	15400	16000	17300	14800	15500	16500	27600	15900	25000 U
THALLIUM	5 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U
VANADIUM	5 U	5 U	5 U	5 U	5 U	5 U	7.2	5 U	5 U	6.9	5 U
ZINC	25 U	25 U	20 U	20 U	28.9	20 U	30.7	20 U	20 U	30.9	25 U

Notes:
J = Estimated Value
R = Rejected Value
U = Non-detect at laboratory detection limit
2 at end of sample ID indicate duplicate sample

Prepared for:
BASF Corporation
Florham Park, New Jersey

Appendix C, Part 2

Data Validation Memoranda and Forms

Hudson River Operable Unit 2 Investigation Report

BASF Rensselaer

Rensselaer, New York

Prepared for:
BASF Corporation
Florham Park, New Jersey

Appendix C, Part 2

Data Validation Memoranda and Forms

Prepared for:
BASF Corporation
Florham Park, New Jersey

Appendix C, Part 2

Data Validation Memoranda and Forms – Surficial Sediment

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Memorandum

Date: January 14, 2008

To: John Bleiler/Westford

From: Paula DiMattei/Westford

Subject: Data Validation, VOC Analysis
Surface Sediment Sampling, November 2007
BASF Rensselaer Site, NY
CAS Submission # R2740914

Distribution: L. Herberich/Westford

00760-171-408 File
BR021vocpld.doc

SUMMARY

Limited validation was performed on the data for 11 surface sediment samples, one equipment blank, and one trip blank analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The samples were collected at the BASF site in Rensselaer, NY, on November 15, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2740914.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data are valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
03SD094N-SC-A-1	03SD032N-SC-A-1
03SD094N-SC-A-2 (Field duplicate of 03SD094N-SC-A-1)	03SD087N-SC-A-1
03SD097N-SC-A-1	03SD133W-SC-A-1
03SD097N-SC-A-2 (Field duplicate of 03SD097N-SC-A-1)	03SD085N-SC-A-1

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Sample IDs	
03SD006U-SC-A-1	03SD-EB-4-SC-A-3 (Equipment blank)
03SD027U-SC-A-1	TRIP BLANK 2 (Trip blank)
03SD027U-SC-A-2 (Field duplicate of 03SD027U-SC-A-1)	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) Tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard recoveries
- Sample quantitation/detection limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were analyzed within the method specified holding time.

GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations

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(IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 10/2/07 (MSVOA7)	1,4-Dioxane	0.006	J/UJ*
Associated samples: 03SD094N-SC-A-1, 03SD85N-SC-A-1, 03SD-EB-4-SC-A-3, TRIP BLANK 2			
CC 11/17/07 (MSVOA7)	1,4-Dioxane	0.005	J/UJ*
Associated samples: 03SD094N-SC-A-1, 03SD85N-SC-A-1			
CC 11/19/07 (MSVOA7)	1,4-Dioxane	0.005	J/UJ*
Associated samples: 03SD-EB-4-SC-A-3, TRIP BLANK 2			
IC 10/3/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 03SD027U-SC-A-2, 03SD133W-SC-A-1, 03SD006U-SC-A-1, 03SD027U-SC-A-1, 03SD032N-SC-A-1, 03SD097N-SC-A-2, 03SD087N-SC-A-1, 03SD094N-SC-A-2, 03SD097N-SC-A-1			
CC 11/17/07 (MSVOA7)	1,4-Dioxane	0.006	J/UJ*
Associated samples: 03SD027U-SC-A-2, 03SD133W-SC-A-1, 03SD006U-SC-A-1, 03SD027U-SC-A-1			
CC 11/19/07 (MSVOA7)	1,4-Dioxane	0.006	J/UJ*
Associated samples: 03SD032N-SC-A-1, 03SD097N-SC-A-2, 03SD087N-SC-A-1, 03SD094N-SC-A-2, 03SD097N-SC-A-1			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			

Laboratory Blanks/Equipment Blanks/Trip Blanks

Several target compounds were detected in the laboratory method blanks, equipment blank (03SD-EB-4-SC-A-3), and trip blank (TRIP BLANK 2) associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected and the associated samples.

Blank type (lab ID)	Compound	Concentration (units)
Method (VBLK2)	2-Butanone	99 µg/Kg
Associated samples: 03SD094N-SC-A-1, 03SD085N-SC-A-1		
Method (VBLK3)	Acetone	3.4 µg/Kg
	2-Butanone	0.91 µg/Kg
	Methylene chloride	0.44 µg/Kg
Associated samples: 03SD032N-SC-A-1, 03SD097N-SC-A-1, 03SD087N-SC-A-1, 03SD094N-SC-A-2, 03SD097N-SC-A-2		
Equipment (03SD-EB-4-SC-A-3)	Carbon disulfide	0.63 µg/L
Associated samples: All sediment samples		
Trip (TRIP BLANK 2)	Acetone	2.5 µg/L

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Blank type (lab ID)	Compound	Concentration (units)
Associated samples: All sediment samples*		
Note*: Although all sediment samples are associated with this trip blank, the blank actions were applied to sediment sample 03SD085N-SC-A-1 only since the remaining sediment samples were either not detected for acetone, or acetone was present at a higher concentration in the associated method blank which was subsequently used in determining the blank actions taken.		

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC detected	Detects	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			

RL (Reporting Limit) is equivalent to the lowest calibration standard

Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses.

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MS/MSD Results

MS/MSD analyses were performed on sample 03SD085N-SC-A-1. All target compounds were spiked for the MS and MSD analyses. All %Rs and relative percent differences (RPDs) were within the QC acceptance criteria.

LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses.

Field Duplicate Results

Samples 03SD027U-SC-A-1/03SD027U-SC-A-2, 03SD097N-SC-A-1/03SD097N-SC-A-2, and 03SD094N-SC-A-1/03SD094N-SC-A-2 were submitted as the field duplicate pairs with this sample set.

For the field duplicate pair 03SD027U-SC-A-1/03SD027U-SC-A-2, all target compounds were not detected in both samples. Precision was deemed acceptable.

The following table summarizes the RPDs of the detected compounds for the field duplicate pair 03SD097N-SC-A-1/03SD097N-SC-A-2. The RPD was within QC acceptance limits.

Compound	03SD097N-SC-A-1 (µg/Kg)	03SD097N-SC-A-2 (µg/Kg)	RPD
Chlorobenzene	1.8 J	2.7 J	40
Criteria: RPD <50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			

The following table summarizes the RPDs of the detected compounds for the field duplicate pair 03SD094N-SC-A-1/03SD094N-SC-A-2. The positive results for chlorobenzene in samples 03SD094N-SC-A-1 and 03SD094N-SC-A-2 were qualified as estimated (J). Although the RPDs for methyl acetate, benzene, and 1,4-dichlorobenzene were not calculable (NC), precision was deemed acceptable since one result was not detected and the positive results for these compounds were <5x RL. It should be noted that sample 03SD094N-SC-A-1 was analyzed as a medium level soil with higher reporting limits (RLs).

Compound	03SD094N-SC-A-1 (µg/Kg)	03SD094N-SC-A-2 (µg/Kg)	RPD
Chlorobenzene	2100	37	193
Methyl acetate	110 J	25 U	NC
Benzene	1500 U	1.4 J	NC
1,4-Dichlorobenzene	1500 U	3.9 J	NC
Criteria: RPD <50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			

NC-Not calculable due to a nondetected result in the original or duplicate sample.

Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses.

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Sample Quantitation/Detection Limits

Samples 03SD094N-SC-A-1 and 03SD085N-SC-A-1 were analyzed as medium level soil analyses due to the high concentration of target compounds present in the samples. RLs were adjusted accordingly.

The percent (%) solids content for all samples was greater than 50% with the following exceptions (percent solids are listed in parentheses): 03SD094N-SC-A-1 (42.8), 03SD094N-SC-A-2 (43.7), and 03SD085N-SC-A-1 (44.2). The positive and nondetect VOC results in these samples were qualified as estimated (J, UJ).

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD094N-SC-A-1

Date Sampled : 11/15/07 10:08 **Order #:** 1052316 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 42.8

DATE ANALYZED : 11/18/07
ANALYTICAL DILUTION: 132.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	6200 U J	UG/KG
BENZENE	5.0	1500 U	UG/KG
BROMOCHLOROMETHANE	5.0	1500 U	UG/KG
BROMODICHLOROMETHANE	5.0	1500 U	UG/KG
BROMOFORM	5.0	1500 U	UG/KG
BROMOMETHANE	5.0	1500 U	UG/KG
2-BUTANONE (MEK)	10	31000 ~~510 JB~~	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1500 U	UG/KG
CARBON DISULFIDE	10	3100 U	UG/KG
CARBON TETRACHLORIDE	5.0	1500 U	UG/KG
CHLOROBENZENE	5.0	2100	UG/KG
CHLOROETHANE	10	3100 U	UG/KG
CHLOROFORM	5.0	1500 U	UG/KG
CHLOROMETHANE	5.0	1500 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1500 U	UG/KG
CYCLOHEXANE	5.0	1500 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1500 U	UG/KG
1,2-DIBROMOETHANE	5.0	1500 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1500 U	UG/KG
1,4-DICHLOROBENZENE	5.0	1500 U	UG/KG
1,2-DICHLOROBENZENE	5.0	1500 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1500 U	UG/KG
1,1-DICHLOROETHANE	5.0	1500 U	UG/KG
1,2-DICHLOROETHANE	5.0	1500 U	UG/KG
1,1-DICHLOROETHENE	5.0	1500 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1500 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1500 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1500 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1500 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	120,000 ~~31000~~ U	UG/KG
1,4-DIOXANE	5.0	1500 U	UG/KG
ETHYLBENZENE	10	3100 U	UG/KG
2-HEXANONE	5.0	1500 U	UG/KG
ISOPROPYLBENZENE	10	110 J	UG/KG
METHYL ACETATE	5.0	1500 U	UG/KG
METHYLCYCLOHEXANE	5.0	1500 U	UG/KG
METHYLENE CHLORIDE	10	3100 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	1500 U	UG/KG
STYRENE	5.0	1500 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1500 U	UG/KG
TETRACHLOROETHENE	5.0	1500 U	UG/KG
TOLUENE	5.0	1500 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1500 U	UG/KG
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD094N-SC-A-1

Date Sampled : 11/15/07 10:08 **Order #:** 1052316 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 42.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/18/07			
ANALYTICAL DILUTION: 132.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1500 U J	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1500 U	UG/KG
TRICHLOROETHENE	5.0	1500 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1500 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1500 U	UG/KG
VINYL CHLORIDE	5.0	1500 U	UG/KG
O-XYLENE	5.0	1500 U	UG/KG
M+P-XYLENE	5.0	1500 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	110	%
TOLUENE-D8	(75 - 128 %)	110	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD094N-SC-A-2

Date Sampled : 11/15/07 10:08 **Order #:** 1052309 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 43.7

DATE ANALYZED : 11/19/07
ANALYTICAL DILUTION: 1.11

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	SW ~~8.5 JB~~ J	UG/KG
BENZENE	5.0	1.4 J	UG/KG
BROMOCHLOROMETHANE	5.0	13 U	UG/KG
BROMODICHLOROMETHANE	5.0	13 U	UG/KG
BROMOFORM	5.0	13 U	UG/KG
BROMOMETHANE	5.0	13 U	UG/KG
2-BUTANONE (MEK)	10	25 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	13 U	UG/KG
CARBON DISULFIDE	10	25 U	UG/KG
CARBON TETRACHLORIDE	5.0	13 U	UG/KG
CHLOROBENZENE	5.0	37	UG/KG
CHLOROETHANE	10	25 U	UG/KG
CHLOROFORM	5.0	13 U	UG/KG
CHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	13 U	UG/KG
CYCLOHEXANE	5.0	13 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMOETHANE	5.0	13 U	UG/KG
1,3-DICHLOROBENZENE	5.0	13 U	UG/KG
1,4-DICHLOROBENZENE	5.0	3.9 J	UG/KG
1,2-DICHLOROBENZENE	5.0	13 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHANE	5.0	13 U	UG/KG
1,2-DICHLOROETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHENE	5.0	13 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
1,2-DICHLOROPROPANE	5.0	13 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
1,4-DIOXANE	100	1000 ~~250~~ U	UG/KG
ETHYLBENZENE	5.0	13 U	UG/KG
2-HEXANONE	10	25 U	UG/KG
ISOPROPYLBENZENE	5.0	13 U	UG/KG
METHYL ACETATE	10	25 U	UG/KG
METHYLCYCLOHEXANE	5.0	13 U	UG/KG
METHYLENE CHLORIDE	5.0	13 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/KG
STYRENE	5.0	13 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/KG
TETRACHLOROETHENE	5.0	13 U	UG/KG
TOLUENE	5.0	13 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	13 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	13 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD094N-SC-A-2

Date Sampled : 11/15/07 10:08 **Order #:** 1052309 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 43.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/19/07			
ANALYTICAL DILUTION: 1.11			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	13 U J	UG/KG
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/KG
TRICHLOROETHENE	5.0	13 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	13 U	UG/KG
VINYL CHLORIDE	5.0	13 U	UG/KG
O-XYLENE	5.0	13 U	UG/KG
M+P-XYLENE	5.0	13 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	83	%
TOLUENE-D8	(75 - 128 %)	96	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD097N-SC-A-1

Date Sampled : 11/15/07 09:13 **Order #:** 1052317 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 54.6

DATE ANALYZED : 11/19/07
ANALYTICAL DILUTION: 1.05

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	38U ~~12 JB~~	UG/KG
BENZENE	5.0	9.6 U	UG/KG
BROMOCHLOROMETHANE	5.0	9.6 U	UG/KG
BROMODICHLOROMETHANE	5.0	9.6 U	UG/KG
BROMOFORM	5.0	9.6 U	UG/KG
BROMOMETHANE	5.0	9.6 U	UG/KG
2-BUTANONE (MEK)	10	19 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	9.6 U	UG/KG
CARBON DISULFIDE	10	19U ~~0.77 J~~	UG/KG
CARBON TETRACHLORIDE	5.0	9.6 U	UG/KG
CHLOROBENZENE	5.0	1.8 J	UG/KG
CHLOROETHANE	10	19 U	UG/KG
CHLOROFORM	5.0	9.6 U	UG/KG
CHLOROMETHANE	5.0	9.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	9.6 U	UG/KG
CYCLOHEXANE	5.0	9.6 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	9.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	9.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	9.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	9.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	9.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	9.6 U	UG/KG
1,1-DICHLOROETHANE	5.0	9.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	9.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	9.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	9.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	9.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	9.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	9.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	770 ~~190~~ UJ	UG/KG
1,4-DIOXANE	5.0	9.6 U	UG/KG
ETHYLBENZENE	10	19 U	UG/KG
2-HEXANONE	5.0	9.6 U	UG/KG
ISOPROPYLBENZENE	10	19 U	UG/KG
METHYL ACETATE	5.0	9.6 U	UG/KG
METHYLCYCLOHEXANE	5.0	9.6 U	UG/KG
METHYLENE CHLORIDE	10	19 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	9.6 U	UG/KG
STYRENE	5.0	9.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	9.6 U	UG/KG
TETRACHLOROETHENE	5.0	9.6 U	UG/KG
TOLUENE	5.0	9.6 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	9.6 U	UG/KG
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD097N-SC-A-1

Date Sampled : 11/15/07 09:13 **Order #:** 1052317 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 54.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/19/07			
ANALYTICAL DILUTION: 1.05			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	9.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	9.6 U	UG/KG
TRICHLOROETHENE	5.0	9.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	9.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	9.6 U	UG/KG
VINYL CHLORIDE	5.0	9.6 U	UG/KG
O-XYLENE	5.0	9.6 U	UG/KG
M+P-XYLENE	5.0	9.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	86	%
TOLUENE-D8	(75 - 128 %)	95	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	92	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD097N-SC-A-2

Date Sampled : 11/15/07 09:13 **Order #:** 1052318 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 55.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/19/07			
ANALYTICAL DILUTION: 0.96			Dry Weight
ACETONE	20	35U ~~8.9 JB~~	UG/KG
BENZENE	5.0	8.7 U	UG/KG
BROMOCHLOROMETHANE	5.0	8.7 U	UG/KG
BROMODICHLOROMETHANE	5.0	8.7 U	UG/KG
BROMOFORM	5.0	8.7 U	UG/KG
BROMOMETHANE	5.0	8.7 U	UG/KG
2-BUTANONE (MEK)	10	nu ~~1.8 JB~~	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	8.7 U	UG/KG
CARBON DISULFIDE	10	nu ~~0.58 J~~	UG/KG
CARBON TETRACHLORIDE	5.0	8.7 U	UG/KG
CHLOROBENZENE	5.0	2.7 J	UG/KG
CHLOROETHANE	10	17 U	UG/KG
CHLOROFORM	5.0	8.7 U	UG/KG
CHLOROMETHANE	5.0	8.7 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	8.7 U	UG/KG
CYCLOHEXANE	5.0	8.7 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	8.7 U	UG/KG
1,2-DIBROMOETHANE	5.0	8.7 U	UG/KG
1,3-DICHLOROBENZENE	5.0	8.7 U	UG/KG
1,4-DICHLOROBENZENE	5.0	8.7 U	UG/KG
1,2-DICHLOROBENZENE	5.0	8.7 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	8.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	8.7 U	UG/KG
1,2-DICHLOROETHANE	5.0	8.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	8.7 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	8.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	8.7 U	UG/KG
1,2-DICHLOROPROPANE	5.0	8.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	8.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	8.7 U	UG/KG
1,4-DIOXANE	100	700 ~~170~~ UJ	UG/KG
ETHYLBENZENE	5.0	8.7 U	UG/KG
2-HEXANONE	10	17 U	UG/KG
ISOPROPYLBENZENE	5.0	8.7 U	UG/KG
METHYL ACETATE	10	17 U	UG/KG
METHYLCYCLOHEXANE	5.0	8.7 U	UG/KG
METHYLENE CHLORIDE	5.0	8.7 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	17 U	UG/KG
STYRENE	5.0	8.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	8.7 U	UG/KG
TETRACHLOROETHENE	5.0	8.7 U	UG/KG
TOLUENE	5.0	8.7 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	8.7 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	8.7 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD097N-SC-A-2

Date Sampled : 11/15/07 09:13 **Order #:** 1052318 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 55.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/19/07			
ANALYTICAL DILUTION: 0.96			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	8.7 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	8.7 U	UG/KG
TRICHLOROETHENE	5.0	8.7 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	8.7 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	8.7 U	UG/KG
VINYL CHLORIDE	5.0	8.7 U	UG/KG
O-XYLENE	5.0	8.7 U	UG/KG
M+P-XYLENE	5.0	8.7 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	84	%
TOLUENE-D8	(75 - 128 %)	92	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	91	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD006U-SC-A-1

Date Sampled : 11/15/07 14:00 **Order #:** 1052338 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 56.3

DATE ANALYZED : 11/17/07
ANALYTICAL DILUTION: 1.37

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	49 U	UG/KG
BENZENE	5.0	12 U	UG/KG
BROMOCHLOROMETHANE	5.0	12 U	UG/KG
BROMODICHLOROMETHANE	5.0	12 U	UG/KG
BROMOFORM	5.0	12 U	UG/KG
BROMOMETHANE	5.0	12 U	UG/KG
2-BUTANONE (MEK)	10	24 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	12 U	UG/KG
CARBON DISULFIDE	10	24 U	UG/KG
CARBON TETRACHLORIDE	5.0	12 U	UG/KG
CHLOROBENZENE	5.0	12 U	UG/KG
CHLOROETHANE	10	24 U	UG/KG
CHLOROFORM	5.0	12 U	UG/KG
CHLOROMETHANE	5.0	12 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	12 U	UG/KG
CYCLOHEXANE	5.0	12 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	12 U	UG/KG
1,2-DIBROMOETHANE	5.0	12 U	UG/KG
1,3-DICHLOROBENZENE	5.0	12 U	UG/KG
1,4-DICHLOROBENZENE	5.0	12 U	UG/KG
1,2-DICHLOROBENZENE	5.0	12 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	12 U	UG/KG
1,1-DICHLOROETHANE	5.0	12 U	UG/KG
1,2-DICHLOROETHANE	5.0	12 U	UG/KG
1,1-DICHLOROETHENE	5.0	12 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	12 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	12 U	UG/KG
1,2-DICHLOROPROPANE	5.0	12 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	12 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	970 ~~240~~ UJ	UG/KG
1,4-DIOXANE	5.0	12 U	UG/KG
ETHYLBENZENE	10	24 U	UG/KG
2-HEXANONE	5.0	12 U	UG/KG
ISOPROPYLBENZENE	10	24 U	UG/KG
METHYL ACETATE	5.0	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	0.80 J	UG/KG
METHYLENE CHLORIDE	10	24 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	12 U	UG/KG
STYRENE	5.0	12 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	12 U	UG/KG
TETRACHLOROETHENE	5.0	12 U	UG/KG
TOLUENE	5.0	12 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	12 U	UG/KG
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD006U-SC-A-1

Date Sampled : 11/15/07 14:00 **Order #:** 1052338 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 56.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 1.37			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	12 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	12 U	UG/KG
TRICHLOROETHENE	5.0	0.80 J	UG/KG
TRICHLOROFLUOROMETHANE	5.0	12 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	12 U	UG/KG
VINYL CHLORIDE	5.0	12 U	UG/KG
O-XYLENE	5.0	12 U	UG/KG
M+P-XYLENE	5.0	12 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	82	%
TOLUENE-D8	(75 - 128 %)	100	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	94	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD027U-SC-A-1

Date Sampled : 11/15/07 14:27 **Order #:** 1052341 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 73.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 1.02			Dry Weight
ACETONE	20	28 U	UG/KG
BENZENE	5.0	6.9 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.9 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.9 U	UG/KG
BROMOFORM	5.0	6.9 U	UG/KG
BROMOMETHANE	5.0	6.9 U	UG/KG
2-BUTANONE (MEK)	10	14 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.9 U	UG/KG
CARBON DISULFIDE	10	14 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.9 U	UG/KG
CHLOROBENZENE	5.0	6.9 U	UG/KG
CHLOROETHANE	10	14 U	UG/KG
CHLOROFORM	5.0	6.9 U	UG/KG
CHLOROMETHANE	5.0	6.9 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.9 U	UG/KG
CYCLOHEXANE	5.0	6.9 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.9 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.9 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.9 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.9 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.9 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.9 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.9 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.9 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.9 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.9 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.9 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.9 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.9 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	550 ~~140~~ UJ	UG/KG
1,4-DIOXANE	5.0	6.9 U	UG/KG
ETHYLBENZENE	10	14 U	UG/KG
2-HEXANONE	5.0	6.9 U	UG/KG
ISOPROPYLBENZENE	10	14 U	UG/KG
METHYL ACETATE	5.0	6.9 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.9 U	UG/KG
METHYLENE CHLORIDE	10	14 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	6.9 U	UG/KG
STYRENE	5.0	6.9 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.9 U	UG/KG
TETRACHLOROETHENE	5.0	6.9 U	UG/KG
TOLUENE	5.0	6.9 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.9 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.9 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD027U-SC-A-1

Date Sampled : 11/15/07 14:27 **Order #:** 1052341 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 73.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 1.02			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.9 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.9 U	UG/KG
TRICHLOROETHENE	5.0	6.9 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.9 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.9 U	UG/KG
VINYL CHLORIDE	5.0	6.9 U	UG/KG
O-XYLENE	5.0	6.9 U	UG/KG
M+P-XYLENE	5.0	6.9 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	83	%
TOLUENE-D8	(75 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD027U-SC-A-2

Date Sampled : 11/15/07 14:27 Order #: 1052342 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740914 Percent Solid: 77.4

DATE ANALYZED : 11/17/07
ANALYTICAL DILUTION: 1.18

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	30 U	UG/KG
BENZENE	5.0	7.6 U	UG/KG
BROMOCHLOROMETHANE	5.0	7.6 U	UG/KG
BROMODICHLOROMETHANE	5.0	7.6 U	UG/KG
BROMOFORM	5.0	7.6 U	UG/KG
BROMOMETHANE	5.0	7.6 U	UG/KG
2-BUTANONE (MEK)	10	15 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	7.6 U	UG/KG
CARBON DISULFIDE	10	15U ~~0.52 J~~	UG/KG
CARBON TETRACHLORIDE	5.0	7.6 U	UG/KG
CHLOROBENZENE	5.0	7.6 U	UG/KG
CHLOROETHANE	10	15 U	UG/KG
CHLOROFORM	5.0	7.6 U	UG/KG
CHLOROMETHANE	5.0	7.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7.6 U	UG/KG
CYCLOHEXANE	5.0	7.6 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	7.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	7.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	7.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7.6 U	UG/KG
1,1-DICHLOROETHANE	5.0	7.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	7.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	7.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	610 ~~150~~ UJ	UG/KG
1,4-DIOXANE	5.0	7.6 U	UG/KG
ETHYLBENZENE	10	15 U	UG/KG
2-HEXANONE	5.0	7.6 U	UG/KG
ISOPROPYLBENZENE	10	15 U	UG/KG
METHYL ACETATE	5.0	7.6 U	UG/KG
METHYLCYCLOHEXANE	5.0	7.6 U	UG/KG
METHYLENE CHLORIDE	10	15 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	7.6 U	UG/KG
STYRENE	5.0	7.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7.6 U	UG/KG
TETRACHLOROETHENE	5.0	7.6 U	UG/KG
TOLUENE	5.0	7.6 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	7.6 U	UG/KG
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD027U-SC-A-2

Date Sampled : 11/15/07 14:27 **Order #:** 1052342 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 77.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 1.18			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7.6 U	UG/KG
TRICHLOROETHENE	5.0	7.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7.6 U	UG/KG
VINYL CHLORIDE	5.0	7.6 U	UG/KG
O-XYLENE	5.0	7.6 U	UG/KG
M+P-XYLENE	5.0	7.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	79	%
TOLUENE-D8	(75 - 128 %)	100	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	94	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD032N-SC-A-1

Date Sampled : 11/15/07 12:40 **Order #:** 1052308 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 60.2

DATE ANALYZED : 11/19/07
ANALYTICAL DILUTION: 1.51

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	50U ~~43 J~~	UG/KG
BENZENE	5.0	13 U	UG/KG
BROMOCHLOROMETHANE	5.0	13 U	UG/KG
BROMODICHLOROMETHANE	5.0	13 U	UG/KG
BROMOFORM	5.0	13 U	UG/KG
BROMOMETHANE	5.0	13 U	UG/KG
2-BUTANONE (MEK)	10	25U ~~7.5 JB~~	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	13 U	UG/KG
CARBON DISULFIDE	10	25U ~~1.7 J~~	UG/KG
CARBON TETRACHLORIDE	5.0	13 U	UG/KG
CHLOROBENZENE	5.0	2.8 J	UG/KG
CHLOROETHANE	10	25 U	UG/KG
CHLOROFORM	5.0	13 U	UG/KG
CHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	13 U	UG/KG
CYCLOHEXANE	5.0	13 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMOETHANE	5.0	13 U	UG/KG
1,3-DICHLOROBENZENE	5.0	13 U	UG/KG
1,4-DICHLOROBENZENE	5.0	13 U	UG/KG
1,2-DICHLOROBENZENE	5.0	13 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHANE	5.0	13 U	UG/KG
1,2-DICHLOROETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHENE	5.0	13 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
1,2-DICHLOROPROPANE	5.0	13 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
1,4-DIOXANE	100	1000 ~~250~~ UJ	UG/KG
ETHYLBENZENE	5.0	13 U	UG/KG
2-HEXANONE	10	25 U	UG/KG
ISOPROPYLBENZENE	5.0	13 U	UG/KG
METHYL ACETATE	10	25 U	UG/KG
METHYLCYCLOHEXANE	5.0	13 U	UG/KG
METHYLENE CHLORIDE	5.0	13U ~~1.0 JB~~	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/KG
STYRENE	5.0	13 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/KG
TETRACHLOROETHENE	5.0	13 U	UG/KG
TOLUENE	5.0	13 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	13 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	13 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD032N-SC-A-1

Date Sampled : 11/15/07 12:40 **Order #:** 1052308 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 60.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/19/07			
ANALYTICAL DILUTION: 1.51			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/KG
TRICHLOROETHENE	5.0	13 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	13 U	UG/KG
VINYL CHLORIDE	5.0	13 U	UG/KG
O-XYLENE	5.0	13 U	UG/KG
M+P-XYLENE	5.0	13 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	82	%
TOLUENE-D8	(75 - 128 %)	95	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD087N-SC-A-1

Date Sampled : 11/15/07 11:18 **Order #:** 1052315 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 61.7

DATE ANALYZED : 11/19/07
ANALYTICAL DILUTION: 1.17

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	38 U ~~18 JB~~	UG/KG
BENZENE	5.0	9.5 U	UG/KG
BROMOCHLOROMETHANE	5.0	9.5 U	UG/KG
BROMODICHLOROMETHANE	5.0	9.5 U	UG/KG
BROMOFORM	5.0	9.5 U	UG/KG
BROMOMETHANE	5.0	9.5 U	UG/KG
2-BUTANONE (MEK)	10	19 U ~~1.6 JB~~	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	9.5 U	UG/KG
CARBON DISULFIDE	10	19 U ~~0.81 J~~	UG/KG
CARBON TETRACHLORIDE	5.0	9.5 U	UG/KG
CHLOROBENZENE	5.0	13	UG/KG
CHLOROETHANE	10	19 U	UG/KG
CHLOROFORM	5.0	9.5 U	UG/KG
CHLOROMETHANE	5.0	9.5 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	9.5 U	UG/KG
CYCLOHEXANE	5.0	9.5 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	9.5 U	UG/KG
1,2-DIBROMOETHANE	5.0	9.5 U	UG/KG
1,3-DICHLOROBENZENE	5.0	9.5 U	UG/KG
1,4-DICHLOROBENZENE	5.0	1.6 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1.3 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	9.5 U	UG/KG
1,1-DICHLOROETHANE	5.0	9.5 U	UG/KG
1,2-DICHLOROETHANE	5.0	9.5 U	UG/KG
1,1-DICHLOROETHENE	5.0	9.5 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	9.5 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	9.5 U	UG/KG
1,2-DICHLOROPROPANE	5.0	9.5 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	9.5 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	9.5 U	UG/KG
1,4-DIOXANE	100	760 ~~190~~ UJ	UG/KG
ETHYLBENZENE	5.0	9.5 U	UG/KG
2-HEXANONE	10	19 U	UG/KG
ISOPROPYLBENZENE	5.0	9.5 U	UG/KG
METHYL ACETATE	10	19 U	UG/KG
METHYLCYCLOHEXANE	5.0	9.5 U	UG/KG
METHYLENE CHLORIDE	5.0	9.5 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	19 U	UG/KG
STYRENE	5.0	9.5 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	9.5 U	UG/KG
TETRACHLOROETHENE	5.0	9.5 U	UG/KG
TOLUENE	5.0	9.5 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	9.5 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	9.5 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD087N-SC-A-1

Date Sampled : 11/15/07 11:18 **Order #:** 1052315 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 61.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/19/07			
ANALYTICAL DILUTION: 1.17			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	9.5 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	9.5 U	UG/KG
TRICHLOROETHENE	5.0	9.5 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	9.5 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	9.5 U	UG/KG
VINYL CHLORIDE	5.0	9.5 U	UG/KG
O-XYLENE	5.0	9.5 U	UG/KG
M+P-XYLENE	5.0	9.5 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	84	%
TOLUENE-D8	(75 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD133W-SC-A-1

Date Sampled : 11/15/07 08:47 **Order #:** 1052348 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 84.4

DATE ANALYZED : 11/17/07
ANALYTICAL DILUTION: 1.16

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	27 U	UG/KG
BENZENE	5.0	6.9 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.9 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.9 U	UG/KG
BROMOFORM	5.0	6.9 U	UG/KG
BROMOMETHANE	5.0	6.9 U	UG/KG
2-BUTANONE (MEK)	10	14 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.9 U	UG/KG
CARBON DISULFIDE	10	14 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.9 U	UG/KG
CHLOROBENZENE	5.0	6.9 U	UG/KG
CHLOROETHANE	10	14 U	UG/KG
CHLOROFORM	5.0	6.9 U	UG/KG
CHLOROMETHANE	5.0	6.9 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.9 U	UG/KG
CYCLOHEXANE	5.0	6.9 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.9 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.9 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.9 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.9 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.9 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.9 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.9 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.9 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.9 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.9 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.9 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.9 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.9 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	550 ~~140~~ UJ	UG/KG
1,4-DIOXANE	5.0	6.9 U	UG/KG
ETHYLBENZENE	10	14 U	UG/KG
2-HEXANONE	5.0	6.9 U	UG/KG
ISOPROPYLBENZENE	10	14 U	UG/KG
METHYL ACETATE	5.0	6.9 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.9 U	UG/KG
METHYLENE CHLORIDE	10	14 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	6.9 U	UG/KG
STYRENE	5.0	6.9 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.9 U	UG/KG
TETRACHLOROETHENE	5.0	6.9 U	UG/KG
TOLUENE	5.0	6.9 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.9 U	UG/KG
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD133W-SC-A-1

Date Sampled : 11/15/07 08:47 **Order #:** 1052348 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 84.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 1.16			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.9 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.9 U	UG/KG
TRICHLOROETHENE	5.0	6.9 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.9 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.9 U	UG/KG
VINYL CHLORIDE	5.0	6.9 U	UG/KG
O-XYLENE	5.0	6.9 U	UG/KG
M+P-XYLENE	5.0	6.9 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	84	%
TOLUENE-D8	(75 - 128 %)	91	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	95	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD085N-SC-A-1

Date Sampled : 11/15/07 11:50 **Order #:** 1052314 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 44.2

DATE ANALYZED : 11/18/07
ANALYTICAL DILUTION: 139.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	430 J	UG/KG
BENZENE	5.0	4500	UG/KG
BROMOCHLOROMETHANE	5.0	1600 U	UG/KG
BROMODICHLOROMETHANE	5.0	1600 U	UG/KG
BROMOFORM	5.0	1600 U	UG/KG
BROMOMETHANE	5.0	1600 U	UG/KG
2-BUTANONE (MEK)	10	3100 ~~410 JB~~	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1600 U	UG/KG
CARBON DISULFIDE	10	3100 U	UG/KG
CARBON TETRACHLORIDE	5.0	1600 U	UG/KG
CHLOROBENZENE	5.0	7900	UG/KG
CHLOROETHANE	10	3100 U	UG/KG
CHLOROFORM	5.0	1600 U	UG/KG
CHLOROMETHANE	5.0	1600 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1600 U	UG/KG
CYCLOHEXANE	5.0	1600 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1600 U	UG/KG
1,2-DIBROMOETHANE	5.0	1600 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1600 U	UG/KG
1,4-DICHLOROBENZENE	5.0	200 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1600 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1600 U	UG/KG
1,1-DICHLOROETHANE	5.0	1600 U	UG/KG
1,2-DICHLOROETHANE	5.0	110 J	UG/KG
1,1-DICHLOROETHENE	5.0	1600 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1600 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1600 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1600 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1600 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1600 U	UG/KG
1,4-DIOXANE	100	130,000 ~~31000~~ U	UG/KG
ETHYLBENZENE	5.0	1600 U	UG/KG
2-HEXANONE	10	3100 U	UG/KG
ISOPROPYLBENZENE	5.0	1600 U	UG/KG
METHYL ACETATE	10	190 J	UG/KG
METHYLCYCLOHEXANE	5.0	160 J	UG/KG
METHYLENE CHLORIDE	5.0	1600 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	3100 U	UG/KG
STYRENE	5.0	1600 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1600 U	UG/KG
TETRACHLOROETHENE	5.0	1600 U	UG/KG
TOLUENE	5.0	1600 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1600 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1600 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD085N-SC-A-1

Date Sampled : 11/15/07 11:50 **Order #:** 1052314 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/16/07 **Submission #:** R2740914 **Percent Solid:** 44.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/18/07			
ANALYTICAL DILUTION: 139.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1600 UJ	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1600 U	UG/KG
TRICHLOROETHENE	5.0	1600 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1600 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1600 U	UG/KG
VINYL CHLORIDE	5.0	1600 U	UG/KG
O-XYLENE	5.0	180 J	UG/KG
M+P-XYLENE	5.0	200 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	107	%
TOLUENE-D8	(75 - 128 %)	111	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD-EB-4-SC-A-3

Date Sampled : 11/15/07 11:07 **Order #:** 1052353 **Sample Matrix:** WATER
Date Received: 11/16/07 **Submission #:** R2740914 **Analytical Run** 154352

DATE ANALYZED : 11/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.5 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	0.63 J	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	100	400 ~~100~~ UJ	UG/L
1,4-DIOXANE	1.0	1.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	1.0	1.0 U	UG/L
ISOPROPYLBENZENE	10	10 U	UG/L
METHYL ACETATE	1.0	1.0 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	1.0	1.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD-EB-4-SC-A-3

Date Sampled : 11/15/07 11:07 **Order #:** 1052353 **Sample Matrix:** WATER
Date Received: 11/16/07 **Submission #:** R2740914 **Analytical Run** 154352

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	107	%
TOLUENE-D8	(88 - 124 %)	109	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	110	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : TRIP BLANK 2

Date Sampled : 11/15/07 15:45 **Order #:** 1052357 **Sample Matrix:** WATER
Date Received: 11/16/07 **Submission #:** R2740914 **Analytical Run** 154352

DATE ANALYZED : 11/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	2.5 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	100	400 ~~100~~ UJ	UG/L
1,4-DIOXANE	1.0	1.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	1.0	1.0 U	UG/L
ISOPROPYLBENZENE	10	10 U	UG/L
METHYL ACETATE	1.0	1.0 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	1.0	1.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : TRIP BLANK 2

Date Sampled : 11/15/07 15:45 **Order #:** 1052357 **Sample Matrix:** WATER
Date Received: 11/16/07 **Submission #:** R2740914 **Analytical Run** 154352

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	111	%
TOLUENE-D8	(88 - 124 %)	107	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	108	%

ENSR
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Memorandum

Date: January 16, 2007

To: John Bleiler/Westford

From: Deborah Truini/Westford

Subject: Data Validation
Inorganic Analyses
Surface Sediment Sampling, November 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2740914

Distribution: L. Herberich/Westford

00760-171-525 File
BR021inodat.doc

SUMMARY

Limited validation was performed on the data for 13 surface sediment samples and one aqueous equipment blank sample analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 7470A, 7471A, and 7741A and for total organic carbon (TOC) according to the Lloyd Kahn method. The samples were collected at the BASF Site in Rensselaer, NY on November 15, 2007 and submitted to Columbia Analytical Services in Rochester, NY (CAS-Rochester) for analysis. CAS-Rochester processed and reported these samples under submission number R2740914.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes with the following exceptions. The calcium results in samples 03SD027U-SC-A-1 and 03SD027U-SC-A-2 were rejected (R) due to the field duplicate relative percent difference (RPD) greater than 120 percent (%). These calcium results are not usable for project decisions. Selected other data points were qualified (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
03SD032N-SC-A-1	03SD069C-SC-A-1
03SD094N-SC-A-2 (Field duplicate of 03SD094N-SC-A-1)	03SD069C-SC-A-2 (Field duplicate of 03SD069C-SC-A-1)

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2 Technology Park Drive, Westford, Massachusetts, 01886-3140
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Sample IDs	
03SD085N-SC-A-1	03SD006U-SC-A-1
03SD087N-SC-A-1	03SD027U-SC-A-1
03SD094N-SC-A-1	03SD027U-SC-A-2 (Field duplicate of 03SD027U-SC-A-1)
03SD097N-SC-A-1	03SD133W-SC-A-1
03SD097N-SC-A-2 (Field duplicate of 03SD097N-SC-A-1)	03SD-EB-4-SC-A-3 (Equipment blank)

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results
- Sample quantitation/detection limit results
- Graphite furnace atomic absorption (GFAA) results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

TAL Metals and TOC

All samples were digested and analyzed within the method-specified holding times.

The cooler temperatures were within acceptance criteria (4 ± 2°C) upon receipt at CAS-Rochester.

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Calibrations

TAL Metals

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards (CRI for all analytes, with the exception of mercury and selenium; and CRA for mercury and selenium) containing analytes at concentrations 1 to 2x the laboratory's reporting limit (RL) with the exception of barium which was spiked at 10x the PQL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes.

TOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

TAL Metals

Target analytes were not detected in the laboratory method blanks associated with the sediment and aqueous samples and the laboratory initial and continuing calibration blanks (ICBs/CCBs). Calcium, iron, and lead were detected in equipment blank sample 03SD-EB-4-SC-A-3, which was associated with all the surface sediment samples in this data set, at concentrations greater than the laboratory RLs. Qualification of the sample results was not required since the concentration of calcium, iron, and lead detected in all surface sediment samples exceeded 10x the concentration detected in the associated equipment blank sample. The following table summarizes the maximum blank contamination detected in the equipment blank sample.

Source of Contamination	Analyte	Concentration (µg/L)	Associated Samples
03SD-EB4-SC-A-3 (equipment blank)	Calcium	281	All surface sediment samples
	Iron	271	
	Lead	5.5	

TOC

An equipment blank sample was not submitted with this data set. TOC was not detected in the laboratory method blanks associated with all sample analyses.

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ICP Interference Check Sample Results (metals only)

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

MS Results

TAL Metals

Matrix spike analyses were performed on surface sediment sample 03SD085N-SC-A-1 for all analytes in association with the surface sediment samples in this data set. The matrix spike %Rs met the QC acceptance criteria for all analytes.

TOC

Matrix spike analyses were performed on surface sediment samples 03SD085N-SC-A-1 and 03SD027U-SC-A-2 for TOC in association with the surface sediment samples in this data set. The matrix spike %Rs met the QC acceptance criteria for TOC.

Laboratory Duplicate Results

TAL Metals

Laboratory duplicate analyses were performed on surface sediment sample 03SD085N-SC-A-1 for all analytes in association with the surface sediment samples in this data set. The RPDs met the QC acceptance criteria for all analytes.

TOC

Laboratory duplicate analyses were performed on surface sediment samples 03SD085N-SC-A-1 and 03SD027U-SC-A-2 for TOC in association with the surface sediment samples in this data set. The RPDs met the QC acceptance criteria for TOC.

Field Duplicate Results

TAL Metals

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD094N-SC-A-1 and 03SD094N-SC-A-2. The silver RPD was not calculable (NC) since the original result was nondetect. Silver was detected in the field duplicate sample at a concentration less than the sample quantitation limit (SQL); therefore, no further data validation actions were taken and precision was considered acceptable. No actions were taken for antimony since both results were <5x SQL and the difference was <2xSQL. Precision was acceptable for all remaining analytes in this field duplicate pair.

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Analyte	03SD094N-SC-A-1 (mg/Kg)	03SD094N-SC-A-2 (mg/Kg)	RPD (%)
Aluminum	17,500	18,200	4
Antimony	5.2	3.6	36
Arsenic	13.1	15.7	18
Barium	294	292	1
Cadmium	27.2	27.5	1
Calcium	6,250	7,070	12
Chromium	540	489	10
Cobalt	12.4	14.6	16
Copper	247	225	9
Iron	26,300	30,300	14
Lead	595	438	30
Magnesium	6,350	7,200	13
Manganese	539	617	13
Mercury	3.2	3.1	3
Nickel	36.5	40.9	11
Potassium	1,980	2,240	12
Silver	2.3 U	2.4	NC
Vanadium	49.5	49.6	0
Zinc	630	623	1
Criteria: RPD <35% if both results are >5x sample quantitation limit (SQL). The difference should be ±2x SQL if one or both sample and duplicate results are <5x SQL.			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD097N-SC-A-1 and 03SD097N-SC-A-2. Precision was acceptable for all analytes in this field duplicate pair.

Analyte	03SD097N-SC-A-1 (mg/Kg)	03SD097N-SC-A-2 (mg/Kg)	RPD (%)
Aluminum	10,800	11,100	3
Arsenic	5.7	6.6	15
Barium	137	165	19
Cadmium	9.0	6.8	28
Calcium	5,400	5,210	4
Chromium	154	196	24
Cobalt	10.3	9.9	4
Copper	119	157	28
Iron	23,700	22,400	6
Lead	342	339	1
Magnesium	5,190	4,890	6
Manganese	601	583	3
Mercury	0.54	0.71	27
Nickel	26.1	26.6	2
Potassium	1,440	1,410	2

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Analyte	03SD097N-SC-A-1 (mg/Kg)	03SD097N-SC-A-2 (mg/Kg)	RPD (%)
Vanadium	21.4	23.1	8
Zinc	311	400	25
Criteria: RPD <35% if both results are >5x SQL. The difference should be ±2x SQL if one or both sample and duplicate results are <5x SQL.			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD069C-SC-A-1 and 03SD069C-SC-A-2. The cobalt RPD was NC since the original result was nondetect. Cobalt was detected in the field duplicate sample at a concentration less than the SQL; therefore, no further data validation actions were taken and precision was considered acceptable. The RPD for lead exceeded the QC acceptance criteria; therefore the positive results for lead in surface sediment samples 03SD069C-SC-A-1 and 03SD069C-SC-A-2 were qualified as estimated (J). Precision was acceptable for all remaining analytes in this field duplicate pair.

Analyte	03SD069C-SC-A-1 (mg/Kg)	03SD069C-SC-A-2 (mg/Kg)	RPD (%)
Aluminum	11,500	11,400	1
Antimony	2.8	2.0	33
Arsenic	11.1	9.9	11
Barium	216	196	10
Cadmium	7.0	8.7	22
Calcium	5,610	5,520	2
Chromium	271	283	4
Cobalt	9.7 U	9.1	NC
Copper	182	173	5
Iron	23,600	21,900	7
Lead	604	387	44
Magnesium	4,930	5,070	3
Manganese	558	524	6
Mercury	1.3	1.0	26
Nickel	26.6	26.5	0
Potassium	1,650	1,290	24
Silver	2.6	2.2	17
Vanadium	30.4	29.3	4
Zinc	573	512	11
Criteria: RPD <35% if both results are >5x SQL. The difference should be ±2x SQL if one or both sample and duplicate results are <5x SQL.			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD027U-SC-A-1 and 03SD027U-SC-A-2. The sodium RPD was NC since the original result was nondetect. Sodium was detected in the field duplicate sample at a concentration less than the SQL; therefore, no further data validation actions were taken and precision was considered acceptable. The RPD for calcium and lead exceeded the QC acceptance criteria. The calcium RPD was >120; therefore the positive results for calcium in surface sediment samples 03SD027U-SC-A-1 and 03SD027U-SC-A-2 were qualified as rejected (R). The lead RPD was >35 but <120; therefore the positive results for lead in surface sediment samples 03SD027U-SC-A-1 and 03SD027U-SC-A-2 were

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qualified as estimated (J). Precision was acceptable for all remaining analytes in this field duplicate pair.

Analyte	03SD027U-SC-A-1 (mg/Kg)	03SD027U-SC-A-2 (mg/Kg)	RPD (%)
Aluminum	6,130	5,120	18
Arsenic	2.9	2.1	32
Barium	44.1	48.2	9
Calcium	3,310	28,200	158
Chromium	17.4	16.3	7
Copper	21.7	19.7	10
Iron	17,900	13,100	31
Lead	35.4	22.7	44
Magnesium	3,870	2,960	27
Manganese	403	429	6
Mercury	0.06	0.05	18
Nickel	18.3	15.9	14
Potassium	963	825	15
Sodium	131 U	188	NC
Vanadium	11.5	9.7	17
Zinc	75.6	68.6	10
Criteria: RPD <35% if both results are >5x SQL. The difference should be ±2x SQL if one or both sample and duplicate results are <5x SQL.			

TOC

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD094N-SC-A-1 and 03SD094N-SC-A-2. Precision was acceptable for TOC in this field duplicate pair.

Analyte	03SD094N-SC-A-1 (mg/Kg)	03SD094N-SC-A-2 (mg/Kg)	RPD (%)
TOC	67,600	59,000	14
Criteria: RPD <35% if both results are >5x sample quantitation limit (SQL).			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD097N-SC-A-1 and 03SD097N-SC-A-2. Precision was acceptable for TOC in this field duplicate pair.

Analyte	03SD097N-SC-A-1 (mg/Kg)	03SD097N-SC-A-2 (mg/Kg)	RPD (%)
TOC	21,300	22,000	3
Criteria: RPD <35% if both results are >5x SQL.			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD069C-SC-A-1 and 03SD069C-SC-A-2. Precision was acceptable for TOC in this field duplicate pair.

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Analyte	03SD069C-SC-A-1 (mg/Kg)	03SD069C-SC-A-2 (mg/Kg)	RPD (%)
TOC	47,100	33,500	34
Criteria: RPD <35% if both results are >5x SQL.			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD027U-SC-A-1 and 03SD027U-SC-A-2. Precision was acceptable for TOC in this field duplicate pair.

Analyte	03SD027U-SC-A-1 (mg/Kg)	03SD027U-SC-A-2 (mg/Kg)	RPD (%)
TOC	11,200	13,200	16
Criteria: RPD <35% if both results are >5x SQL.			

LCS Results

TAL Metals

The LCSs associated with the surface sediment samples met the vendor's QC acceptance limits.

The LCSs associated with the aqueous equipment blank samples met the 80-120% recovery criteria.

TOC

The LCSs associated with the surface sediment samples met the laboratory QC acceptance limits of 55-133% recovery criteria.

ICP Serial Dilution Results (metals only)

Serial dilution analyses were performed on surface sediment sample 03SD085N-SC-A-1 for all ICP metals; on surface sediment sample 03SD069C-SC-A-2 for zinc only; and on aqueous equipment blank sample 03SD-EB4-SC-A-3 for all ICP metals in association with all samples in this data set. All analytes met the percent difference (%D) QC acceptance criteria in the serial dilution of samples 03SD085N-SC-A-1, 03SD069C-SC-A-2, and 03SD-EB4-SC-A-3.

Sample Quantitation/Detection Limit Results

TAL Metals

The positive zinc results in samples 03SD094N-SC-A-2, 03SD094N-SC-A-1, 03SD097N-SC-A-2, 03SD069C-SC-A-1, 03SD069C-SC-A-2, and 03SD085N-SC-A-1 were reported from the 10x dilution analysis. Sample results were adjusted accordingly by the laboratory.

The solids content for samples 03SD094N-SC-A-2, 03SD085N-SC-A-1, and 03SD094N-SC-A-1 were < 50%. All positive and nondetect metals results were qualified as estimated (J and UJ, respectively) in these samples.

The project-specific quantitation limits were not met for potassium and sodium for the surface sediment samples. No validation actions were taken other than to note this discrepancy.

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All metals results, with the exception of antimony, were reported to the SQL. Due to software limitations, metal results (except antimony) greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantitation limits were achieved for all metals except potassium and sodium.

Antimony was reported to the instrument detection limit (IDL) in an attempt to meet the project specific quantation limits of 2.0 mg/Kg for the surface sediments. Since the confidence level of results reported to IDL is less than results reported to SQL, the nondetect antimony results in all surface sediment and equipment blank samples, with the exception of samples 03SD069C-SC-A-1, 03SD069C-SC-A-2, 03SD094N-SC-A-1, and 03SD094N-SC-A-2, were qualified as estimated (UJ) due to uncertainty in the accurate quantitation/detection of results at this low level. The positive antimony results in samples 03SD069C-SC-A-1, 03SD069C-SC-A-2, 03SD094N-SC-A-1, and 03SD094N-SC-A-2 were qualified as estimated (J) due to quantitation of these results at a level <SQL but greater than IDL.

TOC

Due to software limitation, the TOC SQL reported for all surface sediment samples was 300 mg/Kg even though the initial weights varied on a sample-by-sample basis. No actions were taken other than to note this discrepancy.

The solids content for samples 03SD094N-SC-A-2, 03SD085N-SC-A-1, and 03SD094N-SC-A-1 were < 50%. All positive TOC results were qualified as estimated (J) in these samples.

GFAA Results (selenium only)

The following samples did not meet post digestion spike (PDS) recovery criteria of 85-115% for the selenium analysis.

Sample ID	Analyte	PDS %R	Actions
03SD085N-SC-A-1	Selenium	81.3	Qualify the nondetect selenium result as estimated (UJ).
03SD037N-SC-A-1	Selenium	68.8	Qualify the nondetect selenium result as estimated (UJ).
03SD097N-SC-A-2	Selenium	73.1	Qualify the nondetect selenium result as estimated (UJ).
03SD087N-SC-A-1	Selenium	59.8	Qualify the nondetect selenium result as estimated (UJ).
03SD094N-SC-A-1	Selenium	80.0	Qualify the nondetect selenium result as estimated (UJ).
03SD097N-SC-A-1	Selenium	66.5	Qualify the nondetect selenium result as estimated (UJ).
03SD097N-SC-A-2	Selenium	73.3	Qualify the nondetect selenium result as estimated (UJ).
03SD069C-SC-A-1	Selenium	74.2	Qualify the nondetect selenium result as estimated (UJ).
03SD069C-SC-A-2	Selenium	74.2	Qualify the nondetect selenium result as estimated (UJ).
03SD006U-SC-A-1	Selenium	67.3	Qualify the nondetect selenium result as estimated (UJ).
03SD027U-SC-A-1	Selenium	81.9	Qualify the nondetect selenium result as estimated (UJ).
03SD027U-SC-A-2	Selenium	59.5	Qualify the nondetect selenium result as estimated (UJ).
03SD133W-SC-A-1	Selenium	71.8	Qualify the nondetect selenium result as estimated (UJ).

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD032N-SC-A-1

ntract: R2740914

b Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-A

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052308

vel (low/med): LOW Date Received: 11/16/07

Solids: 60.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9440			P
7440-36-0	Antimony	10.3 ~~10.0~~	U	J	P
7440-38-2	Arsenic	6.2			P
7440-39-3	Barium	72.9			P
7440-41-7	Beryllium	0.83	U		P
7440-43-9	Cadmium	1.1			P
7440-70-2	Calcium	8880			P
7440-47-3	Chromium	58.4			P
7440-48-4	Cobalt	8.8			P
7440-50-8	Copper	44.4			P
7439-89-6	Iron	20100			P
7439-92-1	Lead	65.0			P
7439-95-4	Magnesium	5580			P
7439-96-5	Manganese	560			P
7439-97-6	Mercury	0.48			CV
7440-02-0	Nickel	19.8			P
7440-09-7	Potassium	1240			P
7782-49-2	Selenium	0.81	U	J+	P
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	166	U		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	19.4			P
7440-66-6	Zinc	163			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD094N-SC-A-2

Contract: R2740914

Lab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052309

Level (low/med): LOW Date Received: 11/16/07

% Solids: 43.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18200		J	P
7440-36-0	Antimony	3.6 ~~13.6~~	U		P
7440-38-2	Arsenic	15.7			P
7440-39-3	Barium	292			P
7440-41-7	Beryllium	1.1	U		P
7440-43-9	Cadmium	27.5			P
7440-70-2	Calcium	7070			P
7440-47-3	Chromium	489			P
7440-48-4	Cobalt	14.6			P
7440-50-8	Copper	225			P
7439-89-6	Iron	30300			P
7439-92-1	Lead	438			P
7439-95-4	Magnesium	7200			P
7439-96-5	Manganese	617			P
7439-97-6	Mercury	3.1			CV
7440-02-0	Nickel	40.9			P
7440-09-7	Potassium	2240			P
7782-49-2	Selenium	1.1	U	J/W	F
7440-22-4	Silver	2.4		J	P
7440-23-5	Sodium	227	U		P
7440-28-0	Thallium	2.3	U		P
7440-62-2	Vanadium	49.6			P
7440-66-6	Zinc	623			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD085N-SC-A-1

ontract: R2740914

ab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-F

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052314

evel (low/med): LOW Date Received: 11/16/07

Solids: 44.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15800		J	P
7440-36-0	Antimony	1.8 ~~13.6~~	U		P
7440-38-2	Arsenic	15.0			P
7440-39-3	Barium	170			P
7440-41-7	Beryllium	1.1	U		P
7440-43-9	Cadmium	6.6			P
7440-70-2	Calcium	8220			P
7440-47-3	Chromium	218			P
7440-48-4	Cobalt	18.5			P
7440-50-8	Copper	192			P
7439-89-6	Iron	30500			P
7439-92-1	Lead	196			P
7439-95-4	Magnesium	7220			P
7439-96-5	Manganese	892			P
7439-97-6	Mercury	1.1			CV
7440-02-0	Nickel	37.5			P
7440-09-7	Potassium	2150			P
7782-49-2	Selenium	1.1	U	J M	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	226	U		P
7440-28-0	Thallium	2.3	U		P
7440-62-2	Vanadium	38.9			P
7440-66-6	Zinc	491			P

olor Before: BROWN Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD087N-SC-A-1

ontract: R2740914

ab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-A

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052315

evel (low/med): LOW Date Received: 11/16/07

Solids: 61.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10200			P
7440-36-0	Antimony	~~9.5~~ 1.3	U	J	P
7440-38-2	Arsenic	6.8			P
7440-39-3	Barium	95.6			P
7440-41-7	Beryllium	0.79	U		P
7440-43-9	Cadmium	2.4			P
7440-70-2	Calcium	6460			P
7440-47-3	Chromium	112			P
7440-48-4	Cobalt	10.3			P
7440-50-8	Copper	69.0			P
7439-89-6	Iron	21100			P
7439-92-1	Lead	92.1			P
7439-95-4	Magnesium	5770			P
7439-96-5	Manganese	416			P
7439-97-6	Mercury	0.35			CV
7440-02-0	Nickel	22.9			P
7440-09-7	Potassium	1420			P
7782-49-2	Selenium	0.80	U	J W	P
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium	159	U		P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	20.2			P
7440-66-6	Zinc	201			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD094N-SC-A-1

ontract: R2740914

ab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-F

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052316

evel (low/med): LOW Date Received: 11/16/07

Solids: 42.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17500		J	P
7440-36-0	Antimony	5.2 ~~13.9~~	~~U~~		P
7440-38-2	Arsenic	13.1			P
7440-39-3	Barium	294			P
7440-41-7	Beryllium	1.2	U		P
7440-43-9	Cadmium	27.2			P
7440-70-2	Calcium	6250			P
7440-47-3	Chromium	540			P
7440-48-4	Cobalt	12.4			P
7440-50-8	Copper	247			P
7439-89-6	Iron	26300			P
7439-92-1	Lead	595			P
7439-95-4	Magnesium	6350			P
7439-96-5	Manganese	539			P
7439-97-6	Mercury	3.2			CV
7440-02-0	Nickel	36.5			P
7440-09-7	Potassium	1980		↓	P
7782-49-2	Selenium	1.1	U	JW	F
7440-22-4	Silver	2.3	U		P
7440-23-5	Sodium	231	U		P
7440-28-0	Thallium	2.3	U		P
7440-62-2	Vanadium	49.5			P
7440-66-6	Zinc	630		↓	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD097N-SC-A-1

Contract: R2740914

Lab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052317

Level (low/med): LOW Date Received: 11/16/07

% Solids: 54.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10800			P
7440-36-0	Antimony	1.4 ~~10.7~~	U	J	P
7440-38-2	Arsenic	5.7			P
7440-39-3	Barium	137			P
7440-41-7	Beryllium	0.89	U		P
7440-43-9	Cadmium	9.0			P
7440-70-2	Calcium	5400			P
7440-47-3	Chromium	154			P
7440-48-4	Cobalt	10.3			P
7440-50-8	Copper	119			P
7439-89-6	Iron	23700			P
7439-92-1	Lead	342			P
7439-95-4	Magnesium	5190			P
7439-96-5	Manganese	601			P
7439-97-6	Mercury	0.54			CV
7440-02-0	Nickel	26.1			P
7440-09-7	Potassium	1440			P
7782-49-2	Selenium	0.90	U	J W	F
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	178	U		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	21.4			P
7440-66-6	Zinc	311			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD097N-SC-A-2

Contract: R2740914

Lab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052318

Level (low/med): LOW Date Received: 11/16/07

Solids: 55.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11100			P
7440-36-0	Antimony	1.4/10.5	U	J	P
7440-38-2	Arsenic	6.6			P
7440-39-3	Barium	165			P
7440-41-7	Beryllium	0.87	U		P
7440-43-9	Cadmium	6.8			P
7440-70-2	Calcium	5210			P
7440-47-3	Chromium	196			P
7440-48-4	Cobalt	9.9			P
7440-50-8	Copper	157			P
7439-89-6	Iron	22400			P
7439-92-1	Lead	339			P
7439-95-4	Magnesium	4890			P
7439-96-5	Manganese	583			P
7439-97-6	Mercury	0.71			CV
7440-02-0	Nickel	26.6			P
7440-09-7	Potassium	1410			P
7782-49-2	Selenium	0.86	U	J W	F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	175	U		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	23.1			P
7440-66-6	Zinc	400			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD069C-SC-A-1

ontract: R2740914

ab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-1

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052328

evel (low/med): LOW Date Received: 11/16/07

Solids: 50.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11500			P
7440-36-0	Antimony	~~11.7~~ 3.8	U	J	P
7440-38-2	Arsenic	11.1			P
7440-39-3	Barium	216			P
7440-41-7	Beryllium	0.97	U		P
7440-43-9	Cadmium	7.0			P
7440-70-2	Calcium	5610			P
7440-47-3	Chromium	271			P
7440-48-4	Cobalt	9.7	U		P
7440-50-8	Copper	182			P
7439-89-6	Iron	23600			P
7439-92-1	Lead	604		J	P
7439-95-4	Magnesium	4930			P
7439-96-5	Manganese	558			P
7439-97-6	Mercury	1.3			CV
7440-02-0	Nickel	26.6			P
7440-09-7	Potassium	1650			P
7782-49-2	Selenium	0.97	U	J-W	F
7440-22-4	Silver	2.6			P
7440-23-5	Sodium	195	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	30.4			P
7440-66-6	Zinc	573			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD069C-SC-A-2

Contract: R2740914

Lab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-A

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052329

Level (low/med): LOW Date Received: 11/16/07

% Solids: 53.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11400			P
7440-36-0	Antimony	2.10 10.9 ~~U~~		J	P
7440-38-2	Arsenic	9.9			P
7440-39-3	Barium	196			P
7440-41-7	Beryllium	0.91	U		P
7440-43-9	Cadmium	8.7			P
7440-70-2	Calcium	5520			P
7440-47-3	Chromium	283			P
7440-48-4	Cobalt	9.1			P
7440-50-8	Copper	173			P
7439-89-6	Iron	21900			P
7439-92-1	Lead	387		J	P
7439-95-4	Magnesium	5070			P
7439-96-5	Manganese	524			P
7439-97-6	Mercury	1.0			CV
7440-02-0	Nickel	26.5			P
7440-09-7	Potassium	1290			P
7782-49-2	Selenium	0.93	U	J W	F
7440-22-4	Silver	2.2			P
7440-23-5	Sodium	181	U		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	29.3			P
7440-66-6	Zinc	512			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

olumbia Analytical Services

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03SD006U-SC-A-1

ontract: R2740914
ab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-1
atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052338
evel (low/med): LOW Date Received: 11/16/07

Solids: 56.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10400			P
7440-36-0	Antimony	13 10.1	U	J	P
7440-38-2	Arsenic	5.8			P
7440-39-3	Barium	79.4			P
7440-41-7	Beryllium	0.85	U		P
7440-43-9	Cadmium	4.9			P
7440-70-2	Calcium	7450			P
7440-47-3	Chromium	97.8			P
7440-48-4	Cobalt	9.0			P
7440-50-8	Copper	61.2			P
7439-89-6	Iron	21600			P
7439-92-1	Lead	109			P
7439-95-4	Magnesium	6040			P
7439-96-5	Manganese	461			P
7439-97-6	Mercury	0.59			CV
7440-02-0	Nickel	20.6			P
7440-09-7	Potassium	1280			P
7782-49-2	Selenium	0.89	U	J W	F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	169	U		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	21.4			P
7440-66-6	Zinc	182			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLEAR Artifacts:
Comments:

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METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD027U-SC-A-1

ontract: R2740914

ab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-1

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052341

evel (low/med): LOW Date Received: 11/16/07

Solids: 73.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6130			P
7440-36-0	Antimony	1.0 ~~7.9~~	U	J	P
7440-38-2	Arsenic	2.9			P
7440-39-3	Barium	44.1			P
7440-41-7	Beryllium	0.66	U		P
7440-43-9	Cadmium	0.66	U		P
7440-70-2	Calcium	~~3310~~		R	P
7440-47-3	Chromium	17.4			P
7440-48-4	Cobalt	6.6	U		P
7440-50-8	Copper	21.7			P
7439-89-6	Iron	17900			P
7439-92-1	Lead	35.4		J	P
7439-95-4	Magnesium	3870			P
7439-96-5	Manganese	403			P
7439-97-6	Mercury	0.06			CV
7440-02-0	Nickel	18.3			P
7440-09-7	Potassium	963			P
7782-49-2	Selenium	0.66	U	J W	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	131	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	11.5			P
7440-66-6	Zinc	75.6			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03SD027U-SC-A-2

ontract: R2740914
ab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-F
atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052342
evel (low/med): LOW Date Received: 11/16/07
Solids: 77.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5120			P
7440-36-0	Antimony	~~7.7~~ 1.0	U	J	P
7440-38-2	Arsenic	2.1			P
7440-39-3	Barium	48.2			P
7440-41-7	Beryllium	0.64	U		P
7440-43-9	Cadmium	0.64	U		P
7440-70-2	Calcium	~~28200~~		R	P
7440-47-3	Chromium	16.3			P
7440-48-4	Cobalt	6.4	U		P
7440-50-8	Copper	19.7			P
7439-89-6	Iron	13100			P
7439-92-1	Lead	22.7		J	P
7439-95-4	Magnesium	2960			P
7439-96-5	Manganese	429			P
7439-97-6	Mercury	0.05			CV
7440-02-0	Nickel	15.9			P
7440-09-7	Potassium	825			P
7782-49-2	Selenium	0.62	U	J N	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	188			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	9.7			P
7440-66-6	Zinc	68.6			P

Color Before: BROWN Clarity Before: Texture: COARSE
Color After: YELLOW Clarity After: CLEAR Artifacts:
Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD133W-SC-A-1

Contract: R2740914

Lab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-A

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052348

Level (low/med): LOW Date Received: 11/16/07

% Solids: 84.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5810			P
7440-36-0	Antimony	0.98 ~~7.1~~	U	J	P
7440-38-2	Arsenic	7.3			P
7440-39-3	Barium	53.1			P
7440-41-7	Beryllium	0.59	U		P
7440-43-9	Cadmium	0.59	U		P
7440-70-2	Calcium	1480			P
7440-47-3	Chromium	11.7			P
7440-48-4	Cobalt	6.0			P
7440-50-8	Copper	22.2			P
7439-89-6	Iron	24100			P
7439-92-1	Lead	117			P
7439-95-4	Magnesium	3440			P
7439-96-5	Manganese	365			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	17.7			P
7440-09-7	Potassium	730			P
7782-49-2	Selenium	0.59	U	J W	P
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	118	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	10.9			P
7440-66-6	Zinc	86.4			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD-EB-4-SC-A-3

Contract: R2740914

Lab Code: Case No.: SAS No.: SDG NO.: 03SD032N-SC-A

Matrix (soil/water): WATER Lab Sample ID: 1052353

Level (low/med): LOW Date Received: 11/16/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	281			P
7440-36-0	Antimony	7.9 60.0	U	J	P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	271			P
7439-92-1	Lead	5.5			P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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Memorandum

Date: January 7, 2008

To: John Bleiler/Westford

From: Sheena Blair/Westford

Subject: Data Validation
Inorganic Analyses
Surface Sediment Sampling, November 2007
BASF Site, Rensselaer, NY
CAS SDG R2740906

Distribution: L. Herberich/Westford

00760-171-408 File
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SUMMARY

Limited validation was performed on the data for 11 surface sediment samples analyzed for acid volatile sulfide/simultaneously extracted metals (AVS/SEM) according to EPA Draft method 821/R-91-100 and SW846 methods 6010B and 7470A. The samples were collected at the BASF Site in Rensselear, NY on November 14, 2007 and submitted to Columbia Analytical Services in Rochester, NY (CAS-Rochester) for analysis. CAS processed and reported these samples under sample delivery group (SDG) R2740906.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data are valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
03SD056N-SC-A-1	03SD028U-SC-A-1
03SD082N-SC-A-1	03SD130W-SC-A-1
03SD118F-SC-A-1	03SD131W-SC-A-1
03SD004U-SC-A-1	03SD132W-SC-A-1

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Sample IDs	Sample IDs
03SD010U-SC-A-1	03SD120F-SC-A-1
03SD018U-SC-A-1	

REVIEW ELEMENTS

Sample data were reviewed for the following elements:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample (ICS) results (method 6010B only)
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results (method 6010B only)
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancy was noted.

- The laboratory appended the suffix "M" to the sample IDs as recorded on the COC for the purpose of internal sample identification. During validation the "M" was removed manually from the sample IDs on the Form 1s.

Holding Times/Sample Preservation

All samples were analyzed within the method-specified holding time of 14 days from sample collection for AVS, and within 14 days from extraction to analysis for mercury and metals for the SEM analyses.

The cooler temperatures were within acceptance criteria (4 ± 2°C) upon receipt at CAS-Rochester.

Calibrations

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards for AVS and SEM. Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards for SEM containing analytes at concentrations 1-2x the laboratory's method reporting limit (MRL). An

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acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes with the following exception.

Date	Analyte	True Value (TV) (µg/L)	%R	Action Positive(<2x the TV)/Nondetect
12/7/07	Zinc	20	134	Estimate (J)/Accept
Samples Affected: All surface sediment samples.				

It should be noted that all zinc results were >2x the TV and no validation actions were necessary.

Laboratory Blanks/Equipment Blanks

No equipment blanks were submitted for AVS or SEM with the samples in this data set.

Target analytes were not detected in the laboratory extraction and preparation blanks or the initial and continuing calibration blanks (ICBs/CCBs) associated with the sediment analyses for AVS or SEM except as noted. The extraction blank MBLK 11/27/07 had zinc detected at 0.00336 µmoles/g. Qualification of the associated sample results was not required since the concentration of zinc found in all surface sediment samples exceeded 10x the concentration detected in the extraction blank.

ICP ICS Results

All %Rs criteria were met for the analyses of the interference check solution ICS AB.

MS Results

MS analysis for AVS/SEM was performed on surface sediment sample 03SD004U-SC-A-1. The matrix spike %Rs met the QC acceptance criteria.

Laboratory Duplicate Results

Laboratory duplicate analyses were performed on surface sediment sample 03SD004U-SC-A-1 for all analytes. The relative percent differences (RPDs) met the QC acceptance criteria of 35% RPD for sediments [only applicable if both results are >5x SQL] for all analytes.

Field Duplicate Results

No field duplicate samples were submitted with this data set. The field duplicates samples submitted with this sampling event were reported under SDG R2740915. No validation actions were required for the samples in this data set.

LCS Results

The LCSs associated with the surface sediment samples met QC acceptance limits for both AVS and SEM.

ICP Serial Dilution Results

Serial dilution analyses were performed on surface sediment samples 03SD004U-SC-A-1 and 03SD118F-SC-A-1M. All analytes met the percent difference (%D) QC acceptance criteria.

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Sample Quantitation/Detection Limit Results

Positive and nondetect results were reported from the diluted analyses for the samples listed below.

Sample IDs	Analyte	Dilution Factor
All surface sediment samples	Zinc	10x
03SD004U-SC-A-1	AVS	20x
03SD120F-SC-A-1	AVS	2x

All sediment samples were digested at a 2x preparation factor for mercury. All mercury sample quantitation limits (SQLs) were adjusted accordingly by the laboratory.

The solids content for sample 03SD082N-SC-A-1 was < 50% but >10%. Positive and nondetect results were qualified as estimated (J and UJ, respectively) in this sample.

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Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD056N-SC-A-1M

Date Sampled : 11/14/07 08:21 Order #: 1052483 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000667	0.00142	umoles/g	12/04/07	1.0
COPPER	6010B	0.00470	0.129	umoles/g	12/04/07	1.0
LEAD	6010B	0.00361	0.0502	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000299	0.0000299 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0102	0.0528	umoles/g	12/04/07	1.0
ZINC	6010B	0.0457	0.610	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD082N-SC-A-1M

Date Sampled : 11/14/07 08:17 Order #: 1052485 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000890	0.0151	J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00629	0.592	J	umoles/g	12/04/07	1.0
LEAD	6010B	0.00483	0.241	J	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000399	0.0000399	U J	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0136	0.114	J	umoles/g	12/04/07	1.0
ZINC	6010B	0.0612	2.03	J	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD118F-SC-A-1M

Date Sampled : 11/14/07 08:36 Order #: 1052497 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000569	0.00142	umoles/g	12/04/07	1.0
COPPER	6010B	0.00401	0.121	umoles/g	12/04/07	1.0
LEAD	6010B	0.00308	0.0642	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000498	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00871	0.0698	umoles/g	12/04/07	1.0
ZINC	6010B	0.0391	0.792	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD004U-SC-A-1M

Date Sampled : 11/14/07 12:16 Order #: 1052508 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000747	0.00347	umoles/g	12/04/07	1.0
COPPER	6010B	0.00527	0.247	umoles/g	12/04/07	1.0
LEAD	6010B	0.00403	0.120	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000349	0.0000349 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0114	0.0784	umoles/g	12/04/07	1.0
ZINC	6010B	0.0512	0.938	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD010U-SC-A-1M

Date Sampled : 11/14/07 11:13 Order #: 1052510 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000498	0.00285	umoles/g	12/04/07	1.0
COPPER	6010B	0.00351	0.231	umoles/g	12/04/07	1.0
LEAD	6010B	0.00269	0.128	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000199	0.0000249	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00761	0.0801	umoles/g	12/04/07	1.0
ZINC	6010B	0.0342	0.934	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD018U-SC-A-1M

Date Sampled : 11/14/07 11:00 Order #: 1052511 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000756	0.00356	umoles/g	12/04/07	1.0
COPPER	6010B	0.00535	0.194	umoles/g	12/04/07	1.0
LEAD	6010B	0.00411	0.0936	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000349	0.0000349 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0116	0.0750	umoles/g	12/04/07	1.0
ZINC	6010B	0.0520	0.930	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD028U-SC-A-1M

Date Sampled : 11/14/07 11:33 Order #: 1052514 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000569	0.00249	umoles/g	12/04/07	1.0
COPPER	6010B	0.00403	0.181	umoles/g	12/04/07	1.0
LEAD	6010B	0.00309	0.0796	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000249 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00872	0.0562	umoles/g	12/04/07	1.0
ZINC	6010B	0.0391	0.759	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD130W-SC-A-1M

Date Sampled : 11/14/07 09:56 Order #: 1052515 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000605	0.00222	umoles/g	12/04/07	1.0
COPPER	6010B	0.00430	0.182	umoles/g	12/04/07	1.0
LEAD	6010B	0.00329	0.148	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.000150	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00930	0.0494	umoles/g	12/04/07	1.0
ZINC	6010B	0.0417	0.757	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD131W-SC-A-1M

Date Sampled : 11/14/07 09:39 Order #: 1052516 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000525	0.00142	umoles/g	12/04/07	1.0
COPPER	6010B	0.00368	0.102	umoles/g	12/04/07	1.0
LEAD	6010B	0.00282	0.0536	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000249 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00797	0.0750	umoles/g	12/04/07	1.0
ZINC	6010B	0.0358	0.541	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD132W-SC-A-1M

Date Sampled : 11/14/07 10:17 Order #: 1052517 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000534	0.00169	umoles/g	12/04/07	1.0
COPPER	6010B	0.00379	0.143	umoles/g	12/04/07	1.0
LEAD	6010B	0.00291	0.132	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000498	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00821	0.0596	umoles/g	12/04/07	1.0
ZINC	6010B	0.0369	0.691	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD120F-SC-A-1M

Date Sampled : 11/14/07 08:06 Order #: 1055145 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000818	0.0552	umoles/g	12/04/07	1.0
COPPER	6010B	0.00581	0.795	umoles/g	12/04/07	1.0
LEAD	6010B	0.00445	0.849	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000349	0.0000349 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0126	0.145	umoles/g	12/04/07	1.0
ZINC	6010B	0.0565	5.35	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD056N-SC-A-1M

Date Sampled : 11/14/07 08:21 Order #: 1052483 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.152 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	66.0	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD082N-SC-A-1M

Date Sampled : 11/14/07 08:17 Order #: 1052485 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.335 J	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	49.5	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD118F-SC-A-1M

Date Sampled : 11/14/07 08:36 Order #: 1052497 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.129 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	77.3	%	11/27/07	13:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD004U-SC-A-1M

Date Sampled : 11/14/07 12:16 Order #: 1052508 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	5.08	umoles/g	11/27/07	08:00	20.0
PERCENT SOLIDS	160.3M	1.00	58.5	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD010U-SC-A-1M

Date Sampled : 11/14/07 11:13 Order #: 1052510 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.113 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	88.6	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD018U-SC-A-1M

Date Sampled : 11/14/07 11:00 Order #: 1052511 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.171 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	58.6	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD028U-SC-A-1M

Date Sampled : 11/14/07 11:33 Order #: 1052514 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.132 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	75.8	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD130W-SC-A-1M

Date Sampled : 11/14/07 09:56 Order #: 1052515 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.136 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	73.3	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD131W-SC-A-1M

Date Sampled : 11/14/07 09:39 Order #: 1052516 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.118 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	84.9	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD132W-SC-A-1M

Date Sampled : 11/14/07 10:17 Order #: 1052517 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.121 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	82.7	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD120F-SC-A-1M

Date Sampled : 11/14/07 08:06 Order #: 1055145 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/15/07 Submission #: R2740906

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.474	umoles/g	11/28/07	07:30	2.0
PERCENT SOLIDS	160.3M	1.00	52.9	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

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Memorandum

Date: January 14, 2008

To: John Bleiler/Westford

From: Paula DiMattei/Westford

Subject: Data Validation, VOC Analysis
Surface Sediment Sampling, November 2007
BASF Rensselaer Site, NY
CAS Submission # R2740903

Distribution: L. Herberich/Westford

00760-171-408 File
BR020vocpld.doc

SUMMARY

Limited validation was performed on the data for 11 surface sediment samples, one equipment blank, and one trip blank analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The samples were collected at the BASF site in Rensselaer, NY, on November 14, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2740903.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data are valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
03SD056N-SC-A-1	03SD010U-SC-A-1
03SD082N-SC-A-1	03SD120F-SC-A-1
03SD118F-SC-A-1	03SD004U-SC-A-1
03SD018U-SC-A-1	03SD132W-SC-A-1
03SD130W-SC-A-1	03SDEB3-SC-A-3 (Equipment blank)
03SD131W-SC-A-1	TRIP BLANK 1 (Trip blank)

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Sample IDs	
03SD028U-SC-A-1	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) Tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard recoveries
- Sample quantitation/detection limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were analyzed within the method specified holding time.

GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations (IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

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Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 10/2/07 (MSVOA7)	1,4-Dioxane	0.006	J/UJ*
Associated samples: 03SD082N-SC-A-1, 03SD120F-SC-A-1, TRIP BLANK 1, 03SDEB3-SC-A-3			
CC 11/15/07 (MSVOA7)	1,4-Dioxane	0.003	J/UJ*
Associated samples: 03SD082-SC-A-1, 03SD120F-SC-A-1			
CC 11/19/07 (MSVOA7)	1,4-Dioxane	0.005	J/UJ*
Associated samples: TRIP BLANK 1, 03SDEB3-SC-A-3			
IC 10/3/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 03SD056N-SC-A-1, 03SD118F-SC-A-1, 03SD010U-SC-A-1, 03SD018U-SC-A-1, 03SD004U-SC-A-1, 03SD028U-SC-A-1, 03SD130W-SC-A-1, 03SD131W-SC-A-1, 03SD132W-SC-A-1			
CC 11/16/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 03SD056N-SC-A-1, 03SD118F-SC-A-1, 03SD010U-SC-A-1, 03SD018U-SC-A-1, 03SD004U-SC-A-1			
CC 11/17/07 (MSVOA7)	1,4-Dioxane	0.006	J/UJ*
Associated samples: 03SD028U-SC-A-1, 03SD130W-SC-A-1, 03SD131W-SC-A-1, 03SD132W-SC-A-1			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			

Calibration (Instrument ID)	Compound	%D (CC)	Actions (Detects/Nondetects)
CC 11/15/07 (MSVOA7)	1,4-Dioxane	50	J/UJ
	1,2-Dibromo-3-chloropropane	24.1	J/UJ
Associated samples: 03SD082-SC-A-1, 03SD120F-SC-A-1			
CC 11/16/07 (MSVOA7)	Methyl-t-butyl ether	23.5	J/UJ
Associated samples: 03SD056N-SC-A-1, 03SD118F-SC-A-1, 03SD010U-SC-A-1, 03SD018U-SC-A-1, 03SD004U-SC-A-1			

Laboratory Blanks/Equipment Blanks/Trip Blanks

Several target compounds were detected in the laboratory method blanks and equipment blank (03SDEB3-SC-A-3) associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected which was also present in the samples and the associated samples.

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Blank type (lab ID)	Compound	Concentration (µg/Kg)
Method (VBLK1)	Acetone	98
	2-Butanone	160
Associated samples: 03SD082N-SC-A-1, 03SD120F-SC-A-1		
Method (VBLK2)	Acetone	3.2
	Methylene chloride	0.38
Associated samples: 03SD056N-SC-A-1, 03SD118F-SC-A-1, 03SD010U-SC-A-1, 03SD018U-SC-A-1, 03SD004U-SC-A-1		

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC detected	Detects	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			

RL (Reporting Limit) is equivalent to the lowest calibration standard

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Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses.

MS/MSD Results

MS/MSD analyses were performed on sample 03SD004U-SC-A-1. All target compounds were spiked with the exception of bromochloromethane, 1,4-dioxane, and 1,2,3-trichlorobenzene. All %Rs and relative percent differences (RPDs) were within the QC acceptance criteria with the following exceptions.

Compound	MS %R	MSD %R	QC Limits	Actions (Detects/Nondetects)
Bromoform	61	59	70-130	J/UJ
1,3-Dichlorobenzene	68	69	70-130	J/UJ
1,4-Dichlorobenzene	62	62	70-130	J/UJ
Dichlorodifluoromethane	138	143	70-130	J/Accept result
cis-1,3-Dichloropropene	64	62	70-130	J/UJ
trans-1,3-Dichloropropene	57	53	70-130	J/UJ
2-Hexanone	54	53	70-130	J/UJ
Methyl acetate	30	29	50-150	J/UJ
Styrene	64	66	70-130	J/UJ
1,2,4-Trichlorobenzene	30	31	70-130	J/UJ
Trichlorofluoromethane	131	131	70-130	J/Accept result
1,1,2-Trichloro-1,2,2-trifluoroethane	134	136	70-130	J/Accept result

LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses.

Field Duplicate Results

A field duplicate pair was not submitted with this data set. No data validation actions were taken on this basis.

Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses.

Sample Quantitation/Detection Limits

Samples 03SD082N-SC-A-1 and 03SD120F-SC-A-1 were analyzed as medium level soil analyses due to the high concentration of target compounds present in the samples. Sample RLs were adjusted accordingly.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD056N-SC-A-1

Date Sampled : 11/14/07 08:21 **Order #:** 1052310 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 66.0

DATE ANALYZED : 11/16/07
ANALYTICAL DILUTION: 0.92

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	28 U	UG/KG
BENZENE	5.0	7.0 U	UG/KG
BROMOCHLOROMETHANE	5.0	7.0 U	UG/KG
BROMODICHLOROMETHANE	5.0	7.0 U	UG/KG
BROMOFORM	5.0	7.0 U	UG/KG
BROMOMETHANE	5.0	7.0 U	UG/KG
2-BUTANONE (MEK)	10	14 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	7.0 U J	UG/KG
CARBON DISULFIDE	10	14 U	UG/KG
CARBON TETRACHLORIDE	5.0	7.0 U	UG/KG
CHLOROBENZENE	5.0	0.58 J	UG/KG
CHLOROETHANE	10	14 U	UG/KG
CHLOROFORM	5.0	7.0 U	UG/KG
CHLOROMETHANE	5.0	7.0 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7.0 U	UG/KG
CYCLOHEXANE	5.0	7.0 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	7.0 U	UG/KG
1,2-DIBROMOETHANE	5.0	7.0 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.0 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7.0 U	UG/KG
1,2-DICHLOROBENZENE	5.0	7.0 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7.0 U	UG/KG
1,1-DICHLOROETHANE	5.0	7.0 U	UG/KG
1,2-DICHLOROETHANE	5.0	7.0 U	UG/KG
1,1-DICHLOROETHENE	5.0	7.0 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7.0 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7.0 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7.0 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7.0 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	7.0 U	UG/KG
1,4-DIOXANE	100	560 ~~140~~ U J	UG/KG
ETHYLBENZENE	5.0	7.0 U	UG/KG
2-HEXANONE	10	14 U	UG/KG
ISOPROPYLBENZENE	5.0	7.0 U	UG/KG
METHYL ACETATE	10	14 U	UG/KG
METHYLCYCLOHEXANE	5.0	7.0 U	UG/KG
METHYLENE CHLORIDE	5.0	7.0 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	14 U	UG/KG
STYRENE	5.0	7.0 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7.0 U	UG/KG
TETRACHLOROETHENE	5.0	7.0 U	UG/KG
TOLUENE	5.0	7.0 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	7.0 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	7.0 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD056N-SC-A-1

Date Sampled : 11/14/07 08:21 **Order #:** 1052310 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 66.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 0.92			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7.0 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7.0 U	UG/KG
TRICHLOROETHENE	5.0	7.0 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7.0 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7.0 U	UG/KG
VINYL CHLORIDE	5.0	7.0 U	UG/KG
O-XYLENE	5.0	7.0 U	UG/KG
M+P-XYLENE	5.0	7.0 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	83	%
TOLUENE-D8	(75 - 128 %)	95	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD082N-SC-A-1

Date Sampled : 11/14/07 08:51 **Order #:** 1052313 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 49.5

DATE ANALYZED : 11/16/07
ANALYTICAL DILUTION: 122.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	4900 ~~6000~~ U ~~360 JB~~	UG/KG
BENZENE	5.0	280 J	UG/KG
BROMOCHLOROMETHANE	5.0	1200 U	UG/KG
BROMODICHLOROMETHANE	5.0	1200 U	UG/KG
BROMOFORM	5.0	1200 U	UG/KG
BROMOMETHANE	5.0	1200 U	UG/KG
2-BUTANONE (MEK)	10	2500 U ~~380 JB~~	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1200 U	UG/KG
CARBON DISULFIDE	10	2500 U	UG/KG
CARBON TETRACHLORIDE	5.0	1200 U	UG/KG
CHLOROBENZENE	5.0	3000	UG/KG
CHLOROETHANE	10	2500 U	UG/KG
CHLOROFORM	5.0	1200 U	UG/KG
CHLOROMETHANE	5.0	1200 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1200 U J	UG/KG
CYCLOHEXANE	5.0	1200 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1200 U	UG/KG
1,2-DIBROMOETHANE	5.0	1200 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1200 U	UG/KG
1,4-DICHLOROBENZENE	5.0	79 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1200 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1200 U	UG/KG
1,1-DICHLOROETHANE	5.0	1200 U	UG/KG
1,2-DICHLOROETHANE	5.0	1200 U	UG/KG
1,1-DICHLOROETHENE	5.0	1200 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1200 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1200 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1200 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1200 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1200 U	UG/KG
1,4-DIOXANE	100	99,000 ~~25000~~ U J	UG/KG
ETHYLBENZENE	5.0	1200 U	UG/KG
2-HEXANONE	10	2500 U	UG/KG
ISOPROPYLBENZENE	5.0	1200 U	UG/KG
METHYL ACETATE	10	240 J	UG/KG
METHYLCYCLOHEXANE	5.0	1200 U	UG/KG
METHYLENE CHLORIDE	5.0	1200 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	2500 U	UG/KG
STYRENE	5.0	1200 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1200 U	UG/KG
TETRACHLOROETHENE	5.0	1200 U	UG/KG
TOLUENE	5.0	1200 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1200 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1200 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD082N-SC-A-1

Date Sampled : 11/14/07 08:51 **Order #:** 1052313 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 49.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 122.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1200 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1200 U	UG/KG
TRICHLOROETHENE	5.0	1200 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1200 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1200 U	UG/KG
VINYL CHLORIDE	5.0	1200 U	UG/KG
O-XYLENE	5.0	1200 U	UG/KG
M+P-XYLENE	5.0	1200 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	112	%
TOLUENE-D8	(75 - 128 %)	100	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD118F-SC-A-1

Date Sampled : 11/14/07 08:36 **Order #:** 1052323 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 76.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.01			Dry Weight
ACETONE	20	26 U	UG/KG
BENZENE	5.0	6.6 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.6 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.6 U	UG/KG
BROMOFORM	5.0	6.6 U	UG/KG
BROMOMETHANE	5.0	6.6 U	UG/KG
2-BUTANONE (MEK)	10	13 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.6 UJ	UG/KG
CARBON DISULFIDE	10	13 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.6 U	UG/KG
CHLOROBENZENE	5.0	6.6 U	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.6 U	UG/KG
CHLOROMETHANE	5.0	6.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.6 U	UG/KG
CYCLOHEXANE	5.0	6.6 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.6 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.6 U	UG/KG
1,4-DIOXANE	100	530 ~~130~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.6 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	6.6 U	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.6 U	UG/KG
METHYLENE CHLORIDE	5.0	6.6 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.6 U	UG/KG
TETRACHLOROETHENE	5.0	6.6 U	UG/KG
TOLUENE	5.0	6.6 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.6 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.6 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD118F-SC-A-1

Date Sampled : 11/14/07 08:36 **Order #:** 1052323 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 76.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.01			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.6 U	UG/KG
TRICHLOROETHENE	5.0	6.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.6 U	UG/KG
VINYL CHLORIDE	5.0	6.6 U	UG/KG
O-XYLENE	5.0	6.6 U	UG/KG
M+P-XYLENE	5.0	6.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	89	%
TOLUENE-D8	(75 - 128 %)	97	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD018U-SC-A-1

Date Sampled : 11/14/07 11:00 **Order #:** 1052340 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 58.6

DATE ANALYZED : 11/16/07
ANALYTICAL DILUTION: 1.40

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	48 U	UG/KG
BENZENE	5.0	12 U	UG/KG
BROMOCHLOROMETHANE	5.0	12 U	UG/KG
BROMODICHLOROMETHANE	5.0	12 U	UG/KG
BROMOFORM	5.0	12 U	UG/KG
BROMOMETHANE	5.0	12 U	UG/KG
2-BUTANONE (MEK)	10	24 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	12 U J	UG/KG
CARBON DISULFIDE	10	24 U	UG/KG
CARBON TETRACHLORIDE	5.0	12 U	UG/KG
CHLOROBENZENE	5.0	12 U	UG/KG
CHLOROETHANE	10	24 U	UG/KG
CHLOROFORM	5.0	12 U	UG/KG
CHLOROMETHANE	5.0	12 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	12 U	UG/KG
CYCLOHEXANE	5.0	12 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	12 U	UG/KG
1,2-DIBROMOETHANE	5.0	12 U	UG/KG
1,3-DICHLOROBENZENE	5.0	12 U	UG/KG
1,4-DICHLOROBENZENE	5.0	12 U	UG/KG
1,2-DICHLOROBENZENE	5.0	12 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	12 U	UG/KG
1,1-DICHLOROETHANE	5.0	12 U	UG/KG
1,2-DICHLOROETHANE	5.0	12 U	UG/KG
1,1-DICHLOROETHENE	5.0	12 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	12 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	12 U	UG/KG
1,2-DICHLOROPROPANE	5.0	12 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	12 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	12 U	UG/KG
1,4-DIOXANE	100	960 ~~240~~ U J	UG/KG
ETHYLBENZENE	5.0	12 U	UG/KG
2-HEXANONE	10	24 U	UG/KG
ISOPROPYLBENZENE	5.0	12 U	UG/KG
METHYL ACETATE	10	24 U	UG/KG
METHYLCYCLOHEXANE	5.0	12 U	UG/KG
METHYLENE CHLORIDE	5.0	12 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	24 U	UG/KG
STYRENE	5.0	12 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	12 U	UG/KG
TETRACHLOROETHENE	5.0	12 U	UG/KG
TOLUENE	5.0	12 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	12 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	12 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD018U-SC-A-1

Date Sampled : 11/14/07 11:00 **Order #:** 1052340 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 58.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.40			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	12 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	12 U	UG/KG
TRICHLOROETHENE	5.0	12 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	12 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	12 U	UG/KG
VINYL CHLORIDE	5.0	12 U	UG/KG
O-XYLENE	5.0	12 U	UG/KG
M+P-XYLENE	5.0	12 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	79	%
TOLUENE-D8	(75 - 128 %)	101	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD130W-SC-A-1

Date Sampled : 11/14/07 09:56 **Order #:** 1052344 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 73.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 0.97			Dry Weight
ACETONE	20	26 U	UG/KG
BENZENE	5.0	6.6 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.6 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.6 U	UG/KG
BROMOFORM	5.0	6.6 U	UG/KG
BROMOMETHANE	5.0	6.6 U	UG/KG
2-BUTANONE (MEK)	10	13 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.6 U	UG/KG
CARBON DISULFIDE	10	13 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.6 U	UG/KG
CHLOROBENZENE	5.0	6.6 U	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.6 U	UG/KG
CHLOROMETHANE	5.0	6.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.6 U	UG/KG
CYCLOHEXANE	5.0	6.6 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.6 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.6 U	UG/KG
1,4-DIOXANE	100	530 ~~130~~ U J	UG/KG
ETHYLBENZENE	5.0	6.6 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	6.6 U	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.6 U	UG/KG
METHYLENE CHLORIDE	5.0	6.6 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.6 U	UG/KG
TETRACHLOROETHENE	5.0	6.6 U	UG/KG
TOLUENE	5.0	6.6 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.6 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.6 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD130W-SC-A-1

Date Sampled : 11/14/07 09:56 **Order #:** 1052344 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 73.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 0.97			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.6 U	UG/KG
TRICHLOROETHENE	5.0	6.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.6 U	UG/KG
VINYL CHLORIDE	5.0	6.6 U	UG/KG
O-XYLENE	5.0	6.6 U	UG/KG
M+P-XYLENE	5.0	6.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	80	%
TOLUENE-D8	(75 - 128 %)	96	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD131W-SC-A-1

Date Sampled : 11/14/07 09:39 **Order #:** 1052345 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 84.9

DATE ANALYZED : 11/17/07
ANALYTICAL DILUTION: 1.03

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	24 U	UG/KG
BENZENE	5.0	6.1 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.1 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.1 U	UG/KG
BROMOFORM	5.0	6.1 U	UG/KG
BROMOMETHANE	5.0	6.1 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.1 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.1 U	UG/KG
CHLOROBENZENE	5.0	6.1 U	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	6.1 U	UG/KG
CHLOROMETHANE	5.0	6.1 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.1 U	UG/KG
CYCLOHEXANE	5.0	6.1 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.1 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.1 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.1 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.1 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.1 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.1 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.1 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.1 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.1 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.1 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.1 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.1 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.1 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.1 U	UG/KG
1,4-DIOXANE	100	490 ~~120~~ U J	UG/KG
ETHYLBENZENE	5.0	6.1 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	6.1 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.1 U	UG/KG
METHYLENE CHLORIDE	5.0	6.1 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	6.1 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.1 U	UG/KG
TETRACHLOROETHENE	5.0	6.1 U	UG/KG
TOLUENE	5.0	6.1 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.1 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.1 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD131W-SC-A-1

Date Sampled : 11/14/07 09:39 **Order #:** 1052345 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 84.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 1.03			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.1 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.1 U	UG/KG
TRICHLOROETHENE	5.0	6.1 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.1 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.1 U	UG/KG
VINYL CHLORIDE	5.0	6.1 U	UG/KG
O-XYLENE	5.0	6.1 U	UG/KG
M+P-XYLENE	5.0	6.1 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	89	%
TOLUENE-D8	(75 - 128 %)	93	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	93	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD028U-SC-A-1

Date Sampled : 11/14/07 11:33 **Order #:** 1052343 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 75.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 1.58			Dry Weight
ACETONE	20	42 U	UG/KG
BENZENE	5.0	10 U	UG/KG
BROMOCHLOROMETHANE	5.0	10 U	UG/KG
BROMODICHLOROMETHANE	5.0	10 U	UG/KG
BROMOFORM	5.0	10 U	UG/KG
BROMOMETHANE	5.0	10 U	UG/KG
2-BUTANONE (MEK)	10	21 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	10 U	UG/KG
CARBON DISULFIDE	10	21 U	UG/KG
CARBON TETRACHLORIDE	5.0	10 U	UG/KG
CHLOROBENZENE	5.0	10 U	UG/KG
CHLOROETHANE	10	21 U	UG/KG
CHLOROFORM	5.0	10 U	UG/KG
CHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	10 U	UG/KG
CYCLOHEXANE	5.0	10 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMOETHANE	5.0	10 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10 U	UG/KG
1,4-DICHLOROBENZENE	5.0	10 U	UG/KG
1,2-DICHLOROBENZENE	5.0	10 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHANE	5.0	10 U	UG/KG
1,2-DICHLOROETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHENE	5.0	10 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
1,2-DICHLOROPROPANE	5.0	10 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
1,4-DIOXANE	100	830 ~~210~~ UJ	UG/KG
ETHYLBENZENE	5.0	10 U	UG/KG
2-HEXANONE	10	21 U	UG/KG
ISOPROPYLBENZENE	5.0	10 U	UG/KG
METHYL ACETATE	10	21 U	UG/KG
METHYLCYCLOHEXANE	5.0	10 U	UG/KG
METHYLENE CHLORIDE	5.0	10 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	21 U	UG/KG
STYRENE	5.0	10 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/KG
TETRACHLOROETHENE	5.0	10 U	UG/KG
TOLUENE	5.0	10 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	10 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	10 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD028U-SC-A-1

Date Sampled : 11/14/07 11:33 **Order #:** 1052343 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 75.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 1.58			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/KG
TRICHLOROETHENE	5.0	10 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	10 U	UG/KG
VINYL CHLORIDE	5.0	10 U	UG/KG
O-XYLENE	5.0	10 U	UG/KG
M+P-XYLENE	5.0	10 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	86	%
TOLUENE-D8	(75 - 128 %)	97	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD010U-SC-A-1

Date Sampled : 11/14/07 11:13 **Order #:** 1052339 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 88.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.31			Dry Weight
ACETONE	20	30 U	UG/KG
BENZENE	5.0	7.4 U	UG/KG
BROMOCHLOROMETHANE	5.0	7.4 U	UG/KG
BROMODICHLOROMETHANE	5.0	7.4 U	UG/KG
BROMOFORM	5.0	7.4 U	UG/KG
BROMOMETHANE	5.0	7.4 U	UG/KG
2-BUTANONE (MEK)	10	15 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	7.4 U J	UG/KG
CARBON DISULFIDE	10	15 U	UG/KG
CARBON TETRACHLORIDE	5.0	7.4 U	UG/KG
CHLOROBENZENE	5.0	7.4 U	UG/KG
CHLOROETHANE	10	15 U	UG/KG
CHLOROFORM	5.0	7.4 U	UG/KG
CHLOROMETHANE	5.0	7.4 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7.4 U	UG/KG
CYCLOHEXANE	5.0	7.4 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	7.4 U	UG/KG
1,2-DIBROMOETHANE	5.0	7.4 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.4 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7.4 U	UG/KG
1,2-DICHLOROBENZENE	5.0	7.4 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7.4 U	UG/KG
1,1-DICHLOROETHANE	5.0	7.4 U	UG/KG
1,2-DICHLOROETHANE	5.0	7.4 U	UG/KG
1,1-DICHLOROETHENE	5.0	7.4 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7.4 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7.4 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7.4 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7.4 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	7.4 U	UG/KG
1,4-DIOXANE	100	590 ~~150~~ U J	UG/KG
ETHYLBENZENE	5.0	7.4 U	UG/KG
2-HEXANONE	10	15 U	UG/KG
ISOPROPYLBENZENE	5.0	7.4 U	UG/KG
METHYL ACETATE	10	15 U	UG/KG
METHYLCYCLOHEXANE	5.0	7.4 U	UG/KG
METHYLENE CHLORIDE	5.0	7.4 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	15 U	UG/KG
STYRENE	5.0	7.4 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7.4 U	UG/KG
TETRACHLOROETHENE	5.0	7.4 U	UG/KG
TOLUENE	5.0	7.4 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	7.4 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	7.4 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD010U-SC-A-1

Date Sampled : 11/14/07 11:13 **Order #:** 1052339 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 88.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.31			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7.4 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7.4 U	UG/KG
TRICHLOROETHENE	5.0	7.4 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7.4 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7.4 U	UG/KG
VINYL CHLORIDE	5.0	7.4 U	UG/KG
O-XYLENE	5.0	7.4 U	UG/KG
M+P-XYLENE	5.0	7.4 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	85	%
TOLUENE-D8	(75 - 128 %)	93	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	94	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/21/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD120F-SC-A-1

Date Sampled : 11/14/07 08:06 **Order #:** 1052324 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 52.9

DATE ANALYZED : 11/16/07
ANALYTICAL DILUTION: 124.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	44000 ~~300 JB~~	UG/KG
BENZENE	5.0	81 J	UG/KG
BROMOCHLOROMETHANE	5.0	1200 U	UG/KG
BROMODICHLOROMETHANE	5.0	1200 U	UG/KG
BROMOFORM	5.0	1200 U	UG/KG
BROMOMETHANE	5.0	1200 U	UG/KG
2-BUTANONE (MEK)	10	23000 ~~360 JB~~	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1200 U	UG/KG
CARBON DISULFIDE	10	2300 U	UG/KG
CARBON TETRACHLORIDE	5.0	1200 U	UG/KG
CHLOROBENZENE	5.0	2600	UG/KG
CHLOROETHANE	10	2300 U	UG/KG
CHLOROFORM	5.0	1200 U	UG/KG
CHLOROMETHANE	5.0	1200 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1200 UJ	UG/KG
CYCLOHEXANE	5.0	1200 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1200 U	UG/KG
1,2-DIBROMOETHANE	5.0	1200 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1200 U	UG/KG
1,4-DICHLOROBENZENE	5.0	300 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1200 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1200 U	UG/KG
1,1-DICHLOROETHANE	5.0	1200 U	UG/KG
1,2-DICHLOROETHANE	5.0	1200 U	UG/KG
1,1-DICHLOROETHENE	5.0	1200 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1200 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1200 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1200 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1200 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	94,000 ~~23000~~ U J	UG/KG
1,4-DIOXANE	5.0	1200 U	UG/KG
ETHYLBENZENE	10	2300 U	UG/KG
2-HEXANONE	5.0	1200 U	UG/KG
ISOPROPYLBENZENE	10	170 J	UG/KG
METHYL ACETATE	5.0	1200 U	UG/KG
METHYLCYCLOHEXANE	5.0	1200 U	UG/KG
METHYLENE CHLORIDE	10	2300 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	1200 U	UG/KG
STYRENE	5.0	1200 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1200 U	UG/KG
TETRACHLOROETHENE	5.0	1200 U	UG/KG
TOLUENE	5.0	1200 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1200 U	UG/KG
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/21/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD120F-SC-A-1

Date Sampled : 11/14/07 08:06 **Order #:** 1052324 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 52.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 124.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1200 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1200 U	UG/KG
TRICHLOROETHENE	5.0	1200 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1200 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1200 U	UG/KG
VINYL CHLORIDE	5.0	1200 U	UG/KG
O-XYLENE	5.0	1200 U	UG/KG
M+P-XYLENE	5.0	1200 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	109	%
TOLUENE-D8	(75 - 128 %)	100	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	105	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD004U-SC-A-1

Date Sampled : 11/14/07 12:16 **Order #:** 1052337 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 58.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.24			Dry Weight
ACETONE	20	58 U	UG/KG
BENZENE	5.0	11 U	UG/KG
BROMOCHLOROMETHANE	5.0	11 U	UG/KG
BROMODICHLOROMETHANE	5.0	11 U	UG/KG
BROMOFORM	5.0	11 UJ	UG/KG
BROMOMETHANE	5.0	11 U	UG/KG
2-BUTANONE (MEK)	10	13 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	11 UJ	UG/KG
CARBON DISULFIDE	10	1.9 J	UG/KG
CARBON TETRACHLORIDE	5.0	11 U	UG/KG
CHLOROBENZENE	5.0	11 U	UG/KG
CHLOROETHANE	10	21 U	UG/KG
CHLOROFORM	5.0	11 U	UG/KG
CHLOROMETHANE	5.0	11 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	11 U	UG/KG
CYCLOHEXANE	5.0	11 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	11 U	UG/KG
1,2-DIBROMOETHANE	5.0	11 U	UG/KG
1,3-DICHLOROBENZENE	5.0	11 UJ	UG/KG
1,4-DICHLOROBENZENE	5.0	11 UJ	UG/KG
1,2-DICHLOROBENZENE	5.0	11 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	11 U	UG/KG
1,1-DICHLOROETHANE	5.0	11 U	UG/KG
1,2-DICHLOROETHANE	5.0	11 U	UG/KG
1,1-DICHLOROETHENE	5.0	11 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	11 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	11 U	UG/KG
1,2-DICHLOROPROPANE	5.0	11 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	11 UJ	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	11 UJ	UG/KG
1,4-DIOXANE	100	850 ~~210~~ UJ	UG/KG
ETHYLBENZENE	5.0	11 U	UG/KG
2-HEXANONE	10	21 UJ	UG/KG
ISOPROPYLBENZENE	5.0	11 U	UG/KG
METHYL ACETATE	10	21 UJ	UG/KG
METHYLCYCLOHEXANE	5.0	11 U	UG/KG
METHYLENE CHLORIDE	5.0	11U ~~0.70 JB~~	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	21 U	UG/KG
STYRENE	5.0	11 UJ	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	11 U	UG/KG
TETRACHLOROETHENE	5.0	11 U	UG/KG
TOLUENE	5.0	1.1 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	11 UJ	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	11 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD004U-SC-A-1

Date Sampled : 11/14/07 12:16 **Order #:** 1052337 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 58.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.24			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	11 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	11 U	UG/KG
TRICHLOROETHENE	5.0	11 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	11 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	11 U	UG/KG
VINYL CHLORIDE	5.0	11 U	UG/KG
O-XYLENE	5.0	11 U	UG/KG
M+P-XYLENE	5.0	11 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	83	%
TOLUENE-D8	(75 - 128 %)	100	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT ...
Client Sample ID : 03SD132W-SC-A-1

Date Sampled : 11/14/07 10:17 **Order #:** 1052346 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 82.7

DATE ANALYZED : 11/17/07
ANALYTICAL DILUTION: 0.89

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	22 U	UG/KG
BENZENE	5.0	5.4 U	UG/KG
BROMOCHLOROMETHANE	5.0	5.4 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.4 U	UG/KG
BROMOFORM	5.0	5.4 U	UG/KG
BROMOMETHANE	5.0	5.4 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.4 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.4 U	UG/KG
CHLOROBENZENE	5.0	5.4 U	UG/KG
CHLOROETHANE	10	11 U	UG/KG
CHLOROFORM	5.0	5.4 U	UG/KG
CHLOROMETHANE	5.0	5.4 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.4 U	UG/KG
CYCLOHEXANE	5.0	5.4 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.4 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.4 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.4 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.4 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.4 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.4 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.4 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.4 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.4 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.4 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.4 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.4 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.4 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.4 U	UG/KG
1,4-DIOXANE	100	430 ~~110~~ UJ	UG/KG
ETHYLBENZENE	5.0	5.4 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
ISOPROPYLBENZENE	5.0	5.4 U	UG/KG
METHYL ACETATE	10	11 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.4 U	UG/KG
METHYLENE CHLORIDE	5.0	5.4 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.4 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.4 U	UG/KG
TETRACHLOROETHENE	5.0	5.4 U	UG/KG
TOLUENE	5.0	5.4 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.4 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.4 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD132W-SC-A-1

Date Sampled : 11/14/07 10:17 **Order #:** 1052346 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/15/07 **Submission #:** R2740903 **Percent Solid:** 82.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 0.89			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.4 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.4 U	UG/KG
TRICHLOROETHENE	5.0	5.4 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.4 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.4 U	UG/KG
VINYL CHLORIDE	5.0	5.4 U	UG/KG
O-XYLENE	5.0	5.4 U	UG/KG
M+P-XYLENE	5.0	5.4 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	89	%
TOLUENE-D8	(75 - 128 %)	93	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	94	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SDEB3-SC-A-3

Date Sampled : 11/14/07 13:45 **Order #:** 1052352 **Sample Matrix:** WATER
Date Received: 11/15/07 **Submission #:** R2740903 **Analytical Run** 154352

DATE ANALYZED : 11/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.8 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	0.36 J	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SDEB3-SC-A-3

Date Sampled : 11/14/07 13:45 **Order #:** 1052352 **Sample Matrix:** WATER
Date Received: 11/15/07 **Submission #:** R2740903 **Analytical Run** 154352

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	110	%
TOLUENE-D8	(88 - 124 %)	108	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : TRIP BLANK 1

Date Sampled : 11/14/07 **Order #:** 1052356 **Sample Matrix:** WATER
Date Received: 11/15/07 **Submission #:** R2740903 **Analytical Run** 154352

DATE ANALYZED : 11/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 U	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U J	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : TRIP BLANK 1

Date Sampled : 11/14/07 **Order #:** 1052356 **Sample Matrix:** WATER
Date Received: 11/15/07 **Submission #:** R2740903 **Analytical Run** 154352

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	109	%
TOLUENE-D8	(88 - 124 %)	107	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	105	%

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Memorandum

Date: January 16, 2008

To: John Bleiler/Westford

From: Deborah Truini/Westford

Subject: Data Validation
Inorganic Analyses
Surface Sediment Sampling, November 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2740903

Distribution: L. Herberich/Westford

00760-171-525 File
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SUMMARY

Limited validation was performed on the data for 11 surface sediment samples and one aqueous equipment blank sample analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 7470A, 7471A, and 7741A, and for total organic carbon (TOC) according to the Lloyd Kahn method. The samples were collected at the BASF Site in Rensselaer, NY on November 14, 2007 and submitted to Columbia Analytical Services in Rochester, NY (CAS-Rochester) for analysis. CAS-Rochester processed and reported these samples under submission number R2740903.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
03SD056N-SC-A-1	03SD018U-SC-A-1
03SD082N-SC-A-1	03SD028U-SC-A-1
03SD118F-SC-A-1	03SD130W-SC-A-1

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Sample IDs	
03SD120F-SC-A-1	03SD131W-SC-A-1
03SD004U-SC-A-1	03SD132W-SC-A-1
03SD010U-SC-A-1	03SDEB3-SC-A-3 (Equipment blank)

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results
- Sample quantitation/detection limit results
- Graphite furnace atomic absorption (GFAA) results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

TAL Metals and TOC

All samples were digested and analyzed within the method-specified holding times.

The cooler temperatures were within acceptance criteria (4 ± 2°C) upon receipt at CAS-Rochester.

Calibrations

TAL Metals

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

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Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the laboratory's reporting limit (RL) with the exception of barium which was spiked at 10x the RL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes.

TOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

TAL Metals

The following table indicates the equipment blank samples and the associated CAS-Rochester submission numbers.

Sample IDs	CAS Submission Number
03SDEB3-SC-A-3	R2740903

Target analytes were not detected in the laboratory method blanks associated with the sediment and aqueous samples and the laboratory initial and continuing calibration blanks (ICBs/CCBs). Aluminum, iron, and manganese were detected in equipment blank sample 03SDEB3-SC-A-3, which was associated with all the surface sediment samples in this data set, at concentrations greater than the laboratory RLs. Qualification of the sample results was not required since the concentration of aluminum, iron, and manganese detected in all surface sediment samples exceeded 10x the concentration detected in the associated equipment blank sample. The following table summarizes the maximum blank contamination detected in the equipment blank sample.

Source of Contamination	Analyte	Concentration (µg/L)	Associated Samples
03SDEB5-SC-A-3 (equipment blank)	Aluminum	209	All surface sediment samples
	Iron	266	
	Manganese	18.9	

TOC

An equipment blank sample was not submitted with this data set. TOC was not detected in the laboratory method blanks associated with all sample analyses.

ICP Interference Check Sample Results (metals only)

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

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MS Results

TAL Metals

Matrix spike analyses were performed on surface sediment sample 03SD004U-SC-A-1 for all analytes in association with the surface sediment samples in this data set. The matrix spike %Rs met the QC acceptance criteria for all analytes with the following exception.

Analyte	MS %R	QC Acceptance Range	Actions
Mercury	183.3	75-125%	Qualify positive results as estimated (J). Accept nondetects without qualification.
Samples affected: All surface sediment samples.			

TOC

A matrix spike analysis was performed on surface sediment sample 03SD004U-SC-A-1 for TOC in association with the surface sediment samples in this data set. The matrix spike %R met the QC acceptance criteria for TOC.

Laboratory Duplicate Results

TAL Metals

Laboratory duplicate analyses were performed on surface sediment sample 03SD004U-SC-A-1 for all analytes in association with the surface sediment samples in this data set. The relative percent differences (RPDs) met the QC acceptance criteria for all analytes with the following exception.

Analyte	RPD	QC Acceptance Range	Actions
Calcium	73.3	±35	Qualify all positive results as estimated (J).
Samples affected: All surface sediment samples.			

TOC

Laboratory duplicate analyses were performed on surface sediment sample 03SD004U-SC-A-1 for TOC in association with the surface sediment samples in this data set. The RPD met the QC acceptance criteria for TOC.

Field Duplicate Results

TAL Metals and TOC

A field duplicate pair was not provided with this data set. No data validation actions were taken on this basis.

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LCS Results

TAL Metals

The LCSs associated with the surface sediment samples met the vendor's QC acceptance limits.

The LCSs associated with the aqueous equipment blank samples met the 80-120% recovery criteria.

TOC

The LCS associated with the surface sediment samples met the laboratory QC acceptance limits of 55-133% recovery criteria.

ICP Serial Dilution Results (metals only)

Serial dilution analyses were performed on surface sediment sample 03SD004U-SC-A-1 for all ICP metals; and on aqueous equipment blank sample 03SDEB3-SC-A-3 for all ICP metals in association with all samples in this data set. All analytes met the percent difference (%D) QC acceptance criteria in the serial dilution of samples 03SD004U-SC-A-1and 03SDEB3-SC-A-3.

Sample Quantitation/Detection Limit Results

TAL Metals

The positive iron result in sample 03SD028U-SC-A-1 was reported from the 10x dilution analysis. The sample result was adjusted accordingly by the laboratory.

The project-specific quantitation limits were not met for potassium and sodium for the surface sediment samples. No validation actions were taken other than to note this discrepancy.

All metals results, with the exception of antimony, were reported to the sample quantitation limit (SQL). Due to software limitations, metal results (except antimony) greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantiation limits were achieved for all metals except potassium and sodium.

Antimony was reported to the instrument detection limit (IDL) in an attempt to meet the project specific quantation limits of 2.0 mg/Kg for the surface sediments. Since the confidence level of results reported to the IDL is less than results reported to the SQL, the nondetect antimony results in all surface sediment and equipment blank samples, with the exception of samples 03SD120F-SC-A-1 and 03SD130W-SC-A-1, were qualified as estimated (UJ) due to uncertainty in the accurate quantitation/detection of results at this low level. The positive antimony results in samples 03SD120F-SC-A-1 and 03SD130W-SC-A-1 were qualified as estimated (J) due to quantitation of these results at a level <SQL but greater than IDL.

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TOC

Due to software limitation, the TOC SQL reported for all surface sediment samples was 300 mg/Kg even though the initial weights varied on a sample-by-sample basis. No actions were taken other than to note this discrepancy.

GFAA Results (selenium only)

The following sample did not meet post digestion spike (PDS) recovery criteria of 85-115% for the selenium analysis.

Sample ID	Analyte	PDS %R	Actions
03SDEB3-SC-A-3	Selenium	80.5	Qualify the nondetect selenium result as estimated (UJ).

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD056N-SC-A-1

Contract: R2740903

Lab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-A

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052310

Level (low/med): LOW Date Received: 11/15/07

Solids: 66.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7460			P
7440-36-0	Antimony	~~8.8~~ 1.2	U	J	P
7440-38-2	Arsenic	8.1			P
7440-39-3	Barium	61.6			P
7440-41-7	Beryllium	0.74	U		P
7440-43-9	Cadmium	0.74	U		P
7440-70-2	Calcium	9340		NJ	P
7440-47-3	Chromium	19.5			P
7440-48-4	Cobalt	7.4			P
7440-50-8	Copper	23.0			P
7439-89-6	Iron	17800			P
7439-92-1	Lead	25.3			P
7439-95-4	Magnesium	6040			P
7439-96-5	Manganese	449			P
7439-97-6	Mercury	0.11		NJ	CV
7440-02-0	Nickel	15.9			P
7440-09-7	Potassium	1050			P
7782-49-2	Selenium	0.72	U		P
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	147	U		P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	14.5			P
7440-66-6	Zinc	93.7			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD082N-SC-A-1

Contract: R2740903

Lab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-1

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052313

Level (low/med): LOW Date Received: 11/15/07

% Solids: 49.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11800			P
7440-36-0	Antimony	11.9	U	J	P
7440-38-2	Arsenic	8.4			P
7440-39-3	Barium	127			P
7440-41-7	Beryllium	0.99	U		P
7440-43-9	Cadmium	4.7			P
7440-70-2	Calcium	7740		J	P
7440-47-3	Chromium	119			P
7440-48-4	Cobalt	12.0			P
7440-50-8	Copper	352			P
7439-89-6	Iron	23900			P
7439-92-1	Lead	159			P
7439-95-4	Magnesium	5760			P
7439-96-5	Manganese	649			P
7439-97-6	Mercury	0.71		J	CV
7440-02-0	Nickel	28.2			P
7440-09-7	Potassium	1600			P
7782-49-2	Selenium	0.97	U		F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	198	U		P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	24.1			P
7440-66-6	Zinc	319			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD118F-SC-A-1

Contract: R2740903

Lab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-A

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052323

Level (low/med): LOW Date Received: 11/15/07

Solids: 76.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8810			P
7440-36-0	Antimony	~~7.7~~ 10	U	J	P
7440-38-2	Arsenic	4.4			P
7440-39-3	Barium	50.5			P
7440-41-7	Beryllium	0.64	U		P
7440-43-9	Cadmium	0.64	U		P
7440-70-2	Calcium	2410		~~J~~	P
7440-47-3	Chromium	15.4			P
7440-48-4	Cobalt	7.6			P
7440-50-8	Copper	18.0			P
7439-89-6	Iron	24500			P
7439-92-1	Lead	17.7			P
7439-95-4	Magnesium	5480			P
7439-96-5	Manganese	436			P
7439-97-6	Mercury	0.04	U	~~N~~	CV
7440-02-0	Nickel	19.0			P
7440-09-7	Potassium	1200			P
7782-49-2	Selenium	0.63	U		P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	128	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	14.2			P
7440-66-6	Zinc	112			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD120F-SC-A-1

Contract: R2740903

Lab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-2

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052324

Level (low/med): LOW Date Received: 11/15/07

Solids: 52.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12200			P
7440-36-0	Antimony	25 ~~11.2~~	~~U~~	J	P
7440-38-2	Arsenic	8.2			P
7440-39-3	Barium	157			P
7440-41-7	Beryllium	0.94	U		P
7440-43-9	Cadmium	9.6			P
7440-70-2	Calcium	9640		*J	P
7440-47-3	Chromium	214			P
7440-48-4	Cobalt	10.4			P
7440-50-8	Copper	113			P
7439-89-6	Iron	24000			P
7439-92-1	Lead	213			P
7439-95-4	Magnesium	6380			P
7439-96-5	Manganese	547			P
7439-97-6	Mercury	1.3		*J	CV
7440-02-0	Nickel	25.4			P
7440-09-7	Potassium	1820			P
7782-49-2	Selenium	0.90	U		F
7440-22-4	Silver	1.9	U		P
7440-23-5	Sodium	187	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	28.9			P
7440-66-6	Zinc	323			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD004U-SC-A-1

ıtract: R2740903

Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052337

vel (low/med): LOW Date Received: 11/15/07

olids: 58.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8080			P
7440-36-0	Antimony	1.3 10.3	U	J	P
7440-38-2	Arsenic	3.4			P
7440-39-3	Barium	68.5			P
7440-41-7	Beryllium	0.85	U		P
7440-43-9	Cadmium	0.85	U		P
7440-70-2	Calcium	7960		NJ	P
7440-47-3	Chromium	21.0			P
7440-48-4	Cobalt	8.5	U		P
7440-50-8	Copper	34.4			P
7439-89-6	Iron	19100			P
7439-92-1	Lead	43.6			P
7439-95-4	Magnesium	5530			P
7439-96-5	Manganese	464			P
7439-97-6	Mercury	0.10		NJ	CV
7440-02-0	Nickel	17.9			P
7440-09-7	Potassium	1170			P
7782-49-2	Selenium	0.85	U		F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	171	U		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	16.0			P
7440-66-6	Zinc	105			P

lor Before: BROWN Clarity Before: Texture: MEDIUM

lor After: YELLOW Clarity After: CLEAR Artifacts:

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METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD010U-SC-A-1

ontract: R2740903

ab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-F

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052339

evel (low/med): LOW Date Received: 11/15/07

Solids: 88.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12300			P
7440-36-0	Antimony	0.86 6.6	U	J	P
7440-38-2	Arsenic	5.7			P
7440-39-3	Barium	139			P
7440-41-7	Beryllium	2.0			P
7440-43-9	Cadmium	0.55	U		P
7440-70-2	Calcium	47200		NJ	P
7440-47-3	Chromium	13.0			P
7440-48-4	Cobalt	6.9			P
7440-50-8	Copper	23.8			P
7439-89-6	Iron	20600			P
7439-92-1	Lead	35.1			P
7439-95-4	Magnesium	8350			P
7439-96-5	Manganese	938			P
7439-97-6	Mercury	0.05		NJ	CV
7440-02-0	Nickel	16.5			P
7440-09-7	Potassium	1450			P
7782-49-2	Selenium	0.55	U		F
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	984			P
7440-28-0	Thallium	2.7			P
7440-62-2	Vanadium	15.1			P
7440-66-6	Zinc	105			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD018U-SC-A-1

Contract: R2740903

Lab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-P

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052340

Level (low/med): LOW Date Received: 11/15/07

Solids: 58.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8380			P
7440-36-0	Antimony	13 10.0	U	J	P
7440-38-2	Arsenic	3.5			P
7440-39-3	Barium	68.3			P
7440-41-7	Beryllium	0.84	U		P
7440-43-9	Cadmium	0.84	U		P
7440-70-2	Calcium	9150		NJ	P
7440-47-3	Chromium	22.7			P
7440-48-4	Cobalt	8.7			P
7440-50-8	Copper	25.8			P
7439-89-6	Iron	19600			P
7439-92-1	Lead	29.8			P
7439-95-4	Magnesium	5950			P
7439-96-5	Manganese	553			P
7439-97-6	Mercury	0.10		NJ	CV
7440-02-0	Nickel	16.9			P
7440-09-7	Potassium	1280			P
7782-49-2	Selenium	0.84	U		F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	167	U		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	15.5			P
7440-66-6	Zinc	103			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD028U-SC-A-1

Contract: R2740903

Lab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-1

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052343

Level (low/med): LOW Date Received: 11/15/07

% Solids: 75.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17000			P
7440-36-0	Antimony	1.0 ~~7.9~~	U	J	P
7440-38-2	Arsenic	8.5			P
7440-39-3	Barium	96.6			P
7440-41-7	Beryllium	0.73			P
7440-43-9	Cadmium	0.66	U		P
7440-70-2	Calcium	5440		~~J~~ J	P
7440-47-3	Chromium	26.3			P
7440-48-4	Cobalt	14.5			P
7440-50-8	Copper	40.0			P
7439-89-6	Iron	52400			P
7439-92-1	Lead	24.2			P
7439-95-4	Magnesium	10000			P
7439-96-5	Manganese	1300			P
7439-97-6	Mercury	0.04	U	~~N~~ J	CV
7440-02-0	Nickel	35.9			P
7440-09-7	Potassium	1700			P
7782-49-2	Selenium	0.63	U		P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	132	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	30.8			P
7440-66-6	Zinc	116			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD130W-SC-A-1

Contract: R2740903

Lab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-A

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052344

Level (low/med): LOW Date Received: 11/15/07

Solids: 73.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5480			P
7440-36-0	Antimony	~~8.0~~ 4.9	~~U~~	J	P
7440-38-2	Arsenic	12.5			P
7440-39-3	Barium	119			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.67	U		P
7440-70-2	Calcium	7050		J	P
7440-47-3	Chromium	10.5			P
7440-48-4	Cobalt	6.7	U		P
7440-50-8	Copper	16.1			P
7439-89-6	Iron	29500			P
7439-92-1	Lead	32.4			P
7439-95-4	Magnesium	3740			P
7439-96-5	Manganese	300			P
7439-97-6	Mercury	0.07		NJ	CV
7440-02-0	Nickel	10.8			P
7440-09-7	Potassium	901			P
7782-49-2	Selenium	1.2			F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	134	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	10.8			P
7440-66-6	Zinc	78.5			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD131W-SC-A-1

ntract: R2740903

b Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-F

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052345

vel (low/med): LOW Date Received: 11/15/07

Solids: 84.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6150			P
7440-36-0	Antimony	0.89 6.8	U	J	P
7440-38-2	Arsenic	2.6			P
7440-39-3	Barium	24.5			P
7440-41-7	Beryllium	0.57	U		P
7440-43-9	Cadmium	0.57	U		P
7440-70-2	Calcium	2150		*J	P
7440-47-3	Chromium	8.8			P
7440-48-4	Cobalt	5.7	U		P
7440-50-8	Copper	9.4			P
7439-89-6	Iron	15900			P
7439-92-1	Lead	12.0			P
7439-95-4	Magnesium	3730			P
7439-96-5	Manganese	258			P
7439-97-6	Mercury	0.04		NJ	CV
7440-02-0	Nickel	12.8			P
7440-09-7	Potassium	683			P
7782-49-2	Selenium	0.58	U		F
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	113	U		P
7440-28-0	Thallium	1.1	U		P
7440-62-2	Vanadium	9.0			P
7440-66-6	Zinc	55.0			P

olor Before: BROWN Clarity Before: Texture: COARSE

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD132W-SC-A-1

Contract: R2740903

Lab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-P

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052346

Level (low/med): LOW Date Received: 11/15/07

Solids: 82.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5600			P
7440-36-0	Antimony	0.93 7.0	U	J	P
7440-38-2	Arsenic	125			P
7440-39-3	Barium	73.9			P
7440-41-7	Beryllium	0.59	U		P
7440-43-9	Cadmium	0.59	U		P
7440-70-2	Calcium	6220		J	P
7440-47-3	Chromium	7.2			P
7440-48-4	Cobalt	5.9	U		P
7440-50-8	Copper	10.0			P
7439-89-6	Iron	26300			P
7439-92-1	Lead	20.5			P
7439-95-4	Magnesium	4600			P
7439-96-5	Manganese	219			P
7439-97-6	Mercury	0.05		NJ	CV
7440-02-0	Nickel	10.6			P
7440-09-7	Potassium	740			P
7782-49-2	Selenium	0.58	U		P
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	117	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	8.6			P
7440-66-6	Zinc	60.8			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SDEB3-SC-A-3

ontract: R2740903

ab Code: Case No.: SAS No.: SDG NO.: 03SD056N-SC-2

atrix (soil/water): WATER Lab Sample ID: 1052352

evel (low/med): LOW Date Received: 11/15/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	209			P
7440-36-0	Antimony	79 ~~60.0~~	U	J	P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	266			P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	18.9			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U	JW	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

olor Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

omments:

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Memorandum

Date: January 7, 2008

To: John Bleiler/Westford

From: Sheena Blair/Westford

Subject: Data Validation
Inorganic Analyses
Surface Sediment Sampling, November 2007
BASF Site, Rensselaer, NY
CAS SDG R2740714

Distribution: L. Herberich/Westford

00760-171-408 File
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SUMMARY

Limited validation was performed on the data for 12 surface sediment samples analyzed for acid volatile sulfide/simultaneously extracted metals (AVS/SEM) according to EPA Draft method 821/R-91-100 and SW846 methods 6010B and 7470A. The samples were collected at the BASF Site in Rensselear, NY on November 13, 2007 and submitted to Columbia Analytical Services in Rochester, NY (CAS-Rochester) for analysis. CAS processed and reported these samples under sample delivery group (SDG) R2740714.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data are valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
03SD059N-SC-A-1	03SD125C-SC-A-1
03SD061C-SC-A-1	03SD126C-SC-A-1
03SD064C-SC-A-1	03SD11VC-SC-A-1
03SD067C-SC-A-1	03SD063W-SC-A-1

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Sample IDs	Sample IDs
03SD071C-SC-A-1	03SD134W-SC-A-1
03SD124C-SC-A-1	03SD100N-SC-A-1

REVIEW ELEMENTS

Sample data were reviewed for the following elements:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample (ICS) results (method 6010B only)
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results (method 6010B only)
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancy was noted.

- The laboratory appended the suffix "M" to the sample IDs as recorded on the COC for the purpose of internal sample identification. During validation the "M" was removed manually from the sample IDs on the Form 1s.

Holding Times/Sample Preservation

All samples were analyzed within the method-specified holding time of 14 days from sample collection for AVS, and within 14 days from extraction to analysis for mercury and metals for the SEM analyses except as noted.

- The AVS for samples 03SD063W-SC-A-1 and 03SD134W-SC-A-1 was analyzed one day past the 14 day holding time; therefore, the nondetect AVS results for these samples were qualified estimated (UJ).

The cooler temperatures were within acceptance criteria (4 ± 2°C) upon receipt at CAS-Rochester.

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Calibrations

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1-2x the laboratory's method reporting limit (MRL). An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes with the following exception.

Date	Analyte	True Value (TV) (µg/L)	%R	Action Positive(<2x the TV)/Nondetect
12/7/07	Zinc	20	134	Estimate (J)/Accept
Samples Affected: All surface sediment samples.				

It should be noted that all zinc results were >2x the TV and no validation actions were taken on this basis.

Laboratory Blanks/Equipment Blanks

No equipment blanks were submitted for AVS or SEM with the samples in this data set.

Target analytes were not detected in the laboratory extraction and preparation blanks or the initial and continuing calibration blanks (ICBs/CCBs) associated with the sediment analyses for AVS or SEM except as noted. The extraction blank MBLK 11/27/07 had zinc detected at 0.00336 µmoles/g. Qualification of the associated sample results was not required since the concentration of zinc found in all surface sediment samples exceeded 10x the concentration detected in the extraction blank.

ICP ICS Results

All %Rs criteria were met for the analyses of the interference check solution ICS AB.

MS Results

The batch MS analysis for AVS/SEM was performed on surface sediment sample 03SD004U-SC-A-1 (reported under SDG R2740906). The matrix spike %Rs met the QC acceptance criteria.

Laboratory Duplicate Results

The batch laboratory duplicate analyses were performed on surface sediment sample 03SD004U-SC-A-1 (reported under SDG R2740906) for all analytes. The relative percent differences (RPDs) met the QC acceptance criteria of 35% RPD for sediments [only applicable if both results are >5x sample quantitation limit (SQL)] for all analytes.

Field Duplicate Results

No field duplicate samples were submitted with this data set. The field duplicates samples submitted with this sampling event were reported under SDG R2740915. No validation actions were required for the samples in this data set.

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LCS Results

The LCSs associated with the surface sediment samples met QC acceptance limits for both AVS and SEM.

ICP Serial Dilution Results

The serial dilution analyses for the batch were performed on surface sediment samples 03SD004U-SC-A-1 and 03SD118F-SC-A-1 (reported under SDG R2740906). All analytes met the percent difference (%D) QC acceptance criteria.

Sample Quantitation/Detection Limit Results

Positive and nondetect results were reported from the diluted analyses for the samples listed below.

Sample IDs	Analyte	Dilution Factor
All surface sediment samples	Zinc	10x
03SD11VC-SC-A-1	AVS	20x

All sediment samples were digested at a 2x preparation factor for mercury. All mercury SQLs were adjusted accordingly by the laboratory.

The solids content for samples 03SD100N-SC-A-1 and 03SD126C-SC-A-1 were < 50% but >10%. Positive and nondetect results were qualified as estimated (J and UJ, respectively) in these samples.

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD059N-SC-A-1M

Date Sampled : 11/13/07 14:21 Order #: 1052484 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000552	0.00169	umoles/g	12/04/07	1.0
COPPER	6010B	0.00390	0.110	umoles/g	12/04/07	1.0
LEAD	6010B	0.00299	0.0569	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000249 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00843	0.0630	umoles/g	12/04/07	1.0
ZINC	6010B	0.0379	0.730	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD100N-SC-A-1M

Date Sampled : 11/13/07 14:41 Order #: 1052496 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.00137	0.00534 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00968	0.469 J	umoles/g	12/04/07	1.0
LEAD	6010B	0.00742	0.185 J	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000598	0.0000598 UJ	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0210	0.134 J	umoles/g	12/04/07	1.0
ZINC	6010B	0.0941	1.76 J	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD061C-SC-A-1M

Date Sampled : 11/13/07 13:04 Order #: 1052498 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000605	0.00240	umoles/g	12/04/07	1.0
COPPER	6010B	0.00426	0.159	umoles/g	12/04/07	1.0
LEAD	6010B	0.00327	0.0825	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000249 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00923	0.0784	umoles/g	12/04/07	1.0
ZINC	6010B	0.0414	1.13	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD064C-SC-A-1M

Date Sampled : 11/13/07 12:50 Order #: 1052499 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000560	0.00205	umoles/g	12/04/07	1.0
COPPER	6010B	0.00397	0.132	umoles/g	12/04/07	1.0
LEAD	6010B	0.00304	0.0777	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000249 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00859	0.0732	umoles/g	12/04/07	1.0
ZINC	6010B	0.0385	0.902	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD067C-SC-A-1M

Date Sampled : 11/13/07 13:42 Order #: 1052500 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000552	0.00276	umoles/g	12/04/07	1.0
COPPER	6010B	0.00390	0.343	umoles/g	12/04/07	1.0
LEAD	6010B	0.00300	0.135	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000399	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00847	0.0596	umoles/g	12/04/07	1.0
ZINC	6010B	0.0380	1.04	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD071C-SC-A-1M

Date Sampled : 11/13/07 11:35 Order #: 1052503 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000614	0.00231	umoles/g	12/04/07	1.0
COPPER	6010B	0.00433	0.135	umoles/g	12/04/07	1.0
LEAD	6010B	0.00333	0.0782	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000299	0.0000299 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00939	0.0681	umoles/g	12/04/07	1.0
ZINC	6010B	0.0421	0.879	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD124C-SC-A-1M

Date Sampled : 11/13/07 11:53 Order #: 1052504 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000729	0.00347	umoles/g	12/04/07	1.0
COPPER	6010B	0.00516	0.197	umoles/g	12/04/07	1.0
LEAD	6010B	0.00396	0.0989	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000349	0.0000349 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0112	0.0698	umoles/g	12/04/07	1.0
ZINC	6010B	0.0502	1.08	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD125C-SC-A-1M

Date Sampled : 11/13/07 11:09 Order #: 1052505 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000552	0.00231	umoles/g	12/04/07	1.0
COPPER	6010B	0.00390	0.146	umoles/g	12/04/07	1.0
LEAD	6010B	0.00300	0.0743	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000249 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00847	0.0613	umoles/g	12/04/07	1.0
ZINC	6010B	0.0380	0.803	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD126C-SC-A-1M

Date Sampled : 11/13/07 10:37 Order #: 1052506 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000996	0.00978 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00707	0.225 J	umoles/g	12/04/07	1.0
LEAD	6010B	0.00541	0.172 J	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000449	0.0000449 UJ	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0153	0.114 J	umoles/g	12/04/07	1.0
ZINC	6010B	0.0686	1.44 J	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD11VC-SC-A-1M

Date Sampled : 11/13/07 13:17 Order #: 1052507 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000703	0.0480	umoles/g	12/04/07	1.0
COPPER	6010B	0.00500	0.632	umoles/g	12/04/07	1.0
LEAD	6010B	0.00383	0.579	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000299	0.0000299 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0108	0.0869	umoles/g	12/04/07	1.0
ZINC	6010B	0.0486	3.07	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD063W-SC-A-1

Date Sampled : 11/13/07 15:36 Order #: 1052518 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000525	0.00178	umoles/g	12/04/07	1.0
COPPER	6010B	0.00370	0.241	umoles/g	12/04/07	1.0
LEAD	6010B	0.00284	0.0888	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000498	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00801	0.123	umoles/g	12/04/07	1.0
ZINC	6010B	0.0359	1.04	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD134W-SC-A-1M

Date Sampled : 11/13/07 15:45 Order #: 1052520 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000569	0.00240	umoles/g	12/04/07	1.0
COPPER	6010B	0.00403	0.194	umoles/g	12/04/07	1.0
LEAD	6010B	0.00308	0.0864	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000249 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00871	0.0647	umoles/g	12/04/07	1.0
ZINC	6010B	0.0391	0.835	umoles/g	12/05/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD059N-SC-A-1M

Date Sampled : 11/13/07 14:21 Order #: 1052484 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.127 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	78.7	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD100N-SC-A-1M

Date Sampled : 11/13/07 14:41 Order #: 1052496 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.350 J	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	30.9	%	11/27/07	13:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD061C-SC-A-1M

Date Sampled : 11/13/07 13:04 Order #: 1052498 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.136 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	73.5	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD064C-SC-A-1M

Date Sampled : 11/13/07 12:50 Order #: 1052499 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.130 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	77.1	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD067C-SC-A-1M

Date Sampled : 11/13/07 13:42 Order #: 1052500 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.124 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	80.5	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD071C-SC-A-1M

Date Sampled : 11/13/07 11:35 Order #: 1052503 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.141 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	70.9	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD124C-SC-A-1M

Date Sampled : 11/13/07 11:53 Order #: 1052504 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.176	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	60.2	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD125C-SC-A-1M

Date Sampled : 11/13/07 11:09 Order #: 1052505 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.129 U	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	77.4	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD126C-SC-A-1M

Date Sampled : 11/13/07 10:37 Order #: 1052506 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.225 U J	umoles/g	11/27/07	08:00	1.0
PERCENT SOLIDS	160.3M	1.00	44.5	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD11VC-SC-A-1M

Date Sampled : 11/13/07 13:17 Order #: 1052507 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	4.87	umoles/g	11/27/07	08:00	20.0
PERCENT SOLIDS	160.3M	1.00	62.8	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD063W-SC-A-1M

Date Sampled : 11/13/07 15:36 Order #: 1052518 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.118 UJ	umoles/g	11/28/07	07:30	1.0
PERCENT SOLIDS	160.3M	1.00	85.1	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD134W-SC-A-1M

Date Sampled : 11/13/07 15:45 Order #: 1052520 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740714

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.130 UJ	umoles/g	11/28/07	07:30	1.0
PERCENT SOLIDS	160.3M	1.00	77.0	%	11/16/07	15:50	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

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Memorandum

Date: January 16, 2008

To: John Bleiler/Westford

From: Deborah Truini/Westford

Subject: Data Validation
Inorganic Analyses
Surface Sediment Sampling, November 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2740702

Distribution: L. Herberich/Westford

00760-171-525 File
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SUMMARY

Limited validation was performed on the data for 16 surface sediment samples and two aqueous equipment blank samples analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 7470A, 7471A, and 7741A and for total organic carbon (TOC) according to the Lloyd Kahn method. The samples were collected at the BASF Site in Rensselaer, NY on November 13, 2007 and submitted to Columbia Analytical Services in Rochester, NY (CAS-Rochester) for analysis. CAS-Rochester processed and reported these samples under submission number R2740702.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
03SD059N-SC-A-1	03SD125C-SC-A-1
03SD100N-SC-A-1	03SD126C-SC-A-1
03SD123N-SC-A-1	03SD127C-SC-A-1
03SD129N-SC-A-1	03SD128C-SC-A-1
03SD061C-SC-A-1	03SD11VC-SC-A-1

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Sample IDs	
03SD064C-SC-A-1	03SD063W-SC-A-1
03SD067C-SC-A-1	03SD134W-SC-A-1
03SD071C-SC-A-1	03SD-EB1-SC-A-3 (Equipment blank)
03SD124C-SC-A-1	03SD-EB2-SC-A-3 (Equipment blank)

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results
- Sample quantitation/detection limit results
- Graphite furnace atomic absorption (GFAA) results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

TAL Metals

All samples were digested and analyzed within the method-specified holding times.

The cooler temperatures were within the acceptance criteria (4 ± 2°C) upon receipt at CAS-Rochester.

TOC

All TOC samples were originally analyzed within the method-specified holding times. However, all samples were re-analyzed since expired calibration standards had been used for the original analysis. The re-analyses took place one day outside of the 14 day analytical holding time. All results were

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reported from the re-analysis; therefore, all TOC results were qualified as estimated (J) due to the holding time exceedance.

The cooler temperatures were within the acceptance criteria (4 ± 2°C) upon receipt at CAS-Rochester.

Calibrations

TAL Metals

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the laboratory's practical reporting limit (PQL) with the exception of barium which was spiked at 10x the PQL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes.

TOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

TAL Metals

The following table indicates the equipment blank samples and the associated CAS-Rochester submission numbers.

Sample IDs	CAS Submission Number
03SD-EB1-SC-A-3	R2740702
03SD-EB2-SC-A-3	R2740702

Target analytes were not detected in the laboratory method blanks or the laboratory initial and continuing calibration blanks (ICBs/CCBs) associated with the sediment and aqueous samples. Target analytes were not detected in either equipment blank sample associated with the surface sediment samples in this data set.

TOC

An equipment blank sample was not submitted with this data set. TOC was not detected in the laboratory method blanks associated with all sample analyses.

ICP Interference Check Sample Results (metals only)

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

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MS Results

TAL Metals

Matrix spike analyses were performed on surface sediment sample 03SD063W-SC-A-1 for all analytes in association with the surface sediment samples in this data set. In addition, matrix spike analyses were performed on equipment blank sample 03SD-EB1-SC-A-3 for mercury only and on equipment blank sample 03SD-EB2-SC-A-3 for selenium only in association with the equipment blank samples in this data set. The matrix spike %Rs met the QC acceptance criteria for all analytes with the following exception in MS sample 03SD063W-SC-A-1.

Analyte	MS %R	QC Acceptance Range	Actions
Manganese	51.1	75-125%	Qualify positive and nondetect results as estimated biased low (J and UJ, respectively).
Samples affected: All surface sediment samples.			

TOC

Matrix spike analyses were performed on surface sediment samples 03SD071C-SC-A-1 and 03SD064C-SC-A-1 for TOC in association with the surface sediment samples in this data set. The matrix spike %Rs met the QC acceptance criteria for TOC.

Laboratory Duplicate Results

TAL Metals

Laboratory duplicate analyses were performed on surface sediment sample 03SD063W-SC-A-1 for all analytes in association with the surface sediment samples in this data set. In addition, laboratory duplicate analyses were performed on equipment blank sample 03SD-EB1-SC-A-3 for mercury only and on equipment blank sample 03SD-EB2-SC-A-3 for selenium only in association with the equipment blank samples in this data set. The relative percent differences (RPDs) met the QC acceptance criteria for all analytes with the following exceptions in laboratory duplicate sample 03SD063W-SC-A-1.

Analyte	RPD	QC Acceptance Range	Actions
Copper	46.3	35	Qualify positive and nondetect results as estimated (J and UJ, respectively).
Nickel	61.3	35	Qualify positive and nondetect results as estimated (J and UJ, respectively).
Zinc	52.7	35	Qualify positive and nondetect results as estimated (J and UJ, respectively).
Samples affected: All surface sediment samples.			

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TOC

Laboratory duplicate analyses were performed on surface sediment samples 03SD071C-SC-A-1 and 03SD064C-SC-A-1 for TOC in association with the surface sediment samples in this data set. The RPDs met the QC acceptance criteria for TOC.

Field Duplicate Results

TAL Metals and TOC

A field duplicate pair was not provided with this data set. No data validation actions were taken on this basis.

LCS Results

TAL Metals

The LCSs associated with the surface sediment samples met the vendor's QC acceptance limits.

The LCSs associated with the aqueous equipment blank samples met the 80-120% recovery criteria.

TOC

The LCSs associated with the surface sediment samples met the laboratory QC acceptance limits of 55-133% recovery criteria.

ICP Serial Dilution Results (metals only)

Serial dilution analyses were performed on surface sediment sample 03SD063W-SC-A-1 for all analytes except mercury and selenium and on aqueous equipment blank sample 03SD-EB2-SC-A-3 for all analytes except mercury and selenium in association with all samples in this data set. All analytes met the percent difference (%D) QC acceptance criteria in the serial dilution analysis of samples 03SD063W-SC-A-1 and 03SD-EB2-SC-A-3.

Sample Quantitation/Detection Limit Results

TAL Metals

The solids content for sample 03SD126C-SC-A-1 was < 50%. All positive and nondetect metals results were qualified as estimated (J and UJ, respectively) in this sample.

The project specific quantitation limits were not met for potassium and sodium for the surface sediment samples. No validation actions were taken other than to note this discrepancy.

All metals results, with the exception of antimony, were reported to the SQL. Due to software limitations, metal results (except antimony) greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project specific quantitation limits were achieved for all metals except potassium and sodium.

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Antimony was reported to the instrument detection limit (IDL) in an attempt to meet the project-specific quantation limit of 2.0 mg/Kg for the surface sediments. Since the confidence level of results reported to IDL is less than results reported to SQL, the nondetect antimony results in all surface sediment and equipment blank samples were qualified as estimated (UJ) due to uncertainty in the accurate quantitation/detection of results at this low level.

TOC

Due to software limitation, the TOC SQL reported for all surface sediment samples was 300 mg/Kg even though the initial weights varied on a sample-by-sample basis. No actions were taken other than to note this discrepancy.

The solids content for sample 03SD126C-SC-A-1 was < 50%. The positive TOC result was qualified as estimated (J) in this sample.

GFAA Results (selenium only)

The following samples did not meet post digestion spike (PDS) recovery criteria of 85-115% for the selenium analysis.

Sample ID	Analyte	PDS %R	Actions
03SD63W-SC-A-1	Selenium	122.4	No action since selenium was nondetect.
03SD059N-SC-A-1	Selenium	83.7	Qualify the nondetect selenium result as estimated (UJ).
03SD124C-SC-A-1	Selenium	83.5	Qualify the nondetect selenium result as estimated (UJ).
03SD11VC-SC-A-1	Selenium	84.2	Qualify the nondetect selenium result as estimated (UJ).

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD059N-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-A

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052311

Level (low/med): LOW Date Received: 11/14/07

% Solids: 78.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6120		*	P
7440-36-0	Antimony	0.97 ~~7.4~~	U	J	P
7440-38-2	Arsenic	2.2		*	P
7440-39-3	Barium	32.8			P
7440-41-7	Beryllium	0.62	U		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	1600			P
7440-47-3	Chromium	13.4		*	P
7440-48-4	Cobalt	6.2	U		P
7440-50-8	Copper	9.5		* J	P
7439-89-6	Iron	14400		*	P
7439-92-1	Lead	20.0		*	P
7439-95-4	Magnesium	3390		*	P
7439-96-5	Manganese	290		N J	P
7439-97-6	Mercury	0.07			CV
7440-02-0	Nickel	12.8		* J	P
7440-09-7	Potassium	920			P
7782-49-2	Selenium	0.62	U	J W	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	123	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	10.4			P
7440-66-6	Zinc	67.6		* J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD100N-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052320

Level (low/med): LOW Date Received: 11/14/07

% Solids: 65.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7410		*	P
7440-36-0	Antimony	1.2 ~~9.0~~	U	J	P
7440-38-2	Arsenic	2.8		*	P
7440-39-3	Barium	55.8			P
7440-41-7	Beryllium	0.75	U		P
7440-43-9	Cadmium	0.75	U		P
7440-70-2	Calcium	4990			P
7440-47-3	Chromium	17.7		*	P
7440-48-4	Cobalt	7.9			P
7440-50-8	Copper	23.4		*J	P
7439-89-6	Iron	17100		*	P
7439-92-1	Lead	27.6		*	P
7439-95-4	Magnesium	4650		*	P
7439-96-5	Manganese	452		NJ	P
7439-97-6	Mercury	0.10			CV
7440-02-0	Nickel	15.9		*J	P
7440-09-7	Potassium	1060			P
7782-49-2	Selenium	0.75	U	W	F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	151	U		P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	13.7			P
7440-66-6	Zinc	94.9		*J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD123N-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052321

Level (low/med): LOW Date Received: 11/14/07

% Solids: 70.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7600		*	P
7440-36-0	Antimony	8.4	U	J	P
7440-38-2	Arsenic	2.9		*	P
7440-39-3	Barium	50.1			P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	0.93			P
7440-70-2	Calcium	3430			P
7440-47-3	Chromium	29.4		*	P
7440-48-4	Cobalt	7.3			P
7440-50-8	Copper	50.4		* J	P
7439-89-6	Iron	17600		*	P
7439-92-1	Lead	43.4		*	P
7439-95-4	Magnesium	4200		*	P
7439-96-5	Manganese	341		N J	P
7439-97-6	Mercury	0.19			CV
7440-02-0	Nickel	16.0		* J	P
7440-09-7	Potassium	1060			P
7782-49-2	Selenium	0.68	U	W	F
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	139	U		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	14.1			P
7440-66-6	Zinc	101		* J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD129N-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052322

Level (low/med): LOW Date Received: 11/14/07

Solids: 80.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5520		*	P
7440-36-0	Antimony	0.95 7.2	U	J	P
7440-38-2	Arsenic	2.2		*	P
7440-39-3	Barium	28.7			P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	1680			P
7440-47-3	Chromium	10.5		*	P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.8		* J	P
7439-89-6	Iron	13400		*	P
7439-92-1	Lead	11.1		*	P
7439-95-4	Magnesium	3050		*	P
7439-96-5	Manganese	278		N J	P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	10.9		* J	P
7440-09-7	Potassium	795			P
7782-49-2	Selenium	0.60	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	121	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	8.6			P
7440-66-6	Zinc	51.5		* J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

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METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD061C-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052325

Level (low/med): LOW Date Received: 11/14/07

Solids: 73.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7330		*	P
7440-36-0	Antimony	~~8.2~~ 1.1	U	J	P
7440-38-2	Arsenic	3.5		*	P
7440-39-3	Barium	72.3			P
7440-41-7	Beryllium	0.68	U		P
7440-43-9	Cadmium	2.0			P
7440-70-2	Calcium	3020			P
7440-47-3	Chromium	65.0		*	P
7440-48-4	Cobalt	6.8	U		P
7440-50-8	Copper	39.4		*J	P
7439-89-6	Iron	15300		*	P
7439-92-1	Lead	67.3		*	P
7439-95-4	Magnesium	3700		*	P
7439-96-5	Manganese	299		NJ	P
7439-97-6	Mercury	0.40			CV
7440-02-0	Nickel	15.3		*J	P
7440-09-7	Potassium	1050			P
7782-49-2	Selenium	0.67	U	W	P
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	136	U		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	13.8			P
7440-66-6	Zinc	142		*J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD064C-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-A

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052326

Level (low/med): LOW Date Received: 11/14/07

Solids: 77.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7240		*	P
7440-36-0	Antimony	~~7.5~~ 9.87	U	J	P
7440-38-2	Arsenic	2.4		*	P
7440-39-3	Barium	39.4			P
7440-41-7	Beryllium	0.62	U		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	2170			P
7440-47-3	Chromium	15.9		*	P
7440-48-4	Cobalt	6.9			P
7440-50-8	Copper	12.6		*J	P
7439-89-6	Iron	16400		*	P
7439-92-1	Lead	20.4		*	P
7439-95-4	Magnesium	3990		*	P
7439-96-5	Manganese	327		NJ	P
7439-97-6	Mercury	0.05			CV
7440-02-0	Nickel	15.6		*J	P
7440-09-7	Potassium	1080			P
7782-49-2	Selenium	0.64	U	W	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	125	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	11.7			P
7440-66-6	Zinc	85.1		*J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD067C-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-P

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052327

Level (low/med): LOW Date Received: 11/14/07

Solids: 80.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4690		*	P
7440-36-0	Antimony	0.95 ~~7.2~~	U	J	P
7440-38-2	Arsenic	3.3		*	P
7440-39-3	Barium	28.4			P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	1020			P
7440-47-3	Chromium	8.5		*	P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	9.1		*J	P
7439-89-6	Iron	11600		*	P
7439-92-1	Lead	13.1		*	P
7439-95-4	Magnesium	2920		*	P
7439-96-5	Manganese	177		NJ	P
7439-97-6	Mercury	0.07			CV
7440-02-0	Nickel	10.2		*J	P
7440-09-7	Potassium	625			P
7782-49-2	Selenium	0.61	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	121	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	7.9			P
7440-66-6	Zinc	44.0		*J	P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD071C-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052330

Level (low/med): LOW Date Received: 11/14/07

Solids: 70.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7070		*	P
7440-36-0	Antimony	8.2	U	J	P
7440-38-2	Arsenic	2.5		*	P
7440-39-3	Barium	43.7			P
7440-41-7	Beryllium	0.68	U		P
7440-43-9	Cadmium	0.68	U		P
7440-70-2	Calcium	2820			P
7440-47-3	Chromium	17.7		*	P
7440-48-4	Cobalt	6.8	U		P
7440-50-8	Copper	16.3		*J	P
7439-89-6	Iron	16100		*	P
7439-92-1	Lead	23.5		*	P
7439-95-4	Magnesium	3970		*	P
7439-96-5	Manganese	414		NJ	P
7439-97-6	Mercury	0.06			CV
7440-02-0	Nickel	14.8		*J	P
7440-09-7	Potassium	994			P
7782-49-2	Selenium	0.68	U		P
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	137	U		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	11.9			P
7440-66-6	Zinc	83.2		*J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD124C-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052331

Level (low/med): LOW Date Received: 11/14/07

Solids: 60.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8030		*	P
7440-36-0	Antimony	1.3 ~~9.7~~	U	J	P
7440-38-2	Arsenic	3.1		*	P
7440-39-3	Barium	63.4			P
7440-41-7	Beryllium	0.81	U		P
7440-43-9	Cadmium	0.81	U		P
7440-70-2	Calcium	8100			P
7440-47-3	Chromium	22.1		*	P
7440-48-4	Cobalt	8.5			P
7440-50-8	Copper	26.6		*J	P
7439-89-6	Iron	18000		*	P
7439-92-1	Lead	35.3		*	P
7439-95-4	Magnesium	5600		*	P
7439-96-5	Manganese	456		NJ	P
7439-97-6	Mercury	0.11			CV
7440-02-0	Nickel	18.4		*J	P
7440-09-7	Potassium	1180			P
7782-49-2	Selenium	0.81	U	JW	F
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium	161	U		P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	16.0			P
7440-66-6	Zinc	107		*J	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD125C-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052332

Level (low/med): LOW Date Received: 11/14/07

Solids: 77.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6800		*	P
7440-36-0	Antimony	~~7.5~~ 0.98	U	J	P
7440-38-2	Arsenic	2.5		*	P
7440-39-3	Barium	36.9			P
7440-41-7	Beryllium	0.62	U		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	2130			P
7440-47-3	Chromium	15.6		*	P
7440-48-4	Cobalt	6.5			P
7440-50-8	Copper	17.8		*J	P
7439-89-6	Iron	15400		*	P
7439-92-1	Lead	17.9		*	P
7439-95-4	Magnesium	3910		*	P
7439-96-5	Manganese	307		NJ	P
7439-97-6	Mercury	0.06			CV
7440-02-0	Nickel	14.3		*J	P
7440-09-7	Potassium	899			P
7782-49-2	Selenium	0.62	U	W	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	124	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	11.3			P
7440-66-6	Zinc	78.9		*J	P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD126C-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-A

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052333

Level (low/med): LOW Date Received: 11/14/07

Solids: 44.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11100		*J	P
7440-36-0	Antimony	13.0	U		P
7440-38-2	Arsenic	5.0		*	P
7440-39-3	Barium	102			P
7440-41-7	Beryllium	1.1	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	6580			P
7440-47-3	Chromium	31.9		*	P
7440-48-4	Cobalt	10.8	U		P
7440-50-8	Copper	43.8		*J	P
7439-89-6	Iron	23900		*J	P
7439-92-1	Lead	46.2		*J	P
7439-95-4	Magnesium	6180		*J	P
7439-96-5	Manganese	1040		NJ	P
7439-97-6	Mercury	0.17		J	CV
7440-02-0	Nickel	22.8		*J	P
7440-09-7	Potassium	1740		J	P
7782-49-2	Selenium	1.1	U	J NJ	F
7440-22-4	Silver	2.2	U	J	P
7440-23-5	Sodium	216	U	J	P
7440-28-0	Thallium	2.2	U	J	P
7440-62-2	Vanadium	22.9		J	P
7440-66-6	Zinc	158		*J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD127C-SC-A-1

ontract: R2740702

ab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-2

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052334

evel (low/med): LOW Date Received: 11/14/07

Solids: 70.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6990		*	P
7440-36-0	Antimony	8.4	U	J	P
7440-38-2	Arsenic	3.9		*	P
7440-39-3	Barium	42.3			P
7440-41-7	Beryllium	0.70	U		P
7440-43-9	Cadmium	0.70	U		P
7440-70-2	Calcium	2970			P
7440-47-3	Chromium	16.2		*	P
7440-48-4	Cobalt	7.0	U		P
7440-50-8	Copper	49.9		* J	P
7439-89-6	Iron	16100		*	P
7439-92-1	Lead	24.9		*	P
7439-95-4	Magnesium	3970		*	P
7439-96-5	Manganese	310		N J	P
7439-97-6	Mercury	0.07			CV
7440-02-0	Nickel	14.5		* J	P
7440-09-7	Potassium	991			P
7782-49-2	Selenium	0.71	U	J W	F
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	140	U		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	12.9			P
7440-66-6	Zinc	81.6		* J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD128C-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-2

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052335

Level (low/med): LOW Date Received: 11/14/07

% Solids: 72.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5820		*	P
7440-36-0	Antimony	1.0 ~~7.9~~	U	J	P
7440-38-2	Arsenic	2.1		*	P
7440-39-3	Barium	36.9			P
7440-41-7	Beryllium	0.66	U		P
7440-43-9	Cadmium	0.84			P
7440-70-2	Calcium	2440			P
7440-47-3	Chromium	20.0		*	P
7440-48-4	Cobalt	6.6	U		P
7440-50-8	Copper	15.4		* J	P
7439-89-6	Iron	13300		*	P
7439-92-1	Lead	32.1		*	P
7439-95-4	Magnesium	3120		*	P
7439-96-5	Manganese	305		N J	P
7439-97-6	Mercury	0.05			CV
7440-02-0	Nickel	11.7		* J	P
7440-09-7	Potassium	825			P
7782-49-2	Selenium	0.67	U	J M	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	132	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	9.9			P
7440-66-6	Zinc	84.0		* J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD11VC-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-2

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052336

Level (low/med): LOW Date Received: 11/14/07

Solids: 62.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11700		*	P
7440-36-0	Antimony	~~9.1~~ 12	U	J	P
7440-38-2	Arsenic	11.1		*	P
7440-39-3	Barium	153			P
7440-41-7	Beryllium	0.76	U		P
7440-43-9	Cadmium	6.1			P
7440-70-2	Calcium	7350			P
7440-47-3	Chromium	172		*	P
7440-48-4	Cobalt	10.0			P
7440-50-8	Copper	121		*J	P
7439-89-6	Iron	23400		*	P
7439-92-1	Lead	165		*	P
7439-95-4	Magnesium	6140		*	P
7439-96-5	Manganese	475		NJ	P
7439-97-6	Mercury	0.81			CV
7440-02-0	Nickel	28.2		*J	P
7440-09-7	Potassium	1650			P
7782-49-2	Selenium	0.78	U	JW	F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	152	U		P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	25.1			P
7440-66-6	Zinc	323		*J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD063W-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052347

Level (low/med): LOW Date Received: 11/14/07

% Solids: 85.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4630		*	P
7440-36-0	Antimony	0.93 ~~7.1~~	U	J	P
7440-38-2	Arsenic	5.0		*	P
7440-39-3	Barium	39.8			P
7440-41-7	Beryllium	0.59	U		P
7440-43-9	Cadmium	0.59	U		P
7440-70-2	Calcium	2180			P
7440-47-3	Chromium	9.2		*	P
7440-48-4	Cobalt	5.9	U		P
7440-50-8	Copper	16.1		*J	P
7439-89-6	Iron	15700		*	P
7439-92-1	Lead	25.7		*	P
7439-95-4	Magnesium	2690		*	P
7439-96-5	Manganese	220		NJ	P
7439-97-6	Mercury	0.04			CV
7440-02-0	Nickel	12.1		*J	P
7440-09-7	Potassium	448			P
7782-49-2	Selenium	0.59	U	W	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	118	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	8.6			P
7440-66-6	Zinc	62.3		*J	P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD134W-SC-A-1

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1052349

Level (low/med): LOW Date Received: 11/14/07

Solids: 77.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5260		*	P
7440-36-0	Antimony	10 7.6	U	J	P
7440-38-2	Arsenic	3.6		*	P
7440-39-3	Barium	66.4			P
7440-41-7	Beryllium	0.64	U		P
7440-43-9	Cadmium	0.64	U		P
7440-70-2	Calcium	3680			P
7440-47-3	Chromium	18.1		*	P
7440-48-4	Cobalt	6.4	U		P
7440-50-8	Copper	21.3		* J	P
7439-89-6	Iron	14300		*	P
7439-92-1	Lead	45.5		*	P
7439-95-4	Magnesium	3380		*	P
7439-96-5	Manganese	263		N J	P
7439-97-6	Mercury	0.08			CV
7440-02-0	Nickel	11.6		* J	P
7440-09-7	Potassium	672			P
7782-49-2	Selenium	0.62	U	W	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	127	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	9.7			P
7440-66-6	Zinc	98.4		* J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD-EB1-SC-A-3

ontract: R2740702

ab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-2

atrix (soil/water): WATER Lab Sample ID: 1052350

evel (low/med): LOW Date Received: 11/14/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	~~60.0~~ 7.9	U	J	P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03SD-EB2-SC-A-3

Contract: R2740702

Lab Code: Case No.: SAS No.: SDG NO.: 03SD059N-SC-F

Matrix (soil/water): WATER Lab Sample ID: 1052351

Level (low/med): LOW Date Received: 11/14/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	7.9 ~~60.0~~	U	J	P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD059N-SC-A-1

Date Sampled : 11/13/07 14:21 **Order #:** 1052311 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	78.7		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	1620	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~1450~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD100N-SC-A-1

Date Sampled : 11/13/07 14:41 Order #: 1052320 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	65.7	%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	7620 J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~6710~~	~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD123N-SC-A-1

Date Sampled : 11/13/07 14:57 Order #: 1052321 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	70.4		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	5220	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~4360~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD129N-SC-A-1

Date Sampled : 11/13/07 15:12 Order #: 1052322 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	80.5		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3420	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~3150~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD061C-SC-A-1

Date Sampled : 11/13/07 13:04 Order #: 1052325 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	73.5		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	9100	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~7800~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD064C-SC-A-1

Date Sampled : 11/13/07 12:50 Order #: 1052326 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	77.1		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2890	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~2500~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	1.0 DUP

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD067C-SC-A-1

Date Sampled : 11/13/07 13:42 Order #: 1052327 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	80.5		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2000	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~1720~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD071C-SC-A-1

Date Sampled : 11/13/07 11:35 Order #: 1052330 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	70.9		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	4290	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~3790~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD124C-SC-A-1

Date Sampled : 11/13/07 11:53 Order #: 1052331 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	60.2	%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	14100 J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~11000~~	~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DUP

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD125C-SC-A-1

Date Sampled : 11/13/07 11:09 Order #: 1052332 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	77.4		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2750	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~2390~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD126C-SC-A-1

Date Sampled : 11/13/07 10:37 Order #: 1052333 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	44.5	%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	22900 J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~19400~~	~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD127C-SC-A-1

Date Sampled : 11/13/07 10:16 Order #: 1052334 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	70.8		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	5450	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~4920~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD128C-SC-A-1

Date Sampled : 11/13/07 09:58 Order #: 1052335 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	72.9	%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	8460 J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~4500~~	~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD11VC-SC-A-1

Date Sampled : 11/13/07 13:17 Order #: 1052336 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	62.8		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	20200	J	MG/KG	11/28/07	07:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	20600		MG/KG	11/21/07	09:15	1.0 DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD063W-SC-A-1

Date Sampled : 11/13/07 15:36 Order #: 1052347 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/14/07 Submission #: R2740702

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	85.1		%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	1670	J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~1860~~		~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

COLUMBIA ANALYTICAL SERVICES

Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD134W-SC-A-1

Date Sampled : 11/13/07 15:49 **Order #:** 1052349 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	77.0	%	11/16/07	15:50	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	5310 J	MG/KG	11/28/07	07:50	1.0
~~TOTAL ORGANIC CARBON~~	~~TOC.LK~~	~~300~~	~~4510~~	~~MG/KG~~	~~11/21/07~~	~~09:15~~	~~1.0~~ DNR

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Memorandum

Date: January 14, 2008

To: John Bleiler/Westford

From: Paula DiMattei/Westford

Subject: Data Validation, VOC Analysis
Surface Sediment Sampling, November 2007
BASF Rensselaer Site, NY
CAS Submission # R2740702

Distribution: L. Herberich/Westford

00760-171-408 File
BR019vocpld.doc

SUMMARY

Limited validation was performed on the data for six surface sediment samples, two equipment blanks, and one trip blank analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The samples were collected at the BASF site in Rensselaer, NY, on November 13, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2740702.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data are valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
03SD059N-SC-A-1	03SD134W-SC-A-1
03SD100N-SC-A-1	03SD-EB1-SC-A-3 (Equipment blank)
03SD123N-SC-A-1	03SD-EB2-SC-A-3 (Equipment blank)
03SD129N-SC-A-1	TRIP BLANK 5 (Trip blank)
03SD063W-SC-A-1	

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REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) Tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard recoveries
- Sample quantitation/detection limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The sample IDs for the equipment blanks were designated on the COC as 03SD-EB1-SC-A-1 and 03SD-EB2-SC-A-1; however, the laboratory identified these samples as 03SD-EB1-SC-A-3 and 03SD-EB2-SC-A-3. No actions were taken other than this notation since the laboratory's designation matched the sample ID scheme specified in the work plan. It should also be noted that all other equipment blanks collected during this sampling round were identified with the -3 suffix. No other discrepancies were noted.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were analyzed within the method specified holding time.

GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations

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(IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 10/2/07 (MSVOA7)	1,4-Dioxane	0.006	J/UJ*
CC 11/19/07 (MSVOA7)	1,4-Dioxane	0.005	J/UJ*
Associated samples: 03SD-EB1-SC-A-3, 03SD-EB2-SC-A-3, TRIP BLANK 5			
IC 10/3/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 03SD059N-SC-A-11, 03SD100N-SC-A-1, 03SD129N-SC-A-1, 03SD063W-SC-A-1, 03SD123N-SC-A-1, 03SD134W-SC-A-1			
CC 11/16/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 03SD059N-SC-A-1, 03SD100N-SC-A-1, 03SD129N-SC-A-1, 03SD063W-SC-A-1			
CC 11/17/07 (MSVOA7)	1,4-Dioxane	0.006	J/UJ*
Associated samples: 03SD123N-SC-A-1, 03SD134W-SC-A-1			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			

Calibration (Instrument ID)	Compound	%D (CC)	Actions (Detects/Nondetects)
CC 11/16/07 (MSVOA7)	Methyl-t-butyl ether	23.5	J/UJ
Associated samples: 03SD059N-SC-A-1, 03SD100N-SC-A-1, 03SD129N-SC-A-1, 03SD063W-SC-A-1			

Laboratory Blanks/Equipment Blanks/Trip Blanks

Several target compounds were detected in the laboratory method blanks and equipment blanks (03SD-EB1-SC-A-3 and 03SD-EB2-SC-A-3) associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected which was also present in the samples and the associated samples.

Blank type (lab ID)	Compound	Concentration (µg/Kg)
Method (VBLK1)	Acetone	3.2
Associated samples: 03SD059N-SC-A-1, 03SD100N-SC-A-1, 03SD129N-SC-A-1, 03SD063W-SC-A-1		
Method (VBLK2)	Acetone	3.9
	2-Butanone	1.4
Associated samples: 03SD123N-SC-A-1, 03SD134W-SC-A-1		

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Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC detected	Detects	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			

RL (Reporting Limit) is equivalent to the lowest calibration standard

Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses.

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MS/MSD Results

MS/MSD analyses were not performed on a sample from this data set. No data validation actions were taken on this basis.

LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses.

Field Duplicate Results

A field duplicate pair was not submitted with this data set. No data validation actions were taken on this basis.

Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses.

Sample Quantitation/Detection Limits

Dilutions were not performed on the samples in this data set; therefore, RLs were not affected.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD059N-SC-A-1

Date Sampled : 11/13/07 14:21 **Order #:** 1052311 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 78.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.14			Dry Weight
ACETONE	20	~~28~~ 29 U ~~9.5 JB~~	UG/KG
BENZENE	5.0	7.2 U	UG/KG
BROMOCHLOROMETHANE	5.0	7.2 U	UG/KG
BROMODICHLOROMETHANE	5.0	7.2 U	UG/KG
BROMOFORM	5.0	7.2 U	UG/KG
BROMOMETHANE	5.0	7.2 U	UG/KG
2-BUTANONE (MEK)	10	2.3 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	7.2 UJ	UG/KG
CARBON DISULFIDE	10	14 U	UG/KG
CARBON TETRACHLORIDE	5.0	7.2 U	UG/KG
CHLOROBENZENE	5.0	0.53 J	UG/KG
CHLOROETHANE	10	14 U	UG/KG
CHLOROFORM	5.0	7.2 U	UG/KG
CHLOROMETHANE	5.0	7.2 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7.2 U	UG/KG
CYCLOHEXANE	5.0	0.51 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	7.2 U	UG/KG
1,2-DIBROMOETHANE	5.0	7.2 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.2 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7.2 U	UG/KG
1,2-DICHLOROBENZENE	5.0	7.2 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7.2 U	UG/KG
1,1-DICHLOROETHANE	5.0	7.2 U	UG/KG
1,2-DICHLOROETHANE	5.0	7.2 U	UG/KG
1,1-DICHLOROETHENE	5.0	7.2 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7.2 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7.2 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7.2 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7.2 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	580 ~~140~~ UJ	UG/KG
1,4-DIOXANE	5.0	7.2 U	UG/KG
ETHYLBENZENE	10	14 U	UG/KG
2-HEXANONE	5.0	7.2 U	UG/KG
ISOPROPYLBENZENE	10	14 U	UG/KG
METHYL ACETATE	5.0	7.2 U	UG/KG
METHYLCYCLOHEXANE	5.0	7.2 U	UG/KG
METHYLENE CHLORIDE	10	14 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	7.2 U	UG/KG
STYRENE	5.0	7.2 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7.2 U	UG/KG
TETRACHLOROETHENE	5.0	7.2 U	UG/KG
TOLUENE	5.0	7.2 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	7.2 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	7.2 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD059N-SC-A-1

Date Sampled : 11/13/07 14:21 **Order #:** 1052311 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 78.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.14			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7.2 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7.2 U	UG/KG
TRICHLOROETHENE	5.0	7.2 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7.2 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7.2 U	UG/KG
VINYL CHLORIDE	5.0	7.2 U	UG/KG
O-XYLENE	5.0	7.2 U	UG/KG
M+P-XYLENE	5.0	7.2 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	85	%
TOLUENE-D8	(75 - 128 %)	92	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	95	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD100N-SC-A-1

Date Sampled : 11/13/07 14:41 **Order #:** 1052320 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 65.7

DATE ANALYZED : 11/16/07
ANALYTICAL DILUTION: 1.47

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	45U ~~20~~ JB	UG/KG
BENZENE	5.0	11 U	UG/KG
BROMOCHLOROMETHANE	5.0	11 U	UG/KG
BROMODICHLOROMETHANE	5.0	11 U	UG/KG
BROMOFORM	5.0	11 U	UG/KG
BROMOMETHANE	5.0	11 U	UG/KG
2-BUTANONE (MEK)	10	4.9 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	11 UJ	UG/KG
CARBON DISULFIDE	10	2.0 J	UG/KG
CARBON TETRACHLORIDE	5.0	11 U	UG/KG
CHLOROBENZENE	5.0	11 U	UG/KG
CHLOROETHANE	10	22 U	UG/KG
CHLOROFORM	5.0	11 U	UG/KG
CHLOROMETHANE	5.0	11 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	11 U	UG/KG
CYCLOHEXANE	5.0	0.82 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	11 U	UG/KG
1,2-DIBROMOETHANE	5.0	11 U	UG/KG
1,3-DICHLOROBENZENE	5.0	11 U	UG/KG
1,4-DICHLOROBENZENE	5.0	11 U	UG/KG
1,2-DICHLOROBENZENE	5.0	11 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	11 U	UG/KG
1,1-DICHLOROETHANE	5.0	11 U	UG/KG
1,2-DICHLOROETHANE	5.0	11 U	UG/KG
1,1-DICHLOROETHENE	5.0	11 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	11 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	11 U	UG/KG
1,2-DICHLOROPROPANE	5.0	11 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	11 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	11 U	UG/KG
1,4-DIOXANE	100	890 ~~220~~ UJ	UG/KG
ETHYLBENZENE	5.0	11 U	UG/KG
2-HEXANONE	10	22 U	UG/KG
ISOPROPYLBENZENE	5.0	11 U	UG/KG
METHYL ACETATE	10	22 U	UG/KG
METHYLCYCLOHEXANE	5.0	11 U	UG/KG
METHYLENE CHLORIDE	5.0	11 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	22 U	UG/KG
STYRENE	5.0	11 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	11 U	UG/KG
TETRACHLOROETHENE	5.0	11 U	UG/KG
TOLUENE	5.0	0.99 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	11 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	11 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD100N-SC-A-1

Date Sampled : 11/13/07 14:41 **Order #:** 1052320 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 65.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.47			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	11 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	11 U	UG/KG
TRICHLOROETHENE	5.0	11 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	11 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	11 U	UG/KG
VINYL CHLORIDE	5.0	11 U	UG/KG
O-XYLENE	5.0	11 U	UG/KG
M+P-XYLENE	5.0	11 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	82	%
TOLUENE-D8	(75 - 128 %)	102	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	91	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD123N-SC-A-1

Date Sampled : 11/13/07 14:57 **Order #:** 1052321 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 70.4

DATE ANALYZED : 11/17/07
ANALYTICAL DILUTION: 0.94

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	27U ~~26 JB~~	UG/KG
BENZENE	5.0	6.7 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.7 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.7 U	UG/KG
BROMOFORM	5.0	6.7 U	UG/KG
BROMOMETHANE	5.0	6.7 U	UG/KG
2-BUTANONE (MEK)	10	13U ~~5.0 JB~~	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.7 U	UG/KG
CARBON DISULFIDE	10	0.84 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.7 U	UG/KG
CHLOROBENZENE	5.0	28	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.7 U	UG/KG
CHLOROMETHANE	5.0	6.7 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.7 U	UG/KG
CYCLOHEXANE	5.0	6.7 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.7 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.7 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.7 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.7 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.7 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.7 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.7 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.7 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.7 U	UG/KG
1,4-DIOXANE	100	530 ~~130~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.7 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	6.7 U	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.7 U	UG/KG
METHYLENE CHLORIDE	5.0	6.7 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.7 U	UG/KG
TETRACHLOROETHENE	5.0	6.7 U	UG/KG
TOLUENE	5.0	0.74 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.7 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.7 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD123N-SC-A-1

Date Sampled : 11/13/07 14:57 **Order #:** 1052321 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 70.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			
ANALYTICAL DILUTION: 0.94			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.7 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.7 U	UG/KG
TRICHLOROETHENE	5.0	6.7 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.7 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.7 U	UG/KG
VINYL CHLORIDE	5.0	6.7 U	UG/KG
O-XYLENE	5.0	6.7 U	UG/KG
M+P-XYLENE	5.0	6.7 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	84	%
TOLUENE-D8	(75 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	92	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD129N-SC-A-1

Date Sampled : 11/13/07 15:12 **Order #:** 1052322 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 80.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.06			Dry Weight
ACETONE	20	26 U	UG/KG
BENZENE	5.0	6.6 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.6 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.6 U	UG/KG
BROMOFORM	5.0	6.6 U	UG/KG
BROMOMETHANE	5.0	6.6 U	UG/KG
2-BUTANONE (MEK)	10	13 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.6 UJ	UG/KG
CARBON DISULFIDE	10	13 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.6 U	UG/KG
CHLOROBENZENE	5.0	6.6 U	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.6 U	UG/KG
CHLOROMETHANE	5.0	6.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.6 U	UG/KG
CYCLOHEXANE	5.0	6.6 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.6 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	530 ~~130~~ UJ	UG/KG
1,4-DIOXANE	5.0	6.6 U	UG/KG
ETHYLBENZENE	10	13 U	UG/KG
2-HEXANONE	5.0	6.6 U	UG/KG
ISOPROPYLBENZENE	10	13 U	UG/KG
METHYL ACETATE	5.0	6.6 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.6 U	UG/KG
METHYLENE CHLORIDE	10	13 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	6.6 U	UG/KG
STYRENE	5.0	6.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.6 U	UG/KG
TETRACHLOROETHENE	5.0	6.6 U	UG/KG
TOLUENE	5.0	6.6 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.6 U	UG/KG
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD129N-SC-A-1

Date Sampled : 11/13/07 15:12 **Order #:** 1052322 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 80.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.06			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.6 U	UG/KG
TRICHLOROETHENE	5.0	6.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.6 U	UG/KG
VINYL CHLORIDE	5.0	6.6 U	UG/KG
O-XYLENE	5.0	6.6 U	UG/KG
M+P-XYLENE	5.0	6.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	86	%
TOLUENE-D8	(75 - 128 %)	95	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	95	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD063W-SC-A-1

Date Sampled : 11/13/07 15:36 **Order #:** 1052347 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 85.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.39			Dry Weight
ACETONE	20	33 U	UG/KG
BENZENE	5.0	8.2 U	UG/KG
BROMOCHLOROMETHANE	5.0	8.2 U	UG/KG
BROMODICHLOROMETHANE	5.0	8.2 U	UG/KG
BROMOFORM	5.0	8.2 U	UG/KG
BROMOMETHANE	5.0	8.2 U	UG/KG
2-BUTANONE (MEK)	10	16 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	8.2 U J	UG/KG
CARBON DISULFIDE	10	16 U	UG/KG
CARBON TETRACHLORIDE	5.0	8.2 U	UG/KG
CHLOROBENZENE	5.0	8.2 U	UG/KG
CHLOROETHANE	10	16 U	UG/KG
CHLOROFORM	5.0	8.2 U	UG/KG
CHLOROMETHANE	5.0	8.2 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	8.2 U	UG/KG
CYCLOHEXANE	5.0	0.66 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	8.2 U	UG/KG
1,2-DIBROMOETHANE	5.0	8.2 U	UG/KG
1,3-DICHLOROBENZENE	5.0	8.2 U	UG/KG
1,4-DICHLOROBENZENE	5.0	8.2 U	UG/KG
1,2-DICHLOROBENZENE	5.0	8.2 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	8.2 U	UG/KG
1,1-DICHLOROETHANE	5.0	8.2 U	UG/KG
1,2-DICHLOROETHANE	5.0	8.2 U	UG/KG
1,1-DICHLOROETHENE	5.0	8.2 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	8.2 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	8.2 U	UG/KG
1,2-DICHLOROPROPANE	5.0	8.2 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	8.2 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	650 ~~160~~ U J	UG/KG
1,4-DIOXANE	5.0	8.2 U	UG/KG
ETHYLBENZENE	10	16 U	UG/KG
2-HEXANONE	5.0	8.2 U	UG/KG
ISOPROPYLBENZENE	10	16 U	UG/KG
METHYL ACETATE	5.0	8.2 U	UG/KG
METHYLCYCLOHEXANE	5.0	8.2 U	UG/KG
METHYLENE CHLORIDE	10	16 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	8.2 U	UG/KG
STYRENE	5.0	8.2 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	8.2 U	UG/KG
TETRACHLOROETHENE	5.0	8.2 U	UG/KG
TOLUENE	5.0	8.2 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	8.2 U	UG/KG
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD063W-SC-A-1

Date Sampled : 11/13/07 15:36 **Order #:** 1052347 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 85.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/16/07			
ANALYTICAL DILUTION: 1.39			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	8.2 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	8.2 U	UG/KG
TRICHLOROETHENE	5.0	8.2 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	8.2 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	8.2 U	UG/KG
VINYL CHLORIDE	5.0	8.2 U	UG/KG
O-XYLENE	5.0	8.2 U	UG/KG
M+P-XYLENE	5.0	8.2 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	89	%
TOLUENE-D8	(75 - 128 %)	92	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD134W-SC-A-1

Date Sampled : 11/13/07 15:49 **Order #:** 1052349 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 77.0

DATE ANALYZED : 11/17/07
ANALYTICAL DILUTION: 1.24

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	32U ~~6.6 JB~~	UG/KG
BENZENE	5.0	8.1 U	UG/KG
BROMOCHLOROMETHANE	5.0	8.1 U	UG/KG
BROMODICHLOROMETHANE	5.0	8.1 U	UG/KG
BROMOFORM	5.0	8.1 U	UG/KG
BROMOMETHANE	5.0	8.1 U	UG/KG
2-BUTANONE (MEK)	10	16U ~~1.6 JB~~	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	8.1 U	UG/KG
CARBON DISULFIDE	10	1.3 J	UG/KG
CARBON TETRACHLORIDE	5.0	8.1 U	UG/KG
CHLOROBENZENE	5.0	8.1 U	UG/KG
CHLOROETHANE	10	16 U	UG/KG
CHLOROFORM	5.0	8.1 U	UG/KG
CHLOROMETHANE	5.0	8.1 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	8.1 U	UG/KG
CYCLOHEXANE	5.0	8.1 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	8.1 U	UG/KG
1,2-DIBROMOETHANE	5.0	8.1 U	UG/KG
1,3-DICHLOROBENZENE	5.0	8.1 U	UG/KG
1,4-DICHLOROBENZENE	5.0	8.1 U	UG/KG
1,2-DICHLOROBENZENE	5.0	8.1 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	8.1 U	UG/KG
1,1-DICHLOROETHANE	5.0	8.1 U	UG/KG
1,2-DICHLOROETHANE	5.0	8.1 U	UG/KG
1,1-DICHLOROETHENE	5.0	8.1 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	8.1 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	8.1 U	UG/KG
1,2-DICHLOROPROPANE	5.0	8.1 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	8.1 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	100	640 ~~160~~ U J	UG/KG
1,4-DIOXANE	5.0	8.1 U	UG/KG
ETHYLBENZENE	10	16 U	UG/KG
2-HEXANONE	5.0	8.1 U	UG/KG
ISOPROPYLBENZENE	10	16 U	UG/KG
METHYL ACETATE	5.0	8.1 U	UG/KG
METHYLCYCLOHEXANE	5.0	8.1 U	UG/KG
METHYLENE CHLORIDE	10	16 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	5.0	8.1 U	UG/KG
STYRENE	5.0	8.1 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	8.1 U	UG/KG
TETRACHLOROETHENE	5.0	0.68 J	UG/KG
TOLUENE	5.0	8.1 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	8.1 U	UG/KG
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD134W-SC-A-1

Date Sampled : 11/13/07 15:49 **Order #:** 1052349 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/14/07 **Submission #:** R2740702 **Percent Solid:** 77.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/17/07			Dry Weight
ANALYTICAL DILUTION: 1.24			
1,1,1-TRICHLOROETHANE	5.0	8.1 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	8.1 U	UG/KG
TRICHLOROETHENE	5.0	8.1 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	8.1 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	8.1 U	UG/KG
VINYL CHLORIDE	5.0	8.1 U	UG/KG
O-XYLENE	5.0	8.1 U	UG/KG
M+P-XYLENE	5.0	8.1 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	79	%
TOLUENE-D8	(75 - 128 %)	97	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	94	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD-EB1-SC-A-3

Date Sampled : 11/13/07 14:10 **Order #:** 1052350 **Sample Matrix:** WATER
Date Received: 11/14/07 **Submission #:** R2740702 **Analytical Run** 154352

DATE ANALYZED : 11/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.8 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	0.33 J	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD-EB1-SC-A-3

Date Sampled : 11/13/07 14:10 **Order #:** 1052350 **Sample Matrix:** WATER
Date Received: 11/14/07 **Submission #:** R2740702 **Analytical Run** 154352

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	112	%
TOLUENE-D8	(88 - 124 %)	106	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	110	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD-EB2-SC-A-3

Date Sampled : 11/13/07 14:20 **Order #:** 1052351 **Sample Matrix:** WATER
Date Received: 11/14/07 **Submission #:** R2740702 **Analytical Run** 154352

DATE ANALYZED : 11/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 U	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	100	400 ~~100~~ U J	UG/L
1,4-DIOXANE	1.0	1.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	1.0	1.0 U	UG/L
ISOPROPYLBENZENE	10	10 U	UG/L
METHYL ACETATE	1.0	1.0 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	1.0	0.55 J	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD-EB2-SC-A-3

Date Sampled : 11/13/07 14:20 **Order #:** 1052351 **Sample Matrix:** WATER
Date Received: 11/14/07 **Submission #:** R2740702 **Analytical Run** 154352

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	112	%
TOLUENE-D8	(88 - 124 %)	108	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	109	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : TRIP BLANK 5

Date Sampled : 11/13/07 **Order #:** 1052355 **Sample Matrix:** WATER
Date Received: 11/14/07 **Submission #:** R2740702 **Analytical Run** 154352

DATE ANALYZED : 11/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 U	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	100	400 ~~100~~ U J	UG/L
1,4-DIOXANE	1.0	1.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	1.0	1.0 U	UG/L
ISOPROPYLBENZENE	10	10 U	UG/L
METHYL ACETATE	1.0	1.0 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	1.0	1.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE			

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 12/17/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : TRIP BLANK 5

Date Sampled : 11/13/07 **Order #:** 1052355 **Sample Matrix:** WATER
Date Received: 11/14/07 **Submission #:** R2740702 **Analytical Run** 154352

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	108	%
TOLUENE-D8	(88 - 124 %)	109	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	102	%

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Memorandum

Date: January 7, 2008

To: John Bleiler/Westford

From: Sheena Blair/Westford

Subject: Data Validation
Inorganic Analyses
Surface Sediment Sampling, November 2007
BASF Site, Rensselaer, NY
CAS SDG R2740915

Distribution: L. Herberich/Westford

00760-171-408 File
BR016inosb.doc

SUMMARY

Limited validation was performed on the data for 13 surface sediment samples analyzed for acid volatile sulfide/simultaneously extracted metals (AVS/SEM) according to EPA Draft method 821/R-91-100 and SW846 methods 6010B and 7470A. The samples were collected at the BASF Site in Rensselear, NY on November 15, 2007 and submitted to Columbia Analytical Services in Rochester, NY (CAS-Rochester) for analysis. CAS processed and reported these samples under sample delivery group (SDG) R2740915.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validaton of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data are valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	Sample IDs
03SD032N-SC-A-1	03SD006U-SC-A-1
03SD094N-SC-A-1	03SD069C-SC-A-1
03SD094N-SC-A-2 (field duplicate of 03SD094N-SC-A-1)	03SD069C-SC-A-2 (field duplicate of 03SD069C-SC-A-1)
03SD085N-SC-A-1	03SD027U-SC-A-1

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Sample IDs	Sample IDs
03SD087N-SC-A-1	03SD027U-SC-A-2 (field duplicate of 03SD27U-SC-A-1)
03SD097N-SC-A-1	03SD133W-SC-A-1
03SD097N-SC-A-2 (field duplicate of 03SD097N-SC-A-1)	

REVIEW ELEMENTS

Sample data were reviewed for the following elements:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample (ICS) results (method 6010B only)
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results (method 6010B only)
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancy was noted.

- The laboratory appended the suffix "M" to the sample IDs as recorded on the COC for the purpose of internal sample identification. During validation the "M" was removed manually from the sample IDs on the Form 1s.

Holding Times/Sample Preservation

All samples were analyzed within the method-specified holding time of 14 days from sample collection for AVS, and within 14 days from extraction to analysis for mercury and metals for the SEM analyses.

The cooler temperatures were within acceptance criteria (4 ± 2°C) upon receipt at CAS-Rochester.

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Calibrations

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards for AVS and SEM. Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standard) for SEM containing analytes at concentrations 1-2x the laboratory's method reporting limit (MRL). An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes with the following exception.

Date	Analyte	True Value (TV) (µg/L)	%R	Action Positive(<2x the TV)/Nondetect
12/7/07	Zinc	20	132/134	Estimate (J)/Accept
Samples Affected: All surface sediment samples.				

It should be noted that all zinc results were >2x the TV and no validation actions were necessary.

Laboratory Blanks/Equipment Blanks

No equipment blanks were submitted for AVS or SEM with the samples in this data set.

Target analytes were not detected in the laboratory method blanks (extraction and preparation) and the laboratory initial and continuing calibration blanks (ICBs/CCBs) associated with the sediment analyses for AVS or SEM.

ICP ICS Results

All %Rs criteria were met for the analyses of the interference check solution ICS AB.

MS Results

A MS analysis for AVS/SEM was performed on surface sediment sample 03SD085N-SC-A-1. The matrix spike %Rs met the QC acceptance criteria.

Laboratory Duplicate Results

Laboratory duplicate analyses were performed on surface sediment sample 03SD085N-SC-A-1 for all analytes. The relative percent differences (RPDs) met the QC acceptance criteria of 35% RPD for sediments [only applicable if both results are >5x SQL] for all analytes.

Field Duplicate Results

The following table indicates the surface sediment field duplicate pairs submitted in association with this data set.

Sample IDs
03SD094N-SC-A-1/03SD094N-SC-A-2
03SD097N-SC-A-1/03SD097N-SC-A-2
03SD069C-SC-A-1/03SD069C-SC-A-2
03SD069C-SC-A-1/03SD069C-SC-A-2

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The following table summarizes the RPDs of the detected analytes in field duplicate pair 03SD094N-SC-A-1/03SD094N-SC-A-2. The RPD (64%) for AVS was deemed acceptable since the sample and duplicate results were <5x the sample quantitation limit (SQL). The RPDs for the remaining analytes were within the QC acceptance criteria of 35% for a solid matrix.

Analyte	03SD094N-SC-A-1 (µmoles/g)	03SD094N-SC-A-2 (µmoles/g)	RPD (%)
Cadmium	0.0418	0.0480	14
Copper	0.777	0.610	24
Lead	0.705	0.719	2
Nickel	0.223	0.191	15
Zinc	4.79	4.97	2
AVS	2.73	1.41	64
Criteria: RPD <35% if both results are >5x the SQL.			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD097N-SC-A-1/03SD097N-SC-A-2. Precision was deemed acceptable for all analytes in this field duplicate pair since all RPDs were within the QC acceptance criteria.

Analyte	03SD097N-SC-A-1 (µmoles/g)	03SD097N-SC-A-2 (µmoles/g)	RPD (%)
Cadmium	0.00329	0.00365	10
Copper	0.222	0.234	5
Lead	0.114	0.121	6
Nickel	0.0954	0.0937	2
Zinc	1.31	1.32	1
Criteria: RPD <35% if both results are >5x the SQL.			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD069C-SC-A-1/03SD069C-SC-A-2. The RPD (149%) for AVS was deemed acceptable since the sample and duplicate results were <5x the SQL. The RPDs for cadmium, copper, lead, and zinc exceeded the QC acceptance criteria. The results for cadmium, copper, lead, and zinc were qualified as estimated (J) in both the original and field duplicate samples. The RPD for nickel met the QC acceptance criteria.

Analyte	03SD069C-SC-A-1 (µmoles/g)	03SD069C-SC-A-2 (µmoles/g)	RPD (%)
Cadmium	0.0480	0.0240	67
Copper	1.01	0.508	66
Lead	0.550	0.343	46
Nickel	0.134	0.114	16
Zinc	3.88	2.29	52
AVS	1.68	0.247	149
Criteria: RPD <35% if both results are >5x the SQL.			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 03SD027U-SC-A-1/03SD027U-SC-A-2. The RPD for AVS was not calculable (NC) due to a nondetect for the original sample result. Precision was deemed acceptable since the positive field duplicate result was <5x the SQL. The RPDs for cadmium, copper, and zinc exceeded the QC acceptance

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criteria. The results for cadmium, copper, and zinc were qualified as estimated in both the original and the field duplicate samples. The RPDs for lead and nickel met the QC acceptance criteria.

Analyte	03SD027U-SC-A-1 (µmoles/g)	03SD027U-SC-A-2 (µmoles/g)	RPD (%)
Cadmium	0.0160	0.0258	47
Copper	0.488	0.725	39
Lead	0.288	0.406	34
Nickel	0.0954	0.112	16
Zinc	1.48	2.14	36
AVS	0.135U	0.581	NC
Criteria: RPD <35% if both results are >5x the SQL.			

LCS Results

The LCSs associated with the surface sediment samples met QC acceptance limits for both AVS and SEM.

ICP Serial Dilution Results

A serial dilution analysis was performed on surface sediment sample 03SD085N-SC-A-1. All analytes met the percent difference (%D) QC acceptance criteria except for cadmium. The %D (18%) exceeded 10% but was <100%; therefore, all positive cadmium results in all surface sediment samples in this data set were qualified as estimated (J).

Sample Quantitation/Detection Limit Results

Positive and nondetect results were reported from the diluted analyses for the samples listed below.

Sample IDs	Analyte	Dilution Factor
All surface sediment samples (except 03SD085N-SC-A-1)	Zinc	10x
03SD085N-SC-A-1	Lead, Zinc	20x
03SD006U-SC-A-1	AVS	2x
03SD032N-SC-A-1, 03SD094N-SC-A-2 03SD069C-SC-A-1, 03SD027U-SC-A-1	AVS	4x
03SD085N-SC-A-1, 03SD094N-SC-A-1	AVS	10x

All sediment samples were digested at a 2x preparation factor for mercury. All mercury SQLs were adjusted accordingly by the laboratory.

The solids content for samples 03SD094N-SC-A-1, 03SD094N-SC-A-2, and 03SD085N-SC-A-2 were < 50% but >10%. Positive and nondetect results were qualified as estimated (J and UJ, respectively) in these samples.

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD032N-SC-A-1M

Date Sampled : 11/15/07 12:40 Order #: 1052481 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000729	0.00534 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00515	0.268	umoles/g	12/04/07	1.0
LEAD	6010B	0.00394	0.194	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000349	0.0000349 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0111	0.0903	umoles/g	12/04/07	1.0
ZINC	6010B	0.0500	1.45	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD094N-SC-A-2M

Date Sampled : 11/15/07 10:08 Order #: 1052482 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.00101	0.0480 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00711	0.610 J	umoles/g	12/04/07	1.0
LEAD	6010B	0.00545	0.719 J	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000449	0.0000449 U J	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0154	0.191 J	umoles/g	12/04/07	1.0
ZINC	6010B	0.0691	4.97 J	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD085N-SC-A-1M

Date Sampled : 11/15/07 11:50 Order #: 1052486 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000987	0.112 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00702	1.22 J	umoles/g	12/04/07	1.0
LEAD	6010B	0.108	2.24 J	umoles/g	12/07/07	20.0
MERCURY	7470A	0.0000449	0.0000449 U J	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0152	0.196 J	umoles/g	12/04/07	1.0
ZINC	6010B	0.136	6.82 J	umoles/g	12/07/07	20.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD087N-SC-A-1

Date Sampled : 11/15/07 11:18 Order #: 1052487 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000721	0.00311 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00510	0.228	umoles/g	12/04/07	1.0
LEAD	6010B	0.00391	0.105	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000299	0.0000299 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0110	0.0750	umoles/g	12/04/07	1.0
ZINC	6010B	0.0496	0.895	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD094N-SC-A-1M

Date Sampled : 11/15/07 10:08 Order #: 1052490 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000970	0.0418 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00685	0.777 J	umoles/g	12/04/07	1.0
LEAD	6010B	0.00525	0.705 J	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000449	0.0000449 U J	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0148	0.223 J	umoles/g	12/04/07	1.0
ZINC	6010B	0.0665	4.79 J	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD097N-SC-A-1M

Date Sampled : 11/15/07 09:13 Order #: 1052492 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000801	0.00329 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00565	0.222	umoles/g	12/04/07	1.0
LEAD	6010B	0.00433	0.114	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000349	0.0000349 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0122	0.0954	umoles/g	12/04/07	1.0
ZINC	6010B	0.0549	1.31	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD097N-SC-A-2M

Date Sampled : 11/15/07 09:13 Order #: 1052493 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000783	0.00365 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00555	0.234	umoles/g	12/04/07	1.0
LEAD	6010B	0.00427	0.121	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000349	0.0000349 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0120	0.0937	umoles/g	12/04/07	1.0
ZINC	6010B	0.0541	1.32	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD069C-SC-A-1M

Date Sampled : 11/15/07 08:08 Order #: 1052501 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000872	0.0480 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00618	1.01 J	umoles/g	12/04/07	1.0
LEAD	6010B	0.00474	0.550 J	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000399	0.0000399 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0134	0.134	umoles/g	12/04/07	1.0
ZINC	6010B	0.0602	3.88 J	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD069C-SC-A-2M

Date Sampled : 11/15/07 08:08 Order #: 1052502 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000836	0.0240 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00589	0.508 J	umoles/g	12/04/07	1.0
LEAD	6010B	0.00452	0.343 J	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000349	0.0000349 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0128	0.114	umoles/g	12/04/07	1.0
ZINC	6010B	0.0573	2.29 J	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD006U-SC-A-1M

Date Sampled : 11/15/07 14:00 Order #: 1052509 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000783	0.00320 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00555	0.238	umoles/g	12/04/07	1.0
LEAD	6010B	0.00426	0.110	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000349	0.0000349 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.0120	0.0835	umoles/g	12/04/07	1.0
ZINC	6010B	0.0540	0.916	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD027U-SC-A-1M

Date Sampled : 11/15/07 14:27 Order #: 1052512 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000569	0.0160 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00401	0.488 J	umoles/g	12/04/07	1.0
LEAD	6010B	0.00308	0.288	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000249 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00869	0.0954	umoles/g	12/04/07	1.0
ZINC	6010B	0.0390	1.48 J	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD027U-SC-A-2M

Date Sampled : 11/15/07 14:27 Order #: 1052513 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000534	0.0258 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00379	0.725 J	umoles/g	12/04/07	1.0
LEAD	6010B	0.00290	0.406	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000249 U	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00819	0.112	umoles/g	12/04/07	1.0
ZINC	6010B	0.0368	2.14 J	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD133W-SC-A-1M

Date Sampled : 11/15/07 08:47 Order #: 1052519 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	DILUTION
CADMIUM	6010B	0.000525	0.00196 J	umoles/g	12/04/07	1.0
COPPER	6010B	0.00370	0.496	umoles/g	12/04/07	1.0
LEAD	6010B	0.00283	0.135	umoles/g	12/04/07	1.0
MERCURY	7470A	0.0000249	0.0000498	umoles/g	12/05/07	2.0
NICKEL	6010B	0.00799	0.237	umoles/g	12/04/07	1.0
ZINC	6010B	0.0359	1.87	umoles/g	12/07/07	10.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD032N-SC-A-1

Date Sampled : 11/15/07 12:40 Order #: 1052481 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	1.21	umoles/g	11/28/07	07:30	4.0
PERCENT SOLIDS	160.3M	1.00	60.2	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD094N-SC-A-2M

Date Sampled : 11/15/07 10:08 Order #: 1052482 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	1.41 J	umoles/g	11/28/07	07:30	4.0
PERCENT SOLIDS	160.3M	1.00	43.7	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD085N-SC-A-1M

Date Sampled : 11/15/07 11:50 Order #: 1052486 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	4.21 J	umoles/g	11/28/07	07:30	10.0
PERCENT SOLIDS	160.3M	1.00	44.2	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD087N-SC-A-1M

Date Sampled : 11/15/07 11:18 Order #: 1052487 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.324	umoles/g	11/28/07	07:30	1.0
PERCENT SOLIDS	160.3M	1.00	61.7	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD094N-SC-A-1M

Date Sampled : 11/15/07 10:08 Order #: 1052490 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	2.73 J	umoles/g	11/28/07	07:30	10.0
PERCENT SOLIDS	160.3M	1.00	42.8	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD097N-SC-A-1M

Date Sampled : 11/15/07 09:13 Order #: 1052492 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.183 U	umoles/g	11/28/07	07:30	1.0
PERCENT SOLIDS	160.3M	1.00	54.6	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD097N-SC-A-2M

Date Sampled : 11/15/07 09:13 Order #: 1052493 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.181 U	umoles/g	11/28/07	07:30	1.0
PERCENT SOLIDS	160.3M	1.00	55.1	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD069C-SC-A-1M

Date Sampled : 11/15/07 08:08 Order #: 1052501 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	1.68	umoles/g	11/28/07	07:30	4.0
PERCENT SOLIDS	160.3M	1.00	50.4	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD069C-SC-A-2M

Date Sampled : 11/15/07 08:08 Order #: 1052502 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.247	umoles/g	11/28/07	07:30	1.0
PERCENT SOLIDS	160.3M	1.00	53.1	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD006U-SC-A-1M

Date Sampled : 11/15/07 14:00 Order #: 1052509 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.645	umoles/g	11/28/07	07:30	2.0
PERCENT SOLIDS	160.3M	1.00	56.3	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD027U-SC-A-1M

Date Sampled : 11/15/07 14:27 Order #: 1052512 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.135 U	umoles/g	11/28/07	07:30	1.0
PERCENT SOLIDS	160.3M	1.00	73.9	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD027U-SC-A-2M

Date Sampled : 11/15/07 14:27 Order #: 1052513 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.581	umoles/g	11/28/07	07:30	4.0
PERCENT SOLIDS	160.3M	1.00	77.4	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

COLUMBIA ANALYTICAL SERVICES

Reported: 12/11/07

ENSR International
Project Reference: BASF - RENSSELAER - SURFICIAL SEDIMENT
Client Sample ID : 03SD133W-SC-A-1M

Date Sampled : 11/15/07 08:47 Order #: 1052519 Sample Matrix: SOIL/SEDIMENT
Date Received: 11/16/07 Submission #: R2740915

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
ACID VOLATILE SULFIDE	AVS/SEM	0.100	0.118 U	umoles/g	11/28/07	07:30	1.0
PERCENT SOLIDS	160.3M	1.00	84.4	%	11/26/07	12:55	1.0

< Acid Volatile Sulfide / Simultaneously Extracted Metals >

Prepared for:
BASF Corporation
Florham Park, New Jersey

Appendix C, Part 2

Data Validation Memoranda and Forms – Sub-Surficial Sediment

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Memorandum

Date: February 29, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation
Inorganic Analyses
Subsurficial Sediment Sampling, December 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2741330

Distribution: L. Herberich/Westford

00760-171-525 File
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SUMMARY

Limited validation was performed on the data for 14 sediment samples and two aqueous equipment blanks analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 7470A, 7471, and 7740 and/or total organic carbon (TOC) according to the Lloyd Kahn method. The samples were collected at the BASF Site in Rensselaer, NY on December 13, 2007 and submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741330.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD115N-SC-C-1	04SD115N-SC-D-1
04SD115N-SC-E-1	04SD115N-SC-F-1
04SD115N-SC-F-2 (Field duplicate of 04SD115N-SC-F-1)	04SD115N-SC-G-1
04SD115N-SC-H-1	04SD115N-SC-I-1

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Sample IDs	
04SD124C-SC-C-1	04SD124C-SC-C-2 (Field duplicate of 04SD124C-SC-C-1)
04SD124C-SC-D-1	04SD124C-SC-E-1
04SD124C-SC-F-1	04SD124C-SC-G-1
04SD-EB7-SC-B-3 (equipment blank)	04SD-EB8-SC-3 (equipment blank)

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were digested and/or analyzed within the method and QAPP specified holding times.

Calibrations

TAL Metals

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

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Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the laboratory's reporting limit (RL) with the exceptions of barium which was spiked at 10x the RL and antimony which was spiked at 6x the RL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes with the exceptions of aluminum and lead. The following table summarizes the standard recoveries that fell outside the QC acceptance criteria and the associated samples.

Date Analyzed	Standard	Analyte	%R	True Value CRI
12/28/07	CRI2	Lead	134	10 µg/L
12/28/07	CRI3	Aluminum	61	200 µg/L
12/28/07	CRI3	Lead	140	10 µg/L
Associated Samples: 04SD-EB7-SC-B-3 and 04SD-EB8-SC-3				

Sample results were qualified as follows:

- If the %R was >130% but <180%, and the positive sample result was < 2x the concentration of the check standard, then the positive result was qualified as estimated (J).
- If the %R was >130% but <180%, then the nondetect result was accepted unqualified.
- If the %R was <70% but >50%, and the positive sample result was < 2x the concentration of the check standard, then the positive result was qualified as estimated (J).
- If the %R was <70% but >50%, then the nondetect result was qualified as estimated (UJ).

TOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

TAL Metals

Target analytes were not detected in the laboratory method blanks or in the initial and continuing calibration blanks (ICBs/CCBs) associated with all samples in this sample set. Several target analytes were detected in equipment blanks 04SD-EB7-SC-B-3 and 04SD-EB8-SC-3 at concentrations greater than the laboratory RLs. The following table summarizes the blank contamination detected in the equipment blank samples and the associated samples.

Source of Contamination	Analyte	Concentration (µg/L)	Associated Samples
04SD-EB7-SC-B-3 (equipment blank)	Aluminum	683	04SD115N-SC-C-1, 04SD115N-SC-D-1 04SD115N-SC-E-1, 04SD115N-SC-F-1 04SD115N-SC-F-2, 04SD115N-SC-G-1 04SD115N-SC-H-1, 04SD115N-SC-I-1
	Zinc	72.7	
04SD-EB8-SC-3 (equipment blank)	Lead	5.0	04SD124C-SC-C-1, 04SD124N-SC-C-2 04SD124C-SC-D-1, 04SD124C-SC-E-1 04SD124C-SC-F-1, 04SD124C-SC-G-1

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Sample results were qualified as follows:

Blank Type	Blank Result	Sample Result	Action for Samples
Equipment	>QL and >PB	>QL but <EB/FB	Qualify results as unusable (R)
		>EB/FB but <10x EB/FB	Qualify results as estimated (J)
		<QL	Qualify as nondetect (U) at the QL

TOC

An equipment blank was not submitted with the samples in this sample set. No validation action was taken on this basis.

TOC was not detected in the laboratory method blank or in the ICB/CCBs associated with all samples in this sample set.

ICP Interference Check Sample Results

TAL Metals

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

MS Results

TAL Metals

MS analysis was performed on sample 04SD124C-SC-E-1 for all analytes in association with the surface samples in this data set. The %Rs of the spiked target analytes were all within the QC acceptance criteria for sample results that were <4x the amount spiked.

The ICP post-digestion spike (PDS) was performed on sample 04SD124C-SC-E-1 for all analytes except selenium and mercury. The %Rs of the post-digestion spike were within the QC acceptance criteria for sample results that were <4x the amount spiked.

TOC

An MS analysis was not performed on a sample from this sample set. No validation action was taken on this basis.

Laboratory Duplicate Results

TAL Metals

A laboratory duplicate analysis was performed on sample 04SD124C-SC-E-1. With the following exceptions, the relative percent differences (RPDs) met the QC acceptance criteria for all analytes.

Analyte	RPD	Action
Calcium	39	Estimate (J) positive results > RL
Manganese	42	
Associated Samples: All sediment samples in this sample set.		

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TOC

A laboratory duplicate analysis was not performed on a sample from this sample set. No validation action was taken on this basis.

Field Duplicate Results

TAL Metals

Samples 04SD115N-SC-F-1/04SD115N-SC-F-2 and 04SD124C-SC-C-1/04SD124C-SC-C-2 were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD115N-SC-F-1 and 04SD115N-SC-F-2.

Analyte	04SD115N-SC-F-1 (mg/Kg)	04SD115N-SC-F-2 (mg/Kg)	RPD
Aluminum	12400	14100	13
Arsenic	17.5	25.5	37
Barium	154	146	5
Cadmium	2.1	2.5	17
Calcium	8200	7270	12
Chromium	138	218	45
Cobalt	12.0	12.2	2
Copper	123	148	18
Iron	29900	28400	5
Lead	309	241	25
Magnesium	5820	6080	4
Manganese	722	548	27
Mercury	18.2	5.6	106
Nickel	26.8	31.8	17
Potassium	1590	1650	4
Sodium	362	462	24
Vanadium	23.5	28.1	18
Zinc	356	462	26
Criteria: RPD ≤35% if both results are >5x SQL.			

Results for samples 04SD115N-SC-F-1 and 04SD115N-SC-F-2 were qualified as follows.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

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The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD124C-SC-C-1 and 04SD124C-SC-C-2.

Analyte	04SD124C-SC-C-1 (mg/Kg)	04SD124C-SC-C-2 (mg/Kg)	RPD
Aluminum	7240	9470	27
Arsenic	8.5	6.7	24
Barium	86.2	107	22
Cadmium	2.3	3.3	36
Calcium	4820	5660	16
Chromium	90.8	118	26
Cobalt	9.5	8.8	8
Copper	55.4	81.8	38
Iron	17000	20100	17
Lead	108	168	43
Magnesium	3710	4840	26
Manganese	267	354	28
Mercury	0.45	0.49	9
Nickel	16.1	20.7	25
Potassium	953	1140	18
Vanadium	18.2	20.3	11
Zinc	194	261	29
Criteria: RPD ≤35% if both results are >5x SQL.			

Results for samples 04SD124C-SC-C-1 and 04SD124C-SC-C-2 were qualified as follows.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

TOC

Samples 04SD115N-SC-F-1/04SD115N-SC-F-2 and 04SD124C-SC-C-1/04SD124C-SC-C-2 were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPD of TOC in field duplicate samples 04SD115N-SC-F-1 and 04SD115N-SC-F-2. The RPD of TOC was within the acceptance criteria.

Compound	04SD115N-SC-F-1 (mg/Kg)	04SD115N-SC-F-2 (mg/Kg)	RPD
TOC	70300	66100	6
Criteria: RPD ≤35% if both results are >5x RL.			

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The following table summarizes the RPD of TOC in field duplicate samples 04SD124C-SC-C-1 and 04SD124C-SC-C-2. The RPD of TOC was within the acceptance criteria.

Compound	04SD124C-SC-C-1 (mg/Kg)	04SD124C-SC-C-2 (mg/Kg)	RPD
TOC	18600	26000	33
Criteria: RPD ≤35% if both results are >5x RL.			

LCS Results

TAL Metals

The LCSs associated with the sediment samples met the vendor's QC acceptance limits.

The LCSs associated with the aqueous equipment blank samples met the 80-120% recovery criteria.

TOC

The LCS associated with the sediment samples met the laboratory QC acceptance limits.

ICP Serial Dilution Results

TAL Metals

Serial dilution analyses were performed on surface sediment sample 04SD124C-SC-E-1 for all ICP metals; and on aqueous equipment blank sample 04SD-EB8-SC-3 for all ICP metals in association with all samples in this data set. All analytes met the percent difference (%D) QC acceptance criteria in the serial dilution analyses of samples 04SD124C-SC-E-1 and 04SD-EB8-SC-3.

Sample Quantitation/Detection Limit Results

The percent (%) solids content for all samples was greater than 50% with the following exception: 04SD115N-SC-D-1 (49.5%). The positive and nondetect results for all metals in samples 04SD115N-SC-D-1 were qualified as estimated (J, UJ).

TAL Metals

All metals results were reported to the sample quantitation limit (SQL). Due to software limitations, metal results greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantitation limits were achieved for all metals except and sodium.

The following table summarizes the SQL that exceeded the project-specific quantitation limit listed in the QAPP. No validation action was taken other than to note this discrepancy.

Analyte	Laboratory SQL (mg/Kg)	Project QL (mg/Kg)
Sodium	100	1.0

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The following table summarizes the samples that were analyzed at dilutions due to the elevated concentration of these analytes in the respective samples. Sample results were adjusted accordingly.

Sample ID	Analyte	Dilution
04SD115N-SC-D-1	Mercury	5x
	Zinc	5x
04SD115N-SC-E-1	Zinc	5x
04SD115N-SC-F-1	Mercury	10x
04SD115N-SC-F-2	Zinc	5x
	Mercury	5x
04SD124C-SC-E-1	Zinc	5x
04SD124C-SC-F-1	Zinc	5x

TOC

Due to software limitation, the TOC SQL reported for all surface sediment samples was 300 mg/Kg even though the initial weights varied on a sample-by-sample basis. No actions were taken other than to note this discrepancy.

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD115N-SC-C-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057915

Level (low/med): LOW Date Received: 12/14/07

% Solids: 52.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13800			P
7440-36-0	Antimony	2.9			P
7440-38-2	Arsenic	11.0			P
7440-39-3	Barium	168			P
7440-41-7	Beryllium	0.95	U		P
7440-43-9	Cadmium	9.5			P
7440-70-2	Calcium	11500		#J	P
7440-47-3	Chromium	279			P
7440-48-4	Cobalt	14.4			P
7440-50-8	Copper	197			P
7439-89-6	Iron	27200			P
7439-92-1	Lead	289			P
7439-95-4	Magnesium	6830			P
7439-96-5	Manganese	789		#J	P
7439-97-6	Mercury	1.0			CV
7440-02-0	Nickel	35.0			P
7440-09-7	Potassium	1580			P
7782-49-2	Selenium	0.95	U		F
7440-22-4	Silver	1.9	U		P
7440-23-5	Sodium	189	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	30.6			P
7440-66-6	Zinc	335			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD115N-SC-D-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057916

Level (low/med): LOW Date Received: 12/14/07

% Solids: 49.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16400	J		P
7440-36-0	Antimony	2.6			P
7440-38-2	Arsenic	14.9			P
7440-39-3	Barium	263			P
7440-41-7	Beryllium	1.0	U J		P
7440-43-9	Cadmium	21.4	J		P
7440-70-2	Calcium	9340			P
7440-47-3	Chromium	430			P
7440-48-4	Cobalt	13.8			P
7440-50-8	Copper	236			P
7439-89-6	Iron	30700			P
7439-92-1	Lead	377			P
7439-95-4	Magnesium	7060			P
7439-96-5	Manganese	541			P
7439-97-6	Mercury	3.8			CV
7440-02-0	Nickel	46.3			P
7440-09-7	Potassium	1960			P
7782-49-2	Selenium	1.0	U		F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	229	J		P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	41.2	J		P
7440-66-6	Zinc	587	J		P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD115N-SC-E-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-(

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057917

Level (low/med): LOW Date Received: 12/14/07

% Solids: 51.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14500			P
7440-36-0	Antimony	8.3			P
7440-38-2	Arsenic	13.2			P
7440-39-3	Barium	176			P
7440-41-7	Beryllium	0.96	U		P
7440-43-9	Cadmium	9.6			P
7440-70-2	Calcium	5850		#J	P
7440-47-3	Chromium	324			P
7440-48-4	Cobalt	11.3			P
7440-50-8	Copper	151			P
7439-89-6	Iron	23400			P
7439-92-1	Lead	374			P
7439-95-4	Magnesium	5420			P
7439-96-5	Manganese	406		#J	P
7439-97-6	Mercury	3.0			CV
7440-02-0	Nickel	34.1			P
7440-09-7	Potassium	1550			P
7782-49-2	Selenium	0.96	U		F
7440-22-4	Silver	1.9	U		P
7440-23-5	Sodium	270			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	36.1			P
7440-66-6	Zinc	599			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD115N-SC-F-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057918

Level (low/med): LOW Date Received: 12/14/07

% Solids: 54.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12400			P
7440-36-0	Antimony	1.8	U		P
7440-38-2	Arsenic	17.5		J	P
7440-39-3	Barium	154			P
7440-41-7	Beryllium	0.90	U		P
7440-43-9	Cadmium	2.1			P
7440-70-2	Calcium	8200		*J	P
7440-47-3	Chromium	138		J	P
7440-48-4	Cobalt	12.0			P
7440-50-8	Copper	123			P
7439-89-6	Iron	29900			P
7439-92-1	Lead	309			P
7439-95-4	Magnesium	5820			P
7439-96-5	Manganese	722		*J	P
7439-97-6	Mercury	18.2		J	CV
7440-02-0	Nickel	26.8			P
7440-09-7	Potassium	1590			P
7782-49-2	Selenium	0.90	U		F
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	362			P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	23.5			P
7440-66-6	Zinc	356			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD115N-SC-F-2

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057919

Level (low/med): LOW Date Received: 12/14/07

% Solids: 51.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14100			P
7440-36-0	Antimony	1.9	U		P
7440-38-2	Arsenic	25.5		J	P
7440-39-3	Barium	146			P
7440-41-7	Beryllium	0.97	U		P
7440-43-9	Cadmium	2.5			P
7440-70-2	Calcium	7270		*J	P
7440-47-3	Chromium	218		J	P
7440-48-4	Cobalt	12.2			P
7440-50-8	Copper	148			P
7439-89-6	Iron	28400			P
7439-92-1	Lead	241			P
7439-95-4	Magnesium	6080			P
7439-96-5	Manganese	548		*J	P
7439-97-6	Mercury	5.6		J	CV
7440-02-0	Nickel	31.8			P
7440-09-7	Potassium	1650			P
7782-49-2	Selenium	0.97	U		F
7440-22-4	Silver	1.9	U		P
7440-23-5	Sodium	462			P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	28.1			P
7440-66-6	Zinc	462			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD115N-SC-G-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-G

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057920

Level (low/med): LOW Date Received: 12/14/07

% Solids: 56.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12400			P
7440-36-0	Antimony	2.1			P
7440-38-2	Arsenic	17.3			P
7440-39-3	Barium	170			P
7440-41-7	Beryllium	0.88	U		P
7440-43-9	Cadmium	1.2			P
7440-70-2	Calcium	6100		J	P
7440-47-3	Chromium	61.1			P
7440-48-4	Cobalt	10.9			P
7440-50-8	Copper	105			P
7439-89-6	Iron	23300			P
7439-92-1	Lead	186			P
7439-95-4	Magnesium	6080			P
7439-96-5	Manganese	328		J	P
7439-97-6	Mercury	2.1			CV
7440-02-0	Nickel	23.5			P
7440-09-7	Potassium	1570			P
7782-49-2	Selenium	0.88	U		F
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	572			P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	20.6			P
7440-66-6	Zinc	318			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD115N-SC-H-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057921

Level (low/med): LOW Date Received: 12/14/07

% Solids: 77.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12100			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	8.2			P
7440-39-3	Barium	99.9			P
7440-41-7	Beryllium	0.70			P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	44900		J	P
7440-47-3	Chromium	17.7			P
7440-48-4	Cobalt	13.2			P
7440-50-8	Copper	29.1			P
7439-89-6	Iron	28500			P
7439-92-1	Lead	12.7			P
7439-95-4	Magnesium	12600			P
7439-96-5	Manganese	702		J	P
7439-97-6	Mercury	0.05			CV
7440-02-0	Nickel	26.3			P
7440-09-7	Potassium	1990			P
7782-49-2	Selenium	0.62	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	387			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	24.6			P
7440-66-6	Zinc	62.6		J	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD115N-SC-I-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-(

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057922

Level (low/med): LOW Date Received: 12/14/07

% Solids: 75.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11800			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	9.2			P
7440-39-3	Barium	95.1			P
7440-41-7	Beryllium	0.67			P
7440-43-9	Cadmium	0.66	U		P
7440-70-2	Calcium	42200		*J	P
7440-47-3	Chromium	17.6			P
7440-48-4	Cobalt	13.7			P
7440-50-8	Copper	32.5			P
7439-89-6	Iron	30400			P
7439-92-1	Lead	14.7			P
7439-95-4	Magnesium	13300			P
7439-96-5	Manganese	718		*J	P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	27.8			P
7440-09-7	Potassium	2080			P
7782-49-2	Selenium	0.66	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	362			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	24.0			P
7440-66-6	Zinc	62.4		J	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD124C-SC-C-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-(

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058069

Level (low/med): LOW Date Received: 12/14/07

% Solids: 66.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7240			P
7440-36-0	Antimony	1.5	U		P
7440-38-2	Arsenic	8.5			P
7440-39-3	Barium	86.2			P
7440-41-7	Beryllium	0.76	U		P
7440-43-9	Cadmium	2.3			P
7440-70-2	Calcium	4820		*J	P
7440-47-3	Chromium	90.8			P
7440-48-4	Cobalt	9.5			P
7440-50-8	Copper	55.4		J	P
7439-89-6	Iron	17000			P
7439-92-1	Lead	108		J	P
7439-95-4	Magnesium	3710			P
7439-96-5	Manganese	267		*J	P
7439-97-6	Mercury	0.45			CV
7440-02-0	Nickel	16.1			P
7440-09-7	Potassium	953			P
7782-49-2	Selenium	0.76	U		F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	151	U		P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	18.2			P
7440-66-6	Zinc	194			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD124C-SC-C-2

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058070

Level (low/med): LOW Date Received: 12/14/07

% Solids: 68.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9470			P
7440-36-0	Antimony	1.4	U		P
7440-38-2	Arsenic	6.7			P
7440-39-3	Barium	107			P
7440-41-7	Beryllium	0.71	U		P
7440-43-9	Cadmium	3.3			P
7440-70-2	Calcium	5660		*J	P
7440-47-3	Chromium	118			P
7440-48-4	Cobalt	8.8			P
7440-50-8	Copper	81.8		J	P
7439-89-6	Iron	20100			P
7439-92-1	Lead	168		J	P
7439-95-4	Magnesium	4840			P
7439-96-5	Manganese	354		*J	P
7439-97-6	Mercury	0.49			CV
7440-02-0	Nickel	20.7			P
7440-09-7	Potassium	1140			P
7782-49-2	Selenium	0.71	U		P
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	142	U		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	20.3			P
7440-66-6	Zinc	261			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD124C-SC-D-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058071

Level (low/med): LOW Date Received: 12/14/07

% Solids: 80.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5000			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.4			P
7440-39-3	Barium	18.2			P
7440-41-7	Beryllium	0.61	U		P
7440-43-9	Cadmium	0.61	U		P
7440-70-2	Calcium	1610		*J	P
7440-47-3	Chromium	11.7			P
7440-48-4	Cobalt	6.1	U		P
7440-50-8	Copper	8.4			P
7439-89-6	Iron	13000			P
7439-92-1	Lead	15.0			P
7439-95-4	Magnesium	2670			P
7439-96-5	Manganese	195		*J	P
7439-97-6	Mercury	0.11			CV
7440-02-0	Nickel	10.4			P
7440-09-7	Potassium	557			P
7782-49-2	Selenium	0.61	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	121	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	9.2			P
7440-66-6	Zinc	55.8			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD124C-SC-E-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058072

Level (low/med): LOW Date Received: 12/14/07

% Solids: 62.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11100			P
7440-36-0	Antimony	1.6	U		P
7440-38-2	Arsenic	13.3			P
7440-39-3	Barium	121			P
7440-41-7	Beryllium	0.80	U		P
7440-43-9	Cadmium	2.0			P
7440-70-2	Calcium	14400		*J	P
7440-47-3	Chromium	55.9			P
7440-48-4	Cobalt	11.9			P
7440-50-8	Copper	99.5			P
7439-89-6	Iron	25600			P
7439-92-1	Lead	197			P
7439-95-4	Magnesium	7350			P
7439-96-5	Manganese	526		*J	P
7439-97-6	Mercury	1.1			CV
7440-02-0	Nickel	24.6			P
7440-09-7	Potassium	1500			P
7782-49-2	Selenium	0.80	U		F
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium	160	U		P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	21.1			P
7440-66-6	Zinc	333			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD124C-SC-F-1

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058073

Level (low/med): LOW Date Received: 12/14/07

% Solids: 69.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12700			P
7440-36-0	Antimony	1.4	U		P
7440-38-2	Arsenic	13.6			P
7440-39-3	Barium	151			P
7440-41-7	Beryllium	0.72	U		P
7440-43-9	Cadmium	2.9			P
7440-70-2	Calcium	17300		#J	P
7440-47-3	Chromium	64.9			P
7440-48-4	Cobalt	13.6			P
7440-50-8	Copper	114			P
7439-89-6	Iron	33000			P
7439-92-1	Lead	212			P
7439-95-4	Magnesium	8950			P
7439-96-5	Manganese	970		#J	P
7439-97-6	Mercury	1.5			CV
7440-02-0	Nickel	28.3			P
7440-09-7	Potassium	1760			P
7782-49-2	Selenium	0.72	U		F
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	182			P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	24.2			P
7440-66-6	Zinc	534			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS
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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD124C-SC-G-1

Contract: R2741330
Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C
Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058074
Level (low/med): LOW Date Received: 12/14/07
% Solids: 71.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4780			P
7440-36-0	Antimony	1.4	U		P
7440-38-2	Arsenic	10.1			P
7440-39-3	Barium	47.0			P
7440-41-7	Beryllium	0.68	U		P
7440-43-9	Cadmium	0.68	U		P
7440-70-2	Calcium	5450		*J	P
7440-47-3	Chromium	10.1			P
7440-48-4	Cobalt	7.5			P
7440-50-8	Copper	13.9			P
7439-89-6	Iron	15000			P
7439-92-1	Lead	10.5			P
7439-95-4	Magnesium	3600			P
7439-96-5	Manganese	339		*J	P
7439-97-6	Mercury	0.08			CV
7440-02-0	Nickel	11.8			P
7440-09-7	Potassium	685			P
7782-49-2	Selenium	0.68	U		F
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	137	U		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	12.9			P
7440-66-6	Zinc	40.2			P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLEAR Artifacts:
Comments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD-EB7-SC-B-3

Contract: R2741330

Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C

Matrix (soil/water): WATER Lab Sample ID: 1058170

Level (low/med): LOW Date Received: 12/14/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	683			P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	72.7			P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Columbia Analytical Services

METALS
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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD-EB8-SC-3

Contract: R2741330
Lab Code: Case No.: SAS No.: SDG NO.: 04SD115N-SC-C
Matrix (soil/water): WATER Lab Sample ID: 1058171
Level (low/med): LOW Date Received: 12/14/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U	UJ	P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	5.0		J	P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-C-1

Date Sampled : 12/13/07 09:01 Order #: 1057915 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/14/07 Submission #: R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	52.8	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	53500	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-D-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057916 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	49.5	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	36500 J	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-E-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057917 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	51.7	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	83900	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-1

Date Sampled : 12/13/07 09:01 Order #: 1057918 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/14/07 Submission #: R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	54.4	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	70300	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-2

Date Sampled : 12/13/07 09:01 **Order #:** 1057919 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	51.3	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	66100	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-G-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057920 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	56.2	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	29500	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-H-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057921 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	77.8	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3730	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-I-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057922 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	75.9	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3650	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD124C-SC-C-1

Date Sampled : 12/13/07 08:45 **Order #:** 1058069 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	66.1	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	18600	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD124C-SC-C-2

Date Sampled : 12/13/07 08:45 Order #: 1058070 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/14/07 Submission #: R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	68.2	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	26000	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD124C-SC-D-1

Date Sampled : 12/13/07 08:45 **Order #:** 1058071 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	80.2	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2920	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD124C-SC-E-1

Date Sampled : 12/13/07 08:45 Order #: 1058072 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/14/07 Submission #: R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	62.6	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	26700	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD124C-SC-F-1

Date Sampled : 12/13/07 08:45 Order #: 1058073 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/14/07 Submission #: R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	69.0	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	43600	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD124C-SC-G-1

Date Sampled : 12/13/07 08:45 Order #: 1058074 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/14/07 Submission #: R2741330

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	71.7	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	4380	MG/KG	12/19/07	09:00	1.0

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Memorandum

Date: February 8, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation, VOC Analysis
Subsurficial Sediment Sampling, December 2007
BASF Rensselaer Site, NY
CAS Submission # R2741308

Distribution: L. Herberich/Westford 00760-171-525 File
BR026voclms.doc

SUMMARY

Limited validation was performed on the data for 12 sediment samples, one equipment blank, and two trip blanks analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The sediment samples were collected at the BASF site in Rensselaer, NY, on December 11, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741308.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected (R). Selected data points were qualified as undetected (U) due to blank contamination or were qualified due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD032N-SC-B-1	04SD056N-SC-B-1
04SD056N-SC-B-2 (Field duplicate of 04SD056N-SC-B-1)	04SD080N-SC-B-1
04SD082N-SC-B-1	04SD085N-SC-B-1
04SD098N-SC-B-1	04SD135N-SC-B-1
04SD117F-SC-C-1	04SD117N-SC-D-1
04SD117F-SC-E-1	04SD117F-SC-F-1
04SD-EB1-SC-B-3 (equipment blank)	Trip Blank 2

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Sample IDs	
Trip Blank 10	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard recoveries
- Sample quantitation/reporting limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancy was noted.

- The equipment blank was listed on the COC with a sample ID of 04SDEB1-SC-3. The laboratory correctly logged and reported the equipment blank with a sample ID of 04SD-EB1-SC-B-3 to be consistent with the sampling table.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were analyzed within the method-specified holding time.

GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

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Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations (IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 10/11/07 (MSVOA5)	1,4-Dioxane	0.002	J/UJ*
Associated samples: 04SD080N-SC-B-1, 04SD082N-SC-B-1, 04SD085N-SC-B-1, 04SD-EB1-SC-B-3, Trip Blank 2, and Trip Blank 10			
IC 12/10/07 (MSVOA5)	1,4-Dioxane	0.004	J/UJ*
Associated samples: 04SD032N-SC-B-1, 04SD056N-SC-B-1, 04SD056N-SC-B-2, 04SD098N-SC-B-1, 04SD135N-SC-B-1, 04SD117F-SC-C-1, 04SD117F-SC-D-1, 04SD117F-SC-E-1, and 04SD117F-SC-F-1			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			

Calibration (Instrument ID)	Compound	RRF	%D	Actions (Detects/Nondetects)
CC 12/18/07 (MSVOA5)	1,4-Dioxane	0.004	ok	J/UJ*
Associated samples: 04SD117F-SC-C-1, 04SD117F-SC-D-1, 04SD032N-SC-B-1, 04SD056N-SC-B-1, 04SD056N-SC-B-2, and 04SD135N-SC-B-1				
CC 12/18/07 (MSVOA5)	1,4-Dioxane	0.003	ok	J/UJ*
	Methylcyclohexane	ok	25.4	J/UJ
	1,2,3-Trichlorobenzene	ok	24.7	J/UJ
Associated samples: 04SD080N-SC-B-1, 04SD085N-SC-B-1, 04SD-EB1-SC-B-3, Trip Blank 2, and Trip Blank 10				
CC 12/19/07 (MSVOA5)	1,4-Dioxane	0.004	ok	J/UJ*
	Dichlorodifluoromethane	ok	23.5	J/UJ
	Acetone	ok	33.9	J/UJ
Associated sample: 04SD098N-SC-B-1				
CC 12/20/07 (MSVOA5)	1,4-Dioxane	0.003	27.8	J/UJ*
	Methylcyclohexane	ok	23.3	J/UJ
	1,2,3-Trichlorobenzene	ok	28.2	J/UJ
Associated sample: 04SD082N-SC-B-1				
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.				

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Laboratory Blanks/Equipment Blanks/Trip Blanks

Target analytes were not detected in the trip blanks associated with all samples in this data set. Several target compounds were detected in the laboratory method blanks and in the equipment blank associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected and the associated samples.

Blank type (lab ID)	Compound	Concentration (units)
Method (SOIL BLK3)	Methylene chloride	0.50 J µg/Kg
Associated sample: 04SD098N-SC-B-1		
Method (MED BLK4)	2-Butanone	120 J µg/Kg
Associated sample: 04SD082N-SC-B-1		
04SD-EB1-SC-B-3 (equipment)	Acetone	1.8 J µg/L
	Toluene	0.70 J µg/L
Associated samples: All sediment samples in this data set.		

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	≤ RL	Report sample RL value with a U
		> RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			
RL (Reporting Limit) is equivalent to the lowest calibration standard			

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC detected	Detects	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			
RL (Reporting Limit) is equivalent to the lowest calibration standard			
TIC = Tentatively Identified Compound			

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Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses.

MS/MSD Results

MS/MSD analyses were performed on samples 04SD117F-SC-D-1 and 04SD085N-SC-B-1. All target compounds were spiked for the MS and MSD analyses. All %Rs and relative percent differences (RPDs) were within the QC acceptance criteria with the following exceptions.

04SD117F-SC-D-1			
Compound	**MS/MSD %R (RPD)**	**QC Limits %R (RPD)**	**Actions (Detects/Nondetects)**
Acetone	ok/ok (31)	50-150 (30)	Estimate J/UJ
Cyclohexane	41/42 (ok)	70-130 (30)	Estimate J/UJ
Dichlorodifluoromethane	66/68 (ok)	70-130 (30)	Estimate J/UJ
1,4-Dioxane	ok/58 (102)	50-150 (30)	Estimate J/UJ
Methylcyclohexane	46/45 (ok)	50-150 (30)	Estimate J/UJ
Associated sample: 04SD117F-SC-D-1			

04SD085N-SC-B-1			
Compound	**MS/MSD %R (RPD)**	**QC Limits %R (RPD)**	**Actions (Detects/Nondetects)**
1,2,3-Trichlorobenzene	133/ok (ok)	70-130 (30)	Estimate (J)/Accept result
Associated sample: 04SD085N-SC-B-1			

LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses with the following exceptions.

Compound	**LCS %R**	**QC Limits %R**	**Actions (Detects/Nondetects)**
1,2,3-Trichlorobenzene	133	70-130	Estimate (J)/Accept result
Associated samples: Trip Blank 2, Trip Blank 10, and 04SD-EB1-SC-B-3.			
1,2,3-Trichlorobenzene	131	70-130	Estimate (J)/Accept result
Associated sample: 04SD082N-SC-B-1			

Field Duplicate Results

Samples 04SD056N-SC-B-1/04SD056N-SC-B-2 were submitted as the field duplicate pair with this sample set. It should be noted that the results for chlorobenzene in both samples were reported from the medium level soil analyses since the results for chlorobenzene in the low level analyses of these samples exceeded the calibration range.

The following table summarizes the RPDs of the detected compounds. The RPD for chlorobenzene exceeded the acceptance criteria. The positive results for chlorobenzene in samples 04SD056N-SC-B-1 and 04SD056N-SC-B-2 were therefore qualified as estimated (J). It should be noted that the positive result for acetone in field duplicate sample 04SD056N-SC-B-2 was qualified as undetected (U) due to blank actions. The RPD for acetone was therefore not calculable (NC). Precision for acetone was not met since one result was not detected and the positive result in sample 04SD056N-SC-B-1 was >5x the RL. The positive and nondetect results for acetone in samples 04SD056N-SC-B-

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1 and 04SD056N-SC-B-2 were therefore qualified as estimated (J, UJ, respectively). Precision for 2-butanone and carbon disulfide was deemed acceptable since the detected results were <5x the RL and the RPD criterion was doubled. The remaining RPDs met the acceptance criteria.

Compound	04SD056N-SC-B-1 (µg/Kg)	04SD056N-SC-B-2 (µg/Kg)	RPD
Acetone	140	77 U	NC
Benzene	16	24	40
2-Butanone	37	17	74
Carbon disulfide	2.2 J	1.3 J	51
Chlorobenzene	18000	9400	63
Cyclohexane	2.2 J	1.5 J	38
1,3-Dichlorobenzene	10	10	0
1,2-Dichlorobenzene	38	38	0
1,4-Dichlorobenzene	5.4 J	4.4 J	20
Ethylbenzene	2.4 J	2.4 J	0
Isopropylbenzene	3.8	3.2	17
Methylcyclohexane	18	15	18
m+p-Xylene	5.6 J	5.5 J	2
o-Xylene	11	12	9
Criteria: RPD ≤50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			
NC-Not calculable due to a nondetect result in the original or duplicate sample			

Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses with the following exceptions. Samples 04SD032N-SC-B-1 and 04SD135N-SC-B-1 were reanalyzed by the laboratory. The reanalyses of these samples confirmed the initial low internal standard recoveries. The initial analyses of samples 04SD032N-SC-B-1 and 04SD135N-SC-B-1 were reported by the validator.

Sample	Internal Standard Area %R			
	PFB	DFB	CBZ	DCB
04SD135N-SC-B-1	ok	ok	ok	43
04SD032N-SC-B-1	ok	ok	ok	36
PFB – Pentafluorobenzene DFB – 1,4-Difluorobenzene CBZ – d5-Chlorobenzene DCB – d4-Dichlorobenzene				

Sample results were qualified as follows:

- If the internal standard area was ≥25% but <50%, positive and nondetect results for compounds quantitated with the noncompliant internal standard were qualified as estimated (J, UJ).

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Sample Quantitation/Reporting Limits

The percent (%) solids content for all samples was greater than 50% with the following exceptions: 04SD082N-SC-B-1 (45.0%) and 04SD085N-SC-B-1 (45.4%). The positive and nondetect VOC results in these samples were qualified as estimated (J, UJ).

Samples 04SD080N-SC-B-1, 04SD082N-SC-B-1, and 04SD085N-SC-B-1 were analyzed as medium level soil analyses due to the high concentration of target compounds present in the samples. In addition to the medium level soil analyses, samples 04SD080N-SC-B-1 (50x) and 04SD085N-SC-B-1 (10x) were analyzed at the dilution factor listed in parentheses due to the high concentration of chlorobenzene present in the samples. RLs were adjusted accordingly.

Sample 04SD056N-SC-B-1 and 04SD056N-SC-B-2 were initially analyzed as low level soils. The concentration of chlorobenzene exceeded the calibration range in the low level analyses of these samples. Samples 04SD056N-SC-B-1 and 04SD056N-SC-B-2 were reanalyzed as medium level soil samples. During data validation, the results for chlorobenzene from the medium level analyses were combined with the remaining results from the low level analyses in order to report all results within the calibration range while also reporting the lowest achievable RLs.

All VOCs, except trichloroethene and 1,4-dioxane, have RLs which are less than or equal to the project required detection limits when analyzed without dilution. In all cases where dilutions were performed or where sediment samples were analyzed as medium level soil samples, one or more VOCs exceeded the project required detection limits.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD032N-SC-B-1

Date Sampled : 12/11/07 09:00 **Order #:** 1057477 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 60.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.26			Dry Weight
ACETONE	20	330	UG/KG
BENZENE	5.0	10 U	UG/KG
BROMOCHLOROMETHANE	5.0	10 U	UG/KG
BROMODICHLOROMETHANE	5.0	10 U	UG/KG
BROMOFORM	5.0	10 U	UG/KG
BROMOMETHANE	5.0	10 U	UG/KG
2-BUTANONE (MEK)	10	84	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	10 U	UG/KG
CARBON DISULFIDE	10	4.0 J	UG/KG
CARBON TETRACHLORIDE	5.0	10 U	UG/KG
CHLOROBENZENE	5.0	10 U	UG/KG
CHLOROETHANE	10	21 U	UG/KG
CHLOROFORM	5.0	10 U	UG/KG
CHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	10 UJ	UG/KG
CYCLOHEXANE	5.0	0.64 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMOETHANE	5.0	10 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10 UJ	UG/KG
1,4-DICHLOROBENZENE	5.0	10 U	UG/KG
1,2-DICHLOROBENZENE	5.0	10 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHANE	5.0	10 U	UG/KG
1,2-DICHLOROETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHENE	5.0	10 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
1,2-DICHLOROPROPANE	5.0	10 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
1,4-DIOXANE	100	830 ~~210~~ UJ	UG/KG
ETHYLBENZENE	5.0	10 U	UG/KG
2-HEXANONE	10	21 U	UG/KG
ISOPROPYLBENZENE	5.0	10 U	UG/KG
METHYL ACETATE	10	21 U	UG/KG
METHYLCYCLOHEXANE	5.0	8.3 J	UG/KG
METHYLENE CHLORIDE	5.0	10 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	21 U	UG/KG
STYRENE	5.0	10 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	10 UJ	UG/KG
TETRACHLOROETHENE	5.0	10 U	UG/KG
TOLUENE	5.0	10 ~~0.98 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	10 UJ	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	10 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD032N-SC-B-1

Date Sampled : 12/11/07 09:00 **Order #:** 1057477 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 60.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.26			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/KG
TRICHLOROETHENE	5.0	10 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	10 U	UG/KG
VINYL CHLORIDE	5.0	10 U	UG/KG
O-XYLENE	5.0	10 U	UG/KG
M+P-XYLENE	5.0	10 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	58	%
TOLUENE-D8	(75 - 128 %)	83	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	89	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD032N-SC-B-1

Date Sampled : 12/11/07 09:00 **Order #:** 1057477 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 60.5

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 1.20

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	450 E	UG/KG
BENZENE	5.0	10 U	UG/KG
BROMOCHLOROMETHANE	5.0	10 U	UG/KG
BROMODICHLOROMETHANE	5.0	10 U	UG/KG
BROMOFORM	5.0	10 U	UG/KG
BROMOMETHANE	5.0	10 U	UG/KG
2-BUTANONE (MEK)	10	120	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	10 U	UG/KG
CARBON DISULFIDE	10	3.5 J	UG/KG
CARBON TETRACHLORIDE	5.0	10 U	UG/KG
CHLOROBENZENE	5.0	0.68 J	UG/KG
CHLOROETHANE	10	20 U	UG/KG
CHLOROFORM	5.0	10 U	UG/KG
CHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	10 U	UG/KG
CYCLOHEXANE	5.0	1.6 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMOETHANE	5.0	10 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10 U	UG/KG
1,4-DICHLOROBENZENE	5.0	10 U	UG/KG
1,2-DICHLOROBENZENE	5.0	10 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHANE	5.0	10 U	UG/KG
1,2-DICHLOROETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHENE	5.0	10 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
1,2-DICHLOROPROPANE	5.0	10 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
1,4-DIOXANE	100	200 U	UG/KG
ETHYLBENZENE	5.0	10 U	UG/KG
2-HEXANONE	10	20 U	UG/KG
ISOPROPYLBENZENE	5.0	10 U	UG/KG
METHYL ACETATE	10	20 U	UG/KG
METHYLCYCLOHEXANE	5.0	10	UG/KG
METHYLENE CHLORIDE	5.0	10 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/KG
STYRENE	5.0	10 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/KG
TETRACHLOROETHENE	5.0	10 U	UG/KG
TOLUENE	5.0	10 ~~1.1 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	10 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	10 U	UG/KG

DW Report

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD032N-SC-B-1

Date Sampled : 12/11/07 09:00 **Order #:** 1057477 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 60.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 1.20			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/KG
TRICHLOROETHENE	5.0	10 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	10 U	UG/KG
VINYL CHLORIDE	5.0	10 U	UG/KG
O-XYLENE	5.0	10 U	UG/KG
M+P-XYLENE	5.0	10 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	55	%
TOLUENE-D8	(75 - 128 %)	84	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	88	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD056N-SC-B-1

Date Sampled : 12/11/07 09:56 **Order #:** 1057478 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 73.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 0.92			Dry Weight
ACETONE	20	140 J	UG/KG
BENZENE	5.0	16	UG/KG
BROMOCHLOROMETHANE	5.0	6.3 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.3 U	UG/KG
BROMOFORM	5.0	6.3 U	UG/KG
BROMOMETHANE	5.0	6.3 U	UG/KG
2-BUTANONE (MEK)	10	37	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.3 U	UG/KG
CARBON DISULFIDE	10	2.2 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.3 U	UG/KG
CHLOROBENZENE	5.0	18000 ~~1900 E~~ J	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.3 U	UG/KG
CHLOROMETHANE	5.0	6.3 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.3 U	UG/KG
CYCLOHEXANE	5.0	2.2 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.3 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.3 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10	UG/KG
1,4-DICHLOROBENZENE	5.0	38	UG/KG
1,2-DICHLOROBENZENE	5.0	5.4 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.3 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.3 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.3 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.3 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.3 U	UG/KG
1,4-DIOXANE	100	560 ~~130~~ UJ	UG/KG
ETHYLBENZENE	5.0	2.4 J	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	3.8 J	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	18	UG/KG
METHYLENE CHLORIDE	5.0	6.3 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.3 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.3 U	UG/KG
TETRACHLOROETHENE	5.0	6.3 U	UG/KG
TOLUENE	5.0	6.3 ~~0.85 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.3 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.3 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD056N-SC-B-1

Date Sampled : 12/11/07 09:56 **Order #:** 1057478 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 73.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 0.92			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.3 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.3 U	UG/KG
TRICHLOROETHENE	5.0	6.3 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.3 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.3 U	UG/KG
VINYL CHLORIDE	5.0	6.3 U	UG/KG
O-XYLENE	5.0	11	UG/KG
M+P-XYLENE	5.0	5.6 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	79	%
TOLUENE-D8	(75 - 128 %)	88	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	88	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD056N-SC-B-1

Date Sampled : 12/11/07 09:56 **Order #:** 1057478 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 73.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 80.40			Dry Weight
ACETONE	20	2200 U	UG/KG
BENZENE	5.0	130 J	UG/KG
BROMOCHLOROMETHANE	5.0	540 U	UG/KG
BROMODICHLOROMETHANE	5.0	540 U	UG/KG
BROMOFORM	5.0	540 U	UG/KG
BROMOMETHANE	5.0	540 U	UG/KG
2-BUTANONE (MEK)	10	1100 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	540 U	UG/KG
CARBON DISULFIDE	10	1100 U	UG/KG
CARBON TETRACHLORIDE	5.0	540 U	UG/KG
CHLOROBENZENE	5.0	18000 D	UG/KG
CHLOROETHANE	10	1100 U	UG/KG
CHLOROFORM	5.0	540 U	UG/KG
CHLOROMETHANE	5.0	540 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	540 U	UG/KG
CYCLOHEXANE	5.0	540 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	540 U	UG/KG
1,2-DIBROMOETHANE	5.0	540 U	UG/KG
1,3-DICHLOROBENZENE	5.0	92 J	UG/KG
1,4-DICHLOROBENZENE	5.0	390 J	UG/KG
1,2-DICHLOROBENZENE	5.0	540 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	540 U	UG/KG
1,1-DICHLOROETHANE	5.0	540 U	UG/KG
1,2-DICHLOROETHANE	5.0	540 U	UG/KG
1,1-DICHLOROETHENE	5.0	540 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	540 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	540 U	UG/KG
1,2-DICHLOROPROPANE	5.0	540 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	540 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	540 U	UG/KG
1,4-DIOXANE	100	11000 U	UG/KG
ETHYLBENZENE	5.0	540 U	UG/KG
2-HEXANONE	10	1100 U	UG/KG
ISOPROPYLBENZENE	5.0	540 U	UG/KG
METHYL ACETATE	10	75 J	UG/KG
METHYLCYCLOHEXANE	5.0	50 J	UG/KG
METHYLENE CHLORIDE	5.0	540 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	1100 U	UG/KG
STYRENE	5.0	540 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	540 U	UG/KG
TETRACHLOROETHENE	5.0	540 U	UG/KG
TOLUENE	5.0	540 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	540 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	540 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
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Client Sample ID : 04SD056N-SC-B-1

Date Sampled : 12/11/07 09:56 **Order #:** 1057478 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 73.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 80.40			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	540 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	540 U	UG/KG
TRICHLOROETHENE	5.0	540 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	540 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	540 U	UG/KG
VINYL CHLORIDE	5.0	540 U	UG/KG
O-XYLENE	5.0	99 J	UG/KG
M+P-XYLENE	5.0	180 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	101	%
TOLUENE-D8	(75 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	101	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD056N-SC-B-2

Date Sampled : 12/11/07 09:56 **Order #:** 1057479 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 71.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 0.83			Dry Weight
ACETONE	20	77 UJ	UG/KG
BENZENE	5.0	24	UG/KG
BROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	17	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.8 U	UG/KG
CARBON DISULFIDE	10	1.3 J	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROBENZENE	5.0	9400 ~~1700 E~~ J	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.8 U	UG/KG
CYCLOHEXANE	5.0	1.5 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.8 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10	UG/KG
1,4-DICHLOROBENZENE	5.0	38	UG/KG
1,2-DICHLOROBENZENE	5.0	4.4 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
1,4-DIOXANE	100	470 ~~120~~ UJ	UG/KG
ETHYLBENZENE	5.0	2.4 J	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	3.2 J	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	15	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 ~~0.86 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.8 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.8 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD056N-SC-B-2

Date Sampled : 12/11/07 09:56 **Order #:** 1057479 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 71.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 0.83			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	12	UG/KG
M+P-XYLENE	5.0	5.5 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	82	%
TOLUENE-D8	(75 - 128 %)	91	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	89	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD056N-SC-B-2

Date Sampled : 12/11/07 09:56 **Order #:** 1057479 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 71.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 96.20			Dry Weight
ACETONE	20	2700 U	UG/KG
BENZENE	5.0	42 J	UG/KG
BROMOCHLOROMETHANE	5.0	680 U	UG/KG
BROMODICHLOROMETHANE	5.0	680 U	UG/KG
BROMOFORM	5.0	680 U	UG/KG
BROMOMETHANE	5.0	680 U	UG/KG
2-BUTANONE (MEK)	10	1400 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	680 U	UG/KG
CARBON DISULFIDE	10	1400 U	UG/KG
CARBON TETRACHLORIDE	5.0	680 U	UG/KG
CHLOROBENZENE	50	9400 D	UG/KG
CHLOROETHANE	10	1400 U	UG/KG
CHLOROFORM	5.0	680 U	UG/KG
CHLOROMETHANE	5.0	680 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	680 U	UG/KG
CYCLOHEXANE	5.0	680 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	680 U	UG/KG
1,2-DIBROMOETHANE	5.0	680 U	UG/KG
1,3-DICHLOROBENZENE	5.0	680 U	UG/KG
1,4-DICHLOROBENZENE	5.0	170 J	UG/KG
1,2-DICHLOROBENZENE	5.0	42 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	680 U	UG/KG
1,1-DICHLOROETHANE	5.0	680 U	UG/KG
1,2-DICHLOROETHANE	5.0	680 U	UG/KG
1,1-DICHLOROETHENE	5.0	680 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	680 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	680 U	UG/KG
1,2-DICHLOROPROPANE	5.0	680 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	680 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	680 U	UG/KG
1,4-DIOXANE	100	14000 U	UG/KG
ETHYLBENZENE	5.0	680 U	UG/KG
2-HEXANONE	10	1400 U	UG/KG
ISOPROPYLBENZENE	5.0	680 U	UG/KG
METHYL ACETATE	10	60 J	UG/KG
METHYLCYCLOHEXANE	5.0	680 U	UG/KG
METHYLENE CHLORIDE	5.0	680 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	1400 U	UG/KG
STYRENE	5.0	680 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	680 U	UG/KG
TETRACHLOROETHENE	5.0	680 U	UG/KG
TOLUENE	5.0	680 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	680 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	680 U	UG/KG

Don't Report

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD056N-SC-B-2

Date Sampled : 12/11/07 09:56 **Order #:** 1057479 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 71.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 96.20			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	680 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	680 U	UG/KG
TRICHLOROETHENE	5.0	680 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	680 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	680 U	UG/KG
VINYL CHLORIDE	5.0	680 U	UG/KG
O-XYLENE	5.0	680 U	UG/KG
M+P-XYLENE	5.0	680 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	98	%
TOLUENE-D8	(75 - 128 %)	97	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD080N-SC-B-1

Date Sampled : 12/11/07 09:22 **Order #:** 1057480 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 63.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 4655.00			Dry Weight
ACETONE	20	150000 U	UG/KG
BENZENE	5.0	17000 J	UG/KG
BROMOCHLOROMETHANE	5.0	37000 U	UG/KG
BROMODICHLOROMETHANE	5.0	37000 U	UG/KG
BROMOFORM	5.0	37000 U	UG/KG
BROMOMETHANE	5.0	37000 U	UG/KG
2-BUTANONE (MEK)	10	74000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	37000 U	UG/KG
CARBON DISULFIDE	10	74000 U	UG/KG
CARBON TETRACHLORIDE	5.0	37000 U	UG/KG
CHLOROBENZENE	5.0	810000	UG/KG
CHLOROETHANE	10	74000 U	UG/KG
CHLOROFORM	5.0	37000 U	UG/KG
CHLOROMETHANE	5.0	37000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	37000 U	UG/KG
CYCLOHEXANE	5.0	37000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	37000 U	UG/KG
1,2-DIBROMOETHANE	5.0	37000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6800 J	UG/KG
1,4-DICHLOROBENZENE	5.0	79000	UG/KG
1,2-DICHLOROBENZENE	5.0	540000	UG/KG
DICHLORODIFLUOROMETHANE	5.0	37000 U	UG/KG
1,1-DICHLOROETHANE	5.0	37000 U	UG/KG
1,2-DICHLOROETHANE	5.0	37000 U	UG/KG
1,1-DICHLOROETHENE	5.0	37000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	37000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	37000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	37000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	37000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	37000 U	UG/KG
1,4-DIOXANE	100	290 ~~740~~000 UJ	UG/KG
ETHYLBENZENE	5.0	37000 U	UG/KG
2-HEXANONE	10	74000 U	UG/KG
ISOPROPYLBENZENE	5.0	37000 U	UG/KG
METHYL ACETATE	10	74000 U	UG/KG
METHYLCYCLOHEXANE	5.0	37000 UJ	UG/KG
METHYLENE CHLORIDE	5.0	37000 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	74000 U	UG/KG
STYRENE	5.0	37000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	37000 U	UG/KG
TETRACHLOROETHENE	5.0	37000 U	UG/KG
TOLUENE	5.0	37 ~~19~~000 ~~J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	22000 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	37000 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD080N-SC-B-1

Date Sampled : 12/11/07 09:22 **Order #:** 1057480 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 63.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 4655.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	37000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	37000 U	UG/KG
TRICHLOROETHENE	5.0	37000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	37000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	37000 U	UG/KG
VINYL CHLORIDE	5.0	37000 U	UG/KG
O-XYLENE	5.0	37000 U	UG/KG
M+P-XYLENE	5.0	5400 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	101	%
TOLUENE-D8	(75 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD082N-SC-B-1

Date Sampled : 12/11/07 09:36 **Order #:** 1057481 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 45.0

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 131.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	~~23000~~ 5800 ~~490 J~~ UJ	UG/KG
BENZENE	5.0	8400 J	UG/KG
BROMOCHLOROMETHANE	5.0	1500 U J	UG/KG
BROMODICHLOROMETHANE	5.0	1500 U	UG/KG
BROMOFORM	5.0	1500 U	UG/KG
BROMOMETHANE	5.0	1500 U	UG/KG
2-BUTANONE (MEK)	10	2900 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1500 U	UG/KG
CARBON DISULFIDE	10	2900 U	UG/KG
CARBON TETRACHLORIDE	5.0	1500 U	UG/KG
CHLOROBENZENE	5.0	51000 J	UG/KG
CHLOROETHANE	10	2900 U J	UG/KG
CHLOROFORM	5.0	1500 U	UG/KG
CHLOROMETHANE	5.0	1500 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1500 U	UG/KG
CYCLOHEXANE	5.0	1500 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1500 U	UG/KG
1,2-DIBROMOETHANE	5.0	1500 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1500 U	UG/KG
1,4-DICHLOROBENZENE	5.0	1100 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1500 U J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1500 U	UG/KG
1,1-DICHLOROETHANE	5.0	1500 U	UG/KG
1,2-DICHLOROETHANE	5.0	1500 U	UG/KG
1,1-DICHLOROETHENE	5.0	1500 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1500 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1500 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1500 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1500 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1500 U	UG/KG
1,4-DIOXANE	100	120 ~~29~~000 U J	UG/KG
ETHYLBENZENE	5.0	600 J	UG/KG
2-HEXANONE	10	2900 U J	UG/KG
ISOPROPYLBENZENE	5.0	1500 U J	UG/KG
METHYL ACETATE	10	270 J	UG/KG
METHYLCYCLOHEXANE	5.0	220 J	UG/KG
METHYLENE CHLORIDE	5.0	1500 U J	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	2900 U	UG/KG
STYRENE	5.0	1500 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1500 U	UG/KG
TETRACHLOROETHENE	5.0	1500 U	UG/KG
TOLUENE	5.0	1500 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1500 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1500 U J	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD082N-SC-B-1

Date Sampled : 12/11/07 09:36 **Order #:** 1057481 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 45.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 131.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1500 U J	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1500 U	UG/KG
TRICHLOROETHENE	5.0	1500 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1500 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1500 U	UG/KG
VINYL CHLORIDE	5.0	1500 U	UG/KG
O-XYLENE	5.0	510 J	UG/KG
M+P-XYLENE	5.0	2100 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	99	%
TOLUENE-D8	(75 - 128 %)	99	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD085N-SC-B-1

Date Sampled : 12/11/07 09:43 **Order #:** 1057482 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 45.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1510.00			Dry Weight
ACETONE	20	67000 UJ	UG/KG
BENZENE	5.0	140000 J	UG/KG
BROMOCHLOROMETHANE	5.0	17000 UJ	UG/KG
BROMODICHLOROMETHANE	5.0	17000 U	UG/KG
BROMOFORM	5.0	17000 U	UG/KG
BROMOMETHANE	5.0	17000 U	UG/KG
2-BUTANONE (MEK)	10	33000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	17000 U	UG/KG
CARBON DISULFIDE	10	33000 U	UG/KG
CARBON TETRACHLORIDE	5.0	17000 U	UG/KG
CHLOROBENZENE	5.0	530000 J	UG/KG
CHLOROETHANE	10	33000 UJ	UG/KG
CHLOROFORM	5.0	17000 U	UG/KG
CHLOROMETHANE	5.0	17000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	17000 U	UG/KG
CYCLOHEXANE	5.0	17000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	17000 U	UG/KG
1,2-DIBROMOETHANE	5.0	17000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	17000 U	UG/KG
1,4-DICHLOROBENZENE	5.0	2200 J	UG/KG
1,2-DICHLOROBENZENE	5.0	17000 UJ	UG/KG
DICHLORODIFLUOROMETHANE	5.0	17000 U	UG/KG
1,1-DICHLOROETHANE	5.0	17000 U	UG/KG
1,2-DICHLOROETHANE	5.0	17000 U	UG/KG
1,1-DICHLOROETHENE	5.0	17000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	17000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	17000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	17000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	17000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	17000 U	UG/KG
1,4-DIOXANE	100	1300000 UJ	UG/KG
ETHYLBENZENE	5.0	1100 J	UG/KG
2-HEXANONE	10	33000 UJ	UG/KG
ISOPROPYLBENZENE	5.0	17000 U	UG/KG
METHYL ACETATE	10	33000 U	UG/KG
METHYLCYCLOHEXANE	5.0	17000 UJ	UG/KG
METHYLENE CHLORIDE	5.0	17000 UJ	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	33000 U	UG/KG
STYRENE	5.0	17000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	17000 U	UG/KG
TETRACHLOROETHENE	5.0	17000 U	UG/KG
TOLUENE	5.0	17000 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	17000 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	17000 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD085N-SC-B-1

Date Sampled : 12/11/07 09:43 **Order #:** 1057482 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 45.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1510.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	17000 U J	UG/KG
1,1,2-TRICHLOROETHANE	5.0	17000 U	UG/KG
TRICHLOROETHENE	5.0	17000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	17000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	17000 U	UG/KG
VINYL CHLORIDE	5.0	17000 U	UG/KG
O-XYLENE	5.0	17000 U	UG/KG
M+P-XYLENE	5.0	3100 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	98	%
TOLUENE-D8	(75 - 128 %)	97	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD098N-SC-B-1

Date Sampled : 12/11/07 10:16 **Order #:** 1057483 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 56.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.08			Dry Weight
ACETONE	20	360 J	UG/KG
BENZENE	5.0	9.6 U	UG/KG
BROMOCHLOROMETHANE	5.0	9.6 U	UG/KG
BROMODICHLOROMETHANE	5.0	9.6 U	UG/KG
BROMOFORM	5.0	9.6 U	UG/KG
BROMOMETHANE	5.0	9.6 U	UG/KG
2-BUTANONE (MEK)	10	87	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	9.6 U	UG/KG
CARBON DISULFIDE	10	2.9 J	UG/KG
CARBON TETRACHLORIDE	5.0	9.6 U	UG/KG
CHLOROBENZENE	5.0	5.5 J	UG/KG
CHLOROETHANE	10	19 U	UG/KG
CHLOROFORM	5.0	9.6 U	UG/KG
CHLOROMETHANE	5.0	9.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	9.6 U	UG/KG
CYCLOHEXANE	5.0	9.6 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	9.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	9.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	9.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	9.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	9.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	9.6 UJ	UG/KG
1,1-DICHLOROETHANE	5.0	9.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	9.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	9.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	9.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	9.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	9.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	9.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	9.6 U	UG/KG
1,4-DIOXANE	100	770 ~~190~~ UJ	UG/KG
ETHYLBENZENE	5.0	9.6 U	UG/KG
2-HEXANONE	10	19 U	UG/KG
ISOPROPYLBENZENE	5.0	9.6 U	UG/KG
METHYL ACETATE	10	19 U	UG/KG
METHYLCYCLOHEXANE	5.0	0.77 J	UG/KG
METHYLENE CHLORIDE	5.0	9.6 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	19 U	UG/KG
STYRENE	5.0	9.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	9.6 U	UG/KG
TETRACHLOROETHENE	5.0	9.6 U	UG/KG
TOLUENE	5.0	9.6 ~~0.86 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	9.6 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	9.6 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD098N-SC-B-1

Date Sampled : 12/11/07 10:16 **Order #:** 1057483 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 56.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.08			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	9.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	9.6 U	UG/KG
TRICHLOROETHENE	5.0	9.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	9.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	9.6 U	UG/KG
VINYL CHLORIDE	5.0	9.6 U	UG/KG
O-XYLENE	5.0	9.6 U	UG/KG
M+P-XYLENE	5.0	9.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	66	%
TOLUENE-D8	(75 - 128 %)	87	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	84	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD135N-SC-B-1

Date Sampled : 12/11/07 10:26 **Order #:** 1057484 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 57.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.16			Dry Weight
ACETONE	20	190	UG/KG
BENZENE	5.0	10 U	UG/KG
BROMOCHLOROMETHANE	5.0	10 U	UG/KG
BROMODICHLOROMETHANE	5.0	10 U	UG/KG
BROMOFORM	5.0	10 U	UG/KG
BROMOMETHANE	5.0	10 U	UG/KG
2-BUTANONE (MEK)	10	44	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	10 U	UG/KG
CARBON DISULFIDE	10	2.1 J	UG/KG
CARBON TETRACHLORIDE	5.0	10 U	UG/KG
CHLOROBENZENE	5.0	11	UG/KG
CHLOROETHANE	10	20 U	UG/KG
CHLOROFORM	5.0	10 U	UG/KG
CHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	10 UJ	UG/KG
CYCLOHEXANE	5.0	10 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMOETHANE	5.0	10 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10 UJ	UG/KG
1,4-DICHLOROBENZENE	5.0	10 U	UG/KG
1,2-DICHLOROBENZENE	5.0	10 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHANE	5.0	10 U	UG/KG
1,2-DICHLOROETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHENE	5.0	10 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
1,2-DICHLOROPROPANE	5.0	10 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
1,4-DIOXANE	100	810 ~~200~~ UJ	UG/KG
ETHYLBENZENE	5.0	10 U	UG/KG
2-HEXANONE	10	20 U	UG/KG
ISOPROPYLBENZENE	5.0	10 U	UG/KG
METHYL ACETATE	10	20 U	UG/KG
METHYLCYCLOHEXANE	5.0	10 U	UG/KG
METHYLENE CHLORIDE	5.0	10 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/KG
STYRENE	5.0	10 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	10 UJ	UG/KG
TETRACHLOROETHENE	5.0	10 U	UG/KG
TOLUENE	5.0	10 ~~0.74 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	10 UJ	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	10 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD135N-SC-B-1

Date Sampled : 12/11/07 10:26 **Order #:** 1057484 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 57.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.16			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/KG
TRICHLOROETHENE	5.0	10 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	10 U	UG/KG
VINYL CHLORIDE	5.0	10 U	UG/KG
O-XYLENE	5.0	10 U	UG/KG
M+P-XYLENE	5.0	10 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	64	%
TOLUENE-D8	(75 - 128 %)	88	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	86	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD135N-SC-B-1

Date Sampled : 12/11/07 10:26 **Order #:** 1057484 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 57.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.18			Dry Weight
ACETONE	20	280	UG/KG
BENZENE	5.0	10 U	UG/KG
BROMOCHLOROMETHANE	5.0	10 U	UG/KG
BROMODICHLOROMETHANE	5.0	10 U	UG/KG
BROMOFORM	5.0	10 U	UG/KG
BROMOMETHANE	5.0	10 U	UG/KG
2-BUTANONE (MEK)	10	67	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	10 U	UG/KG
CARBON DISULFIDE	10	2.6 J	UG/KG
CARBON TETRACHLORIDE	5.0	10 U	UG/KG
CHLOROBENZENE	5.0	11	UG/KG
CHLOROETHANE	10	21 U	UG/KG
CHLOROFORM	5.0	10 U	UG/KG
CHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	10 U	UG/KG
CYCLOHEXANE	5.0	10 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMOETHANE	5.0	10 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10 U	UG/KG
1,4-DICHLOROBENZENE	5.0	10 U	UG/KG
1,2-DICHLOROBENZENE	5.0	10 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHANE	5.0	10 U	UG/KG
1,2-DICHLOROETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHENE	5.0	10 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
1,2-DICHLOROPROPANE	5.0	10 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
1,4-DIOXANE	100	830 ~~210~~ UJ	UG/KG
ETHYLBENZENE	5.0	10 U	UG/KG
2-HEXANONE	10	21 U	UG/KG
ISOPROPYLBENZENE	5.0	10 U	UG/KG
METHYL ACETATE	10	21 U	UG/KG
METHYLCYCLOHEXANE	5.0	10 U	UG/KG
METHYLENE CHLORIDE	5.0	10 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	21 U	UG/KG
STYRENE	5.0	10 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/KG
TETRACHLOROETHENE	5.0	10 U	UG/KG
TOLUENE	5.0	10 ~~0.82 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	10 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	10 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD135N-SC-B-1

Date Sampled : 12/11/07 10:26 **Order #:** 1057484 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 57.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.18			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/KG
TRICHLOROETHENE	5.0	10 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	10 U	UG/KG
VINYL CHLORIDE	5.0	10 U	UG/KG
O-XYLENE	5.0	10 U	UG/KG
M+P-XYLENE	5.0	10 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	66	%
TOLUENE-D8	(75 - 128 %)	87	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	87	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-C-1

Date Sampled : 12/11/07 13:19 **Order #:** 1057974 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 85.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.04			Dry Weight
ACETONE	20	40 U	UG/KG
BENZENE	5.0	0.65 J	UG/KG
BROMOCHLOROMETHANE	5.0	6.1 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.1 U	UG/KG
BROMOFORM	5.0	6.1 U	UG/KG
BROMOMETHANE	5.0	6.1 U	UG/KG
2-BUTANONE (MEK)	10	4.9 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.1 U	UG/KG
CARBON DISULFIDE	10	0.69 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.1 U	UG/KG
CHLOROBENZENE	5.0	30	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	6.1 U	UG/KG
CHLOROMETHANE	5.0	6.1 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.1 U	UG/KG
CYCLOHEXANE	5.0	6.1 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.1 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.1 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.1 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.1 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.1 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.1 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.1 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.1 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.1 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.1 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.1 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.1 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.1 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.1 U	UG/KG
1,4-DIOXANE	100	490 ~~120~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.1 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	6.1 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.1 U	UG/KG
METHYLENE CHLORIDE	5.0	6.1 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	6.1 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.1 U	UG/KG
TETRACHLOROETHENE	5.0	6.1 U	UG/KG
TOLUENE	5.0	6.1 ~~0.81 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.1 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.1 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-C-1

Date Sampled : 12/11/07 13:19 **Order #:** 1057974 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 85.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.04			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.1 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.1 U	UG/KG
TRICHLOROETHENE	5.0	6.1 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.1 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.1 U	UG/KG
VINYL CHLORIDE	5.0	6.1 U	UG/KG
O-XYLENE	5.0	6.1 U	UG/KG
M+P-XYLENE	5.0	6.1 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	89	%
TOLUENE-D8	(75 - 128 %)	91	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	85	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-D-1

Date Sampled : 12/11/07 13:19 **Order #:** 1057975 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 82.0

DATE ANALYZED : 12/18/07
ANALYTICAL DILUTION: 1.09

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	26 ~~23 J~~ UJ	UG/KG
BENZENE	5.0	6.6 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.6 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.6 U	UG/KG
BROMOFORM	5.0	6.6 U	UG/KG
BROMOMETHANE	5.0	6.6 U	UG/KG
2-BUTANONE (MEK)	10	2.0 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.6 U	UG/KG
CARBON DISULFIDE	10	0.43 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.6 U	UG/KG
CHLOROBENZENE	5.0	0.41 J	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.6 U	UG/KG
CHLOROMETHANE	5.0	6.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.6 U	UG/KG
CYCLOHEXANE	5.0	6.6 UJ	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.6 UJ	UG/KG
1,1-DICHLOROETHANE	5.0	6.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.6 U	UG/KG
1,4-DIOXANE	100	530 ~~130~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.6 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	6.6 U	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.6 UJ	UG/KG
METHYLENE CHLORIDE	5.0	6.6 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.6 U	UG/KG
TETRACHLOROETHENE	5.0	6.6 U	UG/KG
TOLUENE	5.0	6.6 ~~0.50 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.6 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.6 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-D-1

Date Sampled : 12/11/07 13:19 **Order #:** 1057975 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 82.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.09			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.6 U	UG/KG
TRICHLOROETHENE	5.0	6.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.6 U	UG/KG
VINYL CHLORIDE	5.0	6.6 U	UG/KG
O-XYLENE	5.0	6.6 U	UG/KG
M+P-XYLENE	5.0	6.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	86	%
TOLUENE-D8	(75 - 128 %)	92	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	82	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-E-1

Date Sampled : 12/11/07 13:19 **Order #:** 1057976 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 78.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.51			Dry Weight
ACETONE	20	96 U	UG/KG
BENZENE	5.0	9.6 U	UG/KG
BROMOCHLOROMETHANE	5.0	9.6 U	UG/KG
BROMODICHLOROMETHANE	5.0	9.6 U	UG/KG
BROMOFORM	5.0	9.6 U	UG/KG
BROMOMETHANE	5.0	9.6 U	UG/KG
2-BUTANONE (MEK)	10	17 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	9.6 U	UG/KG
CARBON DISULFIDE	10	1.7 J	UG/KG
CARBON TETRACHLORIDE	5.0	9.6 U	UG/KG
CHLOROBENZENE	5.0	1.1 J	UG/KG
CHLOROETHANE	10	19 U	UG/KG
CHLOROFORM	5.0	9.6 U	UG/KG
CHLOROMETHANE	5.0	9.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	9.6 U	UG/KG
CYCLOHEXANE	5.0	9.6 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	9.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	9.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	9.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	9.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	9.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	9.6 U	UG/KG
1,1-DICHLOROETHANE	5.0	9.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	9.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	9.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	9.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	9.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	9.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	9.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	9.6 U	UG/KG
1,4-DIOXANE	100	770 ~~190~~ UJ	UG/KG
ETHYLBENZENE	5.0	9.6 U	UG/KG
2-HEXANONE	10	19 U	UG/KG
ISOPROPYLBENZENE	5.0	9.6 U	UG/KG
METHYL ACETATE	10	19 U	UG/KG
METHYLCYCLOHEXANE	5.0	9.6 U	UG/KG
METHYLENE CHLORIDE	5.0	9.6 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	19 U	UG/KG
STYRENE	5.0	9.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	9.6 U	UG/KG
TETRACHLOROETHENE	5.0	9.6 U	UG/KG
TOLUENE	5.0	9.6 ~~0.79 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	9.6 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	9.6 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-E-1

Date Sampled : 12/11/07 13:19 **Order #:** 1057976 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 78.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.51			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	9.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	9.6 U	UG/KG
TRICHLOROETHENE	5.0	9.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	9.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	9.6 U	UG/KG
VINYL CHLORIDE	5.0	9.6 U	UG/KG
O-XYLENE	5.0	9.6 U	UG/KG
M+P-XYLENE	5.0	9.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	81	%
TOLUENE-D8	(75 - 128 %)	92	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	89	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-F-1

Date Sampled : 12/11/07 13:19 **Order #:** 1057977 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 79.0

DATE ANALYZED : 12/18/07
ANALYTICAL DILUTION: 1.08

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	32 U	UG/KG
BENZENE	5.0	6.8 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.8 U	UG/KG
BROMOFORM	5.0	6.8 U	UG/KG
BROMOMETHANE	5.0	6.8 U	UG/KG
2-BUTANONE (MEK)	10	3.9 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.8 U	UG/KG
CARBON DISULFIDE	10	0.87 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.8 U	UG/KG
CHLOROBENZENE	5.0	1.2 J	UG/KG
CHLOROETHANE	10	14 U	UG/KG
CHLOROFORM	5.0	6.8 U	UG/KG
CHLOROMETHANE	5.0	6.8 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.8 U	UG/KG
CYCLOHEXANE	5.0	6.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.8 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.8 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.8 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.8 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.8 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.8 U	UG/KG
1,4-DIOXANE	100	550 ~~140~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.8 U	UG/KG
2-HEXANONE	10	14 U	UG/KG
ISOPROPYLBENZENE	5.0	6.8 U	UG/KG
METHYL ACETATE	10	14 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.8 U	UG/KG
METHYLENE CHLORIDE	5.0	6.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	14 U	UG/KG
STYRENE	5.0	6.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.8 U	UG/KG
TETRACHLOROETHENE	5.0	6.8 U	UG/KG
TOLUENE	5.0	6.8 ~~0.78 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.8 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.8 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-F-1

Date Sampled : 12/11/07 13:19 **Order #:** 1057977 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741308 **Percent Solid:** 79.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.08			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.8 U	UG/KG
TRICHLOROETHENE	5.0	6.8 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.8 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.8 U	UG/KG
VINYL CHLORIDE	5.0	6.8 U	UG/KG
O-XYLENE	5.0	6.8 U	UG/KG
M+P-XYLENE	5.0	6.8 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	84	%
TOLUENE-D8	(75 - 128 %)	90	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	87	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : TRIP BLANK 2

Date Sampled : 12/11/07 09:45 **Order #:** 1058179 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741308 **Analytical Run** 155273

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 U	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 UJ	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 UJ	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : TRIP BLANK 2

Date Sampled : 12/11/07 09:45 **Order #:** 1058179 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741308 **Analytical Run** 155273

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	97	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : TRIP BLANK 10

Date Sampled : 12/11/07 09:45 **Order #:** 1058187 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741308 **Analytical Run** 155273

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 U	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 UJ	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 UJ	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : TRIP BLANK 10

Date Sampled : 12/11/07 09:45 **Order #:** 1058187 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741308 **Analytical Run** 155273

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	100	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD-EB1-SC-B-3

Date Sampled : 12/11/07 12:45 **Order #:** 1057492 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741308 **Analytical Run** 155273

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.8 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 UJ	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	0.70 J	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 UJ	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD-EB1-SC-B-3

Date Sampled : 12/11/07 12:45 **Order #:** 1057492 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741308 **Analytical Run** 155273

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	99	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	100	%

ENSR
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Memorandum

Date: February 29, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation
Inorganic Analyses
Subsurficial Sediment Sampling, December 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2741308

Distribution: L. Herberich/Westford

00760-171-525 File
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SUMMARY

Limited validation was performed on the data for 12 sediment samples and one aqueous equipment blank analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 7470A, 7471, and 7740 and/or total organic carbon (TOC) according to the Lloyd Kahn method. The samples were collected at the BASF Site in Rensselaer, NY on December 11, 2007 and submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741308.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD032N-SC-B-1	04SD056N-SC-B-1
04SD056N-SC-B-2 (Field duplicate of 04SD056N-SC-B-1)	04SD080N-SC-B-1
04SD082N-SC-B-1	04SD085N-SC-B-1
04SD098N-SC-B-1	04SD135N-SC-B-1

ENSR
2 Technology Park Drive, Westford, Massachusetts, 01886-3140
T 978.589.3000 F 978.589.3100 www.ensr.aecom.com

Sample IDs	
04SD117F-SC-C-1	04SD117N-SC-D-1
04SD117F-SC-E-1	04SD117F-SC-F-1
04SD-EB1-SC-B-3 (equipment blank)	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were digested and/or analyzed within the method and QAPP specified holding times.

Calibrations

TAL Metals

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the

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laboratory's reporting limit (RL) with the exceptions of barium which was spiked at 10x the RL and antimony which was spiked at 6x the RL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes with the exception of lead. The following table summarizes the standard recovery that exceeded the QC acceptance criteria and the associated samples.

Date Analyzed	Standard	Analyte	%R	True Value CRI
1/05/08	CRI2	Lead	135	10 µg/L
Associated Samples: All sediment samples in this data set.				

Sample results were qualified as follows:

- If the %R was >130% but <180%, and the positive sample result was < 2x the concentration of the check standard, then the positive result was qualified as estimated (J).
- If the %R was >130% but <180%, then the nondetect result was accepted unqualified.

TOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

TAL Metals

Target analytes were not detected in the laboratory method blanks, in the initial and continuing calibration blanks (ICBs/CCBs), or in the equipment blank (04SD-EB1-SC-B-3) associated with all samples in this sample set.

TOC

An equipment blank was not submitted with the samples in this sample set. No validation action was taken on this basis.

TOC was not detected in the laboratory method blank or in the ICB/CCBs associated with all samples in this sample set.

ICP Interference Check Sample Results

TAL Metals

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

MS Results

TAL Metals

MS analyses were performed on samples 04SD085N-SC-B-1 and 04SD117F-SC-D-1 for all analytes in association with the sediment samples in this data set. With the following exceptions, the %Rs of the spiked target analytes were all within the QC acceptance criteria for sample results that were <4x the amount spiked.

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04SD085N-SC-B-1			
Analyte	**MS %R**	**QC Acceptance Range**	**Actions (Detects/Nondetects)**
Antimony	74	75-125%	Estimate J/UJ
Copper	139	75-125%	Estimate J/Accept
Associated Samples: 04SD032N-SC-B-1, 04SD056N-SC-B-1, 04SD056N-SC-B-2, 04SD080N-SC-B-1, 04SD082N-SC-B-1, 04SD085N-SC-B-1, 04SD098N-SC-B-1, and 04SD135N-SC-B-1			

04SD117F-SC-D-1			
Analyte	**MS %R**	**QC Acceptance Range**	**Actions (Detects/Nondetects)**
Copper	138	75-125%	Estimate J/Accept
Associated Samples: 04SD117F-SC-C-1, 04SD117F-SC-D-1, 04SD117F-SC-E-1, and 04SD117F-SC-F-1			

The ICP post-digestion spikes (PDS) were performed on samples 04SD085N-SC-B-1 and 04SD117F-SC-D-1 for all analytes except selenium and mercury. The %Rs of the post-digestion spike were within the QC acceptance criteria for sample results that were <4x the amount spiked.

The following samples did not meet PDS recovery criteria of 85-115% for the graphite furnace atomic absorption analyses of selenium. It should be noted that the laboratory flagged the nondetect results for selenium in all samples except sample 04SD082N-SC-B-1 with a "W" due to a low spike recovery when the sample absorbance was <50%. The "W" flag was crossed-off during validation and replaced with a "UJ" as indicated in the table below. The laboratory was contacted regarding the missing "W" qualifier on the Form I for sample 04SD082N-SC-B-1. The laboratory resubmitted a corrected Form I for this sample.

Sample ID	PDS %R	Action (Nondetects)
04SD056N-SC-B-1	67	UJ
04SD056N-SC-B-2	80	UJ
04SD080N-SC-B-1	82	UJ
04SD082N-SC-B-1	76	UJ
04SD098N-SC-B-1	80	UJ
04SD135N-SC-B-1	81	UJ
04SD117F-SC-C-1	80	UJ
04SD117F-SC-D-1	79	UJ
04SD117F-SC-E-1	76	UJ
04SD117F-SC-F-1	75	UJ

TOC

MS analyses were performed on samples 04SD085N-SC-B-1 and 04SD117F-SC-D-1 from this sample set. The %Rs of TOC were within the QC acceptance criteria.

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Laboratory Duplicate Results

TAL Metals

Laboratory duplicate analyses were performed on samples 04SD085N-SC-B-1 and 04SD117F-SC-D-1. The relative percent differences (RPDs) met the QC acceptance criteria for all analytes.

TOC

Laboratory duplicate analyses were performed on samples 04SD085N-SC-B-1 and 04SD117F-SC-D-1. The RPDs met the QC acceptance criteria for TOC.

Field Duplicate Results

TAL Metals

Samples 04SD056N-SC-B-1/04SD056N-SC-B-2 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes.

Analyte	04SD056N-SC-B-1 (mg/Kg)	04SD056N-SC-B-2 (mg/Kg)	RPD
Aluminum	8790	9550	8
Arsenic	18.4	30.3	49
Barium	99.6	97.9	2
Cadmium	6.4	1.5	124
Calcium	7470	5520	30
Chromium	145	98	39
Cobalt	7.4	8.3	11
Copper	98.8	76.3	26
Iron	164000	21000	25
Lead	174	107	48
Magnesium	4060	4690	14
Manganese	301	407	30
Mercury	0.99	1.0	1
Nickel	19.2	23.4	20
Potassium	1170	1370	16
Sodium	132 U	170	NC
Vanadium	18.3	17.6	4
Zinc	339	260	26
Criteria: RPD ≤35% if both results are >5x SQL.			

NC-Not calculable due to a nondetect result in the original or duplicate sample

Results for samples 04SD056N-SC-B-1 and 04SD056N-SC-B-2 were qualified as follows.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.

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- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

TOC

Samples 04SD056N-SC-B-1/04SD056N-SC-B-2 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPD of TOC, which was within the acceptance criteria.

Compound	04SD056N-SC-B-1 (mg/Kg)	04SD056N-SC-B-2 (mg/Kg)	RPD
TOC	18900	20300	7
Criteria: RPD ≤35% if both results are >5x RL.			

LCS Results

TAL Metals

The LCSs associated with the sediment samples met the vendor's QC acceptance limits.

The LCSs associated with the aqueous equipment blank sample met the 80-120% recovery criteria.

TOC

The LCS associated with the sediment samples met the laboratory QC acceptance limits.

ICP Serial Dilution Results

TAL Metals

Serial dilution analyses were performed on sediment samples 04SD085N-SC-B-1 and 04SD117F-SC-D-1 for all ICP metals; and on aqueous equipment blank sample 04SD-EB1-SC-B-3 for all ICP metals in association with all samples in this data set. All analytes met the percent difference (%D) QC acceptance criteria in the serial dilution of samples 04SD085N-SC-B-1, 04SD117F-SC-D-1, and 04SD-EB1-SC-B-3.

Sample Quantitation/Detection Limit Results

The percent (%) solids content for all samples was greater than 50% with the following exceptions: 04SD082N-SC-B-1 (45.0%) and 04SD085N-SC-B-1 (45.4%). The positive and nondetect results for TAL metals in samples 04SD082-SC-B-1 and 04SD085N-SC-B-1 were qualified as estimated (J, UJ).

TAL Metals

All metals results were reported to the sample quantitation limit (SQL). Due to software limitations, metal results greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantitation limits were achieved for all metals except sodium.

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The following table summarizes the SQL that exceeded the project-specific quantitation limit listed in the QAPP. No validation action was taken other than to note this discrepancy.

Analyte	Laboratory SQL (mg/Kg)	Project QL (mg/Kg)
Sodium	100	1.0

The following table summarizes the samples that were analyzed at dilutions due to the elevated concentration of these analytes in the respective samples. Sample results were adjusted accordingly.

Sample ID	Analyte	Dilution
04SD056N-SC-B-1	Zinc	5x
04SD080N-SC-B-1	Mercury	5x
	Zinc	5x
04SD082N-SC-B-1	Zinc	5x
04SD085N-SC-B-1	Zinc	5x

TOC

Due to software limitation, the TOC SQL reported for all surface sediment samples was 300 mg/Kg even though the initial weights varied on a sample-by-sample basis. No actions were taken other than to note this discrepancy.

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD032N-SC-B-1

ntract: R2741308

Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057477

vel (low/med): LOW Date Received: 12/13/07

olids: 60.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11500			P
7440-36-0	Antimony	1.6	UJ	N	P
7440-38-2	Arsenic	11.1			P
7440-39-3	Barium	132			P
7440-41-7	Beryllium	0.81	U		P
7440-43-9	Cadmium	1.6			P
7440-70-2	Calcium	6440			P
7440-47-3	Chromium	75.2			P
7440-48-4	Cobalt	11.4			P
7440-50-8	Copper	95.3	J	N	P
7439-89-6	Iron	25400			P
7439-92-1	Lead	194		N	P
7439-95-4	Magnesium	6150			P
7439-96-5	Manganese	413			P
7439-97-6	Mercury	1.5		N	CV
7440-02-0	Nickel	23.0			P
7440-09-7	Potassium	1570			P
7782-49-2	Selenium	0.82	U		F
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium	259			P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	19.7			P
7440-66-6	Zinc	281			P

or Before: BROWN Clarity Before: Texture: MEDIUM

or After: YELLOW Clarity After: CLEAR Artifacts:

ments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD056N-SC-B-1

ontract: R2741308

ab Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057478

evel (low/med): LOW Date Received: 12/13/07

Solids: 73.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8790			P
7440-36-0	Antimony	1.3	UJ	N	P
7440-38-2	Arsenic	18.4	J		P
7440-39-3	Barium	99.6			P
7440-41-7	Beryllium	0.66	U		P
7440-43-9	Cadmium	6.4	J		P
7440-70-2	Calcium	7470		+	P
7440-47-3	Chromium	145	J		P
7440-48-4	Cobalt	7.4			P
7440-50-8	Copper	98.8	J	*N	P
7439-89-6	Iron	16400			P
7439-92-1	Lead	173	J	N	P
7439-95-4	Magnesium	4060			P
7439-96-5	Manganese	301			P
7439-97-6	Mercury	0.99		N	CV
7440-02-0	Nickel	19.2			P
7440-09-7	Potassium	1170			P
7782-49-2	Selenium	0.66	UJ	W	P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	132	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	18.3			P
7440-66-6	Zinc	339			P

olor Before: BROWN Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD056N-SC-B-2

ontract: R2741308
ab Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E
atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057479
evel (low/med): LOW Date Received: 12/13/07
Solids: 71.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9550			P
7440-36-0	Antimony	1.4	U J	N	P
7440-38-2	Arsenic	30.3	J		P
7440-39-3	Barium	97.9			P
7440-41-7	Beryllium	0.69	U		P
7440-43-9	Cadmium	1.5	J		P
7440-70-2	Calcium	5520			P
7440-47-3	Chromium	98.0	J		P
7440-48-4	Cobalt	8.3			P
7440-50-8	Copper	76.3	J	N	P
7439-89-6	Iron	21000			P
7439-92-1	Lead	107	J	N	P
7439-95-4	Magnesium	4690			P
7439-96-5	Manganese	407			P
7439-97-6	Mercury	1.0		N	CV
7440-02-0	Nickel	23.4			P
7440-09-7	Potassium	1370			P
7782-49-2	Selenium	0.70	U J	N	F
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	170			P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	17.6			P
7440-66-6	Zinc	260			P

olor Before: BROWN Clarity Before: Texture: MEDIUM
olor After: YELLOW Clarity After: CLEAR Artifacts:
omments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD080N-SC-B-1

Contract: R2741308

Lab Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057480

Level (low/med): LOW Date Received: 12/13/07

% Solids: 63.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10300			P
7440-36-0	Antimony	4.7	J	N	P
7440-38-2	Arsenic	22.3			P
7440-39-3	Barium	148			P
7440-41-7	Beryllium	0.76	U		P
7440-43-9	Cadmium	32.5			P
7440-70-2	Calcium	3950		N	P
7440-47-3	Chromium	312			P
7440-48-4	Cobalt	9.7			P
7440-50-8	Copper	264	J	*N	P
7439-89-6	Iron	18500			P
7439-92-1	Lead	337		N	P
7439-95-4	Magnesium	3960			P
7439-96-5	Manganese	252			P
7439-97-6	Mercury	5.2		N	CV
7440-02-0	Nickel	30.7			P
7440-09-7	Potassium	1260			P
7782-49-2	Selenium	0.75	UJ	N	F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	159			P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	36.7			P
7440-66-6	Zinc	454			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD082N-SC-B-1

ntract: R2741308
b Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E
trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057481
vel (low/med): LOW Date Received: 12/13/07
Solids: 45.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17500	J		P
7440-36-0	Antimony	4.3		N	P
7440-38-2	Arsenic	14.0			P
7440-39-3	Barium	282			P
7440-41-7	Beryllium	1.1	U J		P
7440-43-9	Cadmium	26.6	J		P
7440-70-2	Calcium	9170		*	P
7440-47-3	Chromium	524			P
7440-48-4	Cobalt	13.3			P
7440-50-8	Copper	253		*N	P
7439-89-6	Iron	30300			P
~~7439-92-1~~	~~Lead~~	436		N	P
7439-95-4	Magnesium	7270			P
7439-96-5	Manganese	607			P
7439-97-6	Mercury	3.1		N	CV
7440-02-0	Nickel	40.5			P
7440-09-7	Potassium	2380			P
7782-49-2	Selenium	1.1	U J		F
7440-22-4	Silver	3.0	J		P
7440-23-5	Sodium	220	U J		P
7440-28-0	Thallium	2.2	U J		P
7440-62-2	Vanadium	45.5	J		P
7440-66-6	Zinc	651	J		P

lor Before: BROWN Clarity Before: Texture: MEDIUM
lor After: YELLOW Clarity After: CLEAR Artifacts:
mments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD085N-SC-B-1

itract: R2741308

) Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E

:rix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057482

'el (low/med): LOW Date Received: 12/13/07

olids: 45.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18300	J		P
7440-36-0	Antimony	4.1	J	N	P
7440-38-2	Arsenic	14.8	J		P
7440-39-3	Barium	257	J		P
7440-41-7	Beryllium	1.1	U J		P
7440-43-9	Cadmium	16.5	J		P
7440-70-2	Calcium	9680		N	P
7440-47-3	Chromium	450			P
7440-48-4	Cobalt	14.5			P
7440-50-8	Copper	152		N	P
7439-89-6	Iron	30100			P
7439-92-1	Lead	528		N	P
7439-95-4	Magnesium	7760			P
7439-96-5	Manganese	788			P
7439-97-6	Mercury	1.5		N	CV
7440-02-0	Nickel	37.7			P
7440-09-7	Potassium	2320			P
7782-49-2	Selenium	1.1	U J		F
7440-22-4	Silver	2.2	U		P
7440-23-5	Sodium	220	U		P
7440-28-0	Thallium	2.2	U		P
7440-62-2	Vanadium	42.6	J		P
7440-66-6	Zinc	446	J		P

.or Before: BROWN Clarity Before: Texture: MEDIUM

.or After: YELLOW Clarity After: CLEAR Artifacts:

ments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD098N-SC-B-1

ntract: R2741308

b Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057483

vel (low/med): LOW Date Received: 12/13/07

Solids: 56.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13100			P
7440-36-0	Antimony	1.7	U J	N	P
7440-38-2	Arsenic	7.2			P
7440-39-3	Barium	130			P
7440-41-7	Beryllium	0.87	U		P
7440-43-9	Cadmium	0.98			P
7440-70-2	Calcium	10000		N	P
7440-47-3	Chromium	49.1			P
7440-48-4	Cobalt	13.6			P
7440-50-8	Copper	65.2	J	*N	P
7439-89-6	Iron	28300			P
7439-92-1	Lead	65.1		*N	P
7439-95-4	Magnesium	6730			P
7439-96-5	Manganese	1340			P
7439-97-6	Mercury	0.31		N	CV
7440-02-0	Nickel	27.9			P
7440-09-7	Potassium	1830			P
7782-49-2	Selenium	0.87	U J	W	F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	175	U		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	23.6			P
7440-66-6	Zinc	199			P

lor Before: BROWN Clarity Before: Texture: MEDIUM

lor After: YELLOW Clarity After: CLEAR Artifacts:

mments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD135N-SC-B-1

ontract: R2741308

ab Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057484

evel (low/med): LOW Date Received: 12/13/07

Solids: 57.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11300			P
7440-36-0	Antimony	1.7	U J	N	P
7440-38-2	Arsenic	4.1			P
7440-39-3	Barium	100			P
7440-41-7	Beryllium	0.85	U		P
7440-43-9	Cadmium	0.85	U		P
7440-70-2	Calcium	8780		*	P
7440-47-3	Chromium	33.0			P
7440-48-4	Cobalt	11.3			P
7440-50-8	Copper	48.4	J	*N	P
7439-89-6	Iron	25000			P
7439-92-1	Lead	43.9		N	P
7439-95-4	Magnesium	6600			P
7439-96-5	Manganese	906			P
7439-97-6	Mercury	0.19		N	CV
7440-02-0	Nickel	23.9			P
7440-09-7	Potassium	1650			P
7782-49-2	Selenium	0.83	U J	W	F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	170	U		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	21.2			P
7440-66-6	Zinc	156			P

olor Before: BROWN Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD117F-SC-C-1

Contract: R2741308

Lab Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057974

Level (low/med): LOW Date Received: 12/13/07

% Solids: 85.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6920			P
7440-36-0	Antimony	1.1	U	N	P
7440-38-2	Arsenic	4.0			P
7440-39-3	Barium	32.8			P
7440-41-7	Beryllium	0.57	U		P
7440-43-9	Cadmium	0.57	U		P
7440-70-2	Calcium	4110		+	P
7440-47-3	Chromium	10.5			P
7440-48-4	Cobalt	5.7	U		P
7440-50-8	Copper	18.6	J	N	P
7439-89-6	Iron	18000			P
7439-92-1	Lead	15.1		N	P
7439-95-4	Magnesium	4140			P
7439-96-5	Manganese	242			P
7439-97-6	Mercury	0.04	U	N	CV
7440-02-0	Nickel	15.5			P
7440-09-7	Potassium	884			P
7782-49-2	Selenium	0.57	UJ	W	F
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	113	U		P
7440-28-0	Thallium	1.1	U		P
7440-62-2	Vanadium	12.7			P
7440-66-6	Zinc	60.9			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD117F-SC-D-1

ontract: R2741308
ab Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E
atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057975
evel (low/med): LOW Date Received: 12/13/07
Solids: 82.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6900			P
7440-36-0	Antimony	1.2	U	N	P
7440-38-2	Arsenic	3.1			P
7440-39-3	Barium	34.7			P
7440-41-7	Beryllium	0.61	U		P
7440-43-9	Cadmium	0.61	U		P
7440-70-2	Calcium	3500		N	P
7440-47-3	Chromium	12.5			P
7440-48-4	Cobalt	6.1			P
7440-50-8	Copper	12.7		N	P
7439-89-6	Iron	17300			P
7439-92-1	Lead	13.8		N	P
7439-95-4	Magnesium	4050			P
7439-96-5	Manganese	289			P
7439-97-6	Mercury	0.04	U	N	CV
7440-02-0	Nickel	14.1			P
7440-09-7	Potassium	943			P
7782-49-2	Selenium	0.61	U	N	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	122	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	10.7			P
7440-66-6	Zinc	83.0			P

lor Before: BLACK Clarity Before: Texture: COARSE
lor After: YELLOW Clarity After: CLEAR Artifacts:
mments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD117F-SC-E-1

Contract: R2741308
Lab Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E
Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057976
Level (low/med): LOW Date Received: 12/13/07
Solids: 78.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6570			P
7440-36-0	Antimony	1.2	U	N	P
7440-38-2	Arsenic	2.5			P
7440-39-3	Barium	36.7			P
7440-41-7	Beryllium	0.62	U		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	30400		N	P
7440-47-3	Chromium	13.8			P
7440-48-4	Cobalt	6.2	U		P
7440-50-8	Copper	15.1	J	N	P
7439-89-6	Iron	16500			P
7439-92-1	Lead	16.2		N	P
7439-95-4	Magnesium	3920			P
7439-96-5	Manganese	209			P
7439-97-6	Mercury	0.06		N	CV
7440-02-0	Nickel	13.3			P
7440-09-7	Potassium	1030			P
7782-49-2	Selenium	1.3	U	W	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	196			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	11.3			P
7440-66-6	Zinc	75.6			P

Color Before: BLACK Clarity Before: Texture: COARSE
Color After: YELLOW Clarity After: CLEAR Artifacts:
Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD117F-SC-F-1

Contract: R2741308

Lab Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-F

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057977

Level (low/med): LOW Date Received: 12/13/07

% Solids: 79.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7250			P
7440-36-0	Antimony	1.2	U	N	P
7440-38-2	Arsenic	3.5			P
7440-39-3	Barium	37.2			P
7440-41-7	Beryllium	0.62	U		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	6820		*	P
7440-47-3	Chromium	14.7			P
7440-48-4	Cobalt	6.2	U		P
7440-50-8	Copper	17.4	J	*N	P
7439-89-6	Iron	16900			P
7439-92-1	Lead	19.7		N	P
7439-95-4	Magnesium	3970			P
7439-96-5	Manganese	249			P
7439-97-6	Mercury	0.05		N	CV
7440-02-0	Nickel	15.2			P
7440-09-7	Potassium	1110			P
7782-49-2	Selenium	0.63	U J	W	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	124	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	11.7			P
7440-66-6	Zinc	77.3			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD-EB1-SC-B-3

ontract: R2741308

ab Code: Case No.: SAS No.: SDG NO.: 04SD032N-SC-E

atrix (soil/water): WATER Lab Sample ID: 1057492

evel (low/med): LOW Date Received: 12/13/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

olor Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

omments:

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD032N-SC-B-1

Date Sampled : 12/11/07 09:00 Order #: 1057477 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	60.5	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	45000	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD056N-SC-B-1

Date Sampled : 12/11/07 09:56 Order #: 1057478 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	73.8	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	18900	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD056N-SC-B-2

Date Sampled : 12/11/07 09:56 Order #: 1057479 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	71.1	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	20300	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD080N-SC-B-1

Date Sampled : 12/11/07 09:22 Order #: 1057480 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	63.3	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	47300	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD082N-SC-B-1

Date Sampled : 12/11/07 09:36 Order #: 1057481 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	45.0	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	59700 J	MG/KG	12/17/07	08:30	1.0

LK 2/7/08

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD085N-SC-B-1

Date Sampled : 12/11/07 09:43 Order #: 1057482 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	45.4	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	46700	MG/KG	12/18/07	08:20	1.0

LK
2/7/08

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD098N-SC-B-1

Date Sampled : 12/11/07 10:16 Order #: 1057483 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	56.1	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	25300	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD135N-SC-B-1

Date Sampled : 12/11/07 10:26 Order #: 1057484 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	57.1	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	17100	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-C-1

Date Sampled : 12/11/07 13:19 Order #: 1057974 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	85.6	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	1860	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-D-1

Date Sampled : 12/11/07 13:19 Order #: 1057975 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	82.0	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2640	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-E-1

Date Sampled : 12/11/07 13:19 Order #: 1057976 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	78.5	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3920	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - SUB/DEEP SUB SURFICIAL
Client Sample ID : 04SD117F-SC-F-1

Date Sampled : 12/11/07 13:19 Order #: 1057977 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741308

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	79.0	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3850	MG/KG	12/18/07	08:20	1.0

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Memorandum

Date: February 8, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation, VOC Analysis
Subsurficial Sediment Sampling, December 2007
BASF Rensselaer Site, NY
CAS Submission # R2741303

Distribution: L. Herberich/Westford

00760-171-525 File
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SUMMARY

Limited validation was performed on the data for 15 sediment samples, two equipment blanks, and two trip blanks analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The sediment samples were collected at the BASF site in Rensselaer, NY, on December 12, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741303.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data appear valid as reported and may be used for decision making purposes. Selected data points in one sediment sample were rejected due to very low internal standard area recoveries. Selected other data points were qualified as undetected (U) due to blank contamination or were qualified due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD116N-SC-C-1	04SD116N-SC-D-1
04SD116N-SC-D-2 (Field duplicate of 04SD116N-SC-D-1)	04SD116N-SC-E-1
04SD116N-SC-F-1	04SD121N-SC-C-1
04SD121N-SC-D-1	04SD121N-SC-D-2 (Field duplicate of 04SD121N-SC-D-1)

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Sample IDs	
04SD121N-SC-E-1	04SD121N-SC-F-1
04SD121N-SC-G-1	04SD122N-SC-E-1
04SD122N-SC-E-2 (Field duplicate of 04SD122N-SC-E-1)	04SD122N-SC-F-1
04SD122N-SC-G-1	04SD-EB5-SC-3 (equipment blank)
04SD-EB6-SC-3 (equipment blank)	Trip Blank 8
Trip Blank 9	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard recoveries
- Sample quantitation/reporting limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancies were noted.

- Two of three VOC vials for sample Trip Blank 8 were received with large air bubbles in them. The laboratory performed the VOC analysis for this sample on the remaining VOC vial which did not contain air bubbles. No validation action was taken on this basis.

- Sample Trip Blank 9 was received with one VOC vial broken and a second VOC vial that contained a large air bubble. The laboratory performed the VOC analysis for this sample on the remaining VOC vial which did not contain air bubbles. No validation action was taken on this basis.

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Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were analyzed within the method-specified holding time.

GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations (IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 10/02/07 (MSVOA7)	1,4-Dioxane	0.006	J/UJ*
Associated samples: 04SD116N-SC-C-1, 04SD116N-SC-D-1, 04SD116N-SC-D-2, 04SD116N-SC-E-1, 04SD122N-SC-E-1, 04SD122N-SC-E-2, 04SD-EB5-SC-3, 04SD-EB6-SC-3, Trip Blank 8, and Trip Blank 9			
IC 10/03/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 04SD116N-SC-F-1, 04SD121N-SC-C-1, 04SD121N-SC-D-1, 04SD121N-SC-D-2, 04SD121N-SC-E-1, 04SD121N-SC-F-1, 04SD121N-SC-G-1, 04SD122N-SC-F-1, and 04SD122N-SC-G-1			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			

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Calibration (Instrument ID)	Compound	RRF	%D	Actions (Detects/Nondetects)
CC 12/17/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated samples: 04SD121N-SC-E-1 and 04SD121N-SC-G-1				
CC 12/18/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated samples: 04SD121N-SC-C-1 and 04SD121N-SC-D-2				
CC 12/18/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
	Chloromethane	ok	22.9	J/UJ
Associated samples: 04SD116N-SC-F-1, 04SD121N-SC-D-1, 04SD121N-SC-F-1, and 04SD122N-SC-F-1				
CC 12/19/07 (MSVOA7)	1,4-Dioxane	0.005	ok	J/UJ*
	Trichloroethene	ok	24.3	J/UJ
	1,1,2,2-Tetrachloroethane	ok	29.9	J/UJ
Associated samples: 04SD116N-SC-C-1, 04SD116N-SC-D-1, 04SD116N-SC-D-2, 04SD116N-SC-E-1, 04SD-EB5-SC-3, 04SD-EB6-SC-3, Trip Blank 8, and Trip Blank 9				
CC 12/19/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated sample: 04SD122N-SC-G-1				
CC 12/20/07 (MSVOA7)	1,4-Dioxane	0.005	ok	J/UJ*
Associated samples: 04SD122N-SC-E-1 and 04SD122N-SC-E-2				
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.				

Laboratory Blanks/Equipment Blanks/Trip Blanks

Target analytes were not detected in the Trip Blank 9 associated with all samples in this data set. Several target compounds were detected in the laboratory method blanks, Trip Blank 8, and in the equipment blanks associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected and the associated samples. Note that contaminants detected in Trip Blank 8 were negated due to the method blank actions.

Blank type (lab ID)	Compound	Concentration (units)
Method (WAT BLK4)	Methylene chloride	0.31 J µg/L
Associated samples: 04SD-EB5-SC-3, 04SD-EB6-SC-3, Trip Blank 8, and Trip Blank 9		
Method (SOIL BLK1)	Methylene chloride	0.36 J µg/Kg
Associated samples: 04SD121N-SC-E-1 and 04SD121N-SC-G-1		
Method (SOIL BLK2)	Methylene chloride	0.38 J µg/Kg
	Toluene	0.44 J µg/Kg
Associated samples: 04SD121N-SC-C-1 and 04SD121N-SC-D-2		
Method (SOIL BLK3)	Methylene chloride	0.36 J µg/Kg
Associated samples: 04SD116N-SC-F-1, 04SD121N-SC-D-1, 04SD121N-SC-F-1, and 04SD122N-SC-F-1		
Method (SOIL BLK5)	Chlorobenzene	0.43 J µg/Kg
Associated sample: 04SD122N-SC-G-1		
04SD-EB6-SC-3 (equipment)	Acetone	1.9 J µg/L
Associated samples: All sediment samples in this data set.		

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Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	≤ RL	Report sample RL value with a U
		> RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			
RL (Reporting Limit) is equivalent to the lowest calibration standard			

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC detected	Detects	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			
RL (Reporting Limit) is equivalent to the lowest calibration standard			
TIC = Tentatively Identified Compound			

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Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses with the following exceptions.

Sample	%R DBFM	%R Tol-d8	%R BFB	Actions (Detects/Nondetects)
04SD116N-SC-F-1	ok	155	ok	Estimate (J)/Accept
04SD121N-SC-G-1	173	145	49	J/UJ
Note: Several nondetect results for sample 04SD121N-SC-G-1 were rejected (R) due to very low IS recoveries as noted below under **Internal Standards**.				
DBFM – Dibromofluoromethane Tol-d8 – Toluene-d8 BFB- Bromofluorobenzene				

The initial analysis of sample 04SD121N-SC-G-1 had two of four internal standard recoveries below 25%. The sample was re-analyzed and the recovery of all four internal standards fell below 25%. The initial analysis was reported by the validator since it exhibited higher internal standard recoveries.

Sample 04SD116N-SC-F-1 was analyzed as a low-level soil in the initial analysis and one of three surrogate recoveries exceeded the acceptance criteria. The laboratory reanalyzed this sample as a medium level analysis due to the high concentration of several target analytes in the low level analysis. All surrogate recoveries in the medium level analysis were within the acceptance criteria. The initial low level analysis of sample 04SD116N-SC-F-1 was reported by the validator while the positive results for benzene, chlorobenzene, and 1,4-dichlorobenzene were reported from the medium level analysis. Results reported from the low level analysis of sample 04SD116N-SC-F-1 were qualified as indicated above.

The laboratory noted in the case narrative that the VOC vials for samples 04SD116N-SC-F-1 and 04SD121N-SC-G-1 could have contained small particulate matter between the septum and the sealing lip of the vials. This particulate matter may have caused the purge gas to therefore leak from the vial during analysis of the samples thereby causing the poor surrogate recoveries and the low bias in the internal standard area recoveries.

MS/MSD Results

MS/MSD analyses were not performed on a sample from this sample set. No validation action was taken on this basis.

LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses with the following exceptions.

Compound	LCS %R	QC Limits %R	Actions (Detects/Nondetects)
Dichlorodifluoromethane	136	70-130	Estimate (J)/Accept result
Associated sample: 04SD122N-SC-G-1			
Dichlorodifluoromethane	141	70-130	Estimate (J)/Accept result
Associated samples: 04SD122N-SC-E-1 and 04SD122N-SC-E-2			

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Field Duplicate Results

Samples 04SD116N-SC-D-1/04SD116N-SC-D-2, 04SD121N-SC-D-1/04SD121N-SC-D-2, and 04SD122N-SC-E-1/04SD122N-SC-E-2 were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPDs of the detected compounds in field duplicate samples 04SD116N-SC-D-1 and 04SD116N-SC-D-2. It should be noted that sample 04SD116N-SC-D-1 was analyzed at a 770x dilution while field duplicate sample 04SD116N-SC-D-2 was analyzed at a 153x dilution resulting in significantly different RLs. Additionally, the RPDs for benzene, chlorobenzene, and several other target analytes were significantly above the RPD acceptance limit. It was the opinion of the validator to estimate (J, UJ) all positive and nondetect results in both samples due to the apparent non-homogeneity of the samples.

Compound	04SD116N-SC-D-1 (µg/Kg)	04SD116N-SC-D-2 (µg/Kg)	RPD
Benzene	180000	1800	196
2-Butanone	14000 U	230 J	NC
Chlorobenzene	4200000	42000	196
1,3-Dichlorobenzene	18000	1500 U	NC
1,4-Dichlorobenzene	57000	930 J	194
1,2-Dichlorobenzene	260000	1500 U	NC
Ethylbenzene	5300 J	320 J	177
Methyl acetate	14000 U	340 J	NC
Methylcyclohexane	1200 J	210 J	140
Methylene chloride	7100 U	110 J	NC
Toluene	55000	1500 U	NC
1,2,4-Trichlorobenzene	17000	1500 U	NC
1,2,3-Trichlorobenzene	3700 J	1500 U	NC
m+p-Xylene	17000	880 J	143
o-Xylene	4800 J	800 J	180
Criteria: RPD ≤50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			
NC-Not calculable due to a nondetect result in the original or duplicate sample			

The following table summarizes the RPDs of the detected compounds in field duplicate samples 04SD121N-SC-D-1 and 04SD121N-SC-D-2. The RPDs for 1,4-dichlorobenzene, 1,2-dichlorobenzene, isopropylbenzene, toluene, and m+p-xylene were not calculable (NC) due to a nondetect result in either the sample or the field duplicate sample. Precision for these compounds was deemed acceptable since the detected results in the either the sample or field duplicate sample were <5x the RL. The remaining RPDs met the acceptance criteria.

Compound	04SD121N-SC-D-1 (µg/Kg)	04SD121N-SC-D-2 (µg/Kg)	RPD
Acetone	470	390	19
Benzene	1.2 J	0.82 J	38
2-Butanone	120	100	18
Carbon disulfide	5.7 J	4.5 J	24

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Compound	04SD121N-SC-D-1 (µg/Kg)	04SD121N-SC-D-2 (µg/Kg)	RPD
Chlorobenzene	34	53	44
Cyclohexane	7.2 J	9.0 J	22
1,4-Dichlorobenzene	1.9 J	13 U	NC
1,2-Dichlorobenzene	11 J	13 U	NC
Isopropylbenzene	1.9 J	13 U	NC
Methylcyclohexane	76	90	17
Toluene	3.0 J	13 U	NC
m+p-Xylene	16 U	3.3 J	NC
o-Xylene	3.6 J	5.9 J	48
Criteria: RPD ≤50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			
NC-Not calculable due to a nondetect result in the original or duplicate sample			

The following table summarizes the RPDs of the detected compounds in field duplicate samples 04SD122N-SC-E-1 and 04SD122N-SC-E-2. The RPD for chlorobenzene exceeded the acceptance criteria. The positive results for chlorobenzene in samples 04SD122N-SC-E-1 and 04SD122N-SC-E-2 were therefore qualified as estimated (J). The RPD for benzene was NC due to a nondetect result in sample 04SD122N-SC-E-1. Precision for benzene was deemed acceptable since the detected result in the field duplicate sample was <5x the RL. Precision for o-xylene and m+p-xylene was deemed acceptable since the detected results were <5x the RL and the RPD criterion was doubled. The remaining RPDs met the acceptance criteria.

Compound	04SD122N-SC-E-1 (µg/Kg)	04SD122N-SC-E-2 (µg/Kg)	RPD
Benzene	2400 U	150 J	NC
2-Butanone	350 J	370 J	6
Chlorobenzene	18000	38000	71
1,3-Dichlorobenzene	1400 J	1900 J	30
1,4-Dichlorobenzene	5300	7600	36
1,2-Dichlorobenzene	330 J	270 J	20
Methyl acetate	380 J	460 J	19
Toluene	320 J	440 J	32
1,2,4-Trichlorobenzene	530 J	490 J	8
m+p-Xylene	610 J	1200 J	65
o-Xylene	190 J	330 J	54
Criteria: RPD ≤50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			
NC-Not calculable due to a nondetect result in the original or duplicate sample			

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Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses with the following exceptions.

Sample	Internal Standard Area %R			
	PFB	DFB	CBZ	DCB
04SD116N-SC-F-1	ok	ok	ok	44
04SD121N-SC-G-1	33	32	17	6
04SD121N-SC-D-2	ok	ok	ok	45
04SD122N-SC-G-1	ok	ok	ok	35
PFB – Pentafluorobenzene DFB – 1,4-Difluorobenzene CBZ – d5-Chlorobenzene DCB – d4-Dichlorobenzene				

Sample results were qualified as follows:

- If the internal standard area was ≥25% but <50%, positive and nondetect results for compounds quantitated with the noncompliant internal standard were qualified as estimated (J, UJ).
- If the internal standard area was <25%, positive results for compounds quantitated with the noncompliant internal standard were qualified as estimated (J) and nondetect results were rejected (R).

Samples 04SD121N-SC-G-1 and 04SD121N-SC-D-2 were reanalyzed by the laboratory. The reanalyses of these samples confirmed the initial low internal standard recoveries. The initial analyses of samples 04SD121N-SC-G-1 and 04SD121N-SC-D-2 were reported by the validator. Results were qualified as indicated.

Sample 04SD116N-SC-F-1 was reanalyzed as a medium level soil sample by the laboratory. The internal standard area recoveries in the medium level analysis of this sample was within the acceptance criteria. The low level analysis of this sample was reported by the validator in order to report the lowest possible RLs. Results from the low level analysis of samples 04SD116N-SC-F-1 were qualified as indicated.

The initial analysis of sample 04SD122N-SC-G-1 was analyzed after a sample containing high levels of target analytes resulting in carryover into the analysis of sample 04SD122N-SC-G-1. The results from the initial analysis of this sample were therefore not reported by the laboratory. The sample was reanalyzed and one of four internal standard areas (DCB) fell below the acceptance criteria. The laboratory did not have a third vial to analyze but did note in the case narrative that the initial analysis of this sample also had a low internal standard area recovery for DCB. Results were qualified as indicated.

Sample Quantitation/Reporting Limits

The percent (%) solids content for all samples was greater than 50% with the following exception: 04SD122N-SC-F-1 (49.2%). The positive and nondetect VOC results in this sample were qualified as estimated (J, UJ).

Samples 04SD116N-SC-C-1, 04SD116N-SC-D-2, 04SD122N-SC-E-1, 04SD122N-SC-E-2, and 04SD122N-SC-F-1 were all analyzed as medium level soil analyses due to the high concentration of target compounds present in the samples. RLs were adjusted accordingly. It should be noted that

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sample 04SD122N-SC-F-1 was also analyzed as a low level soil sample. Due to internal standard area nonconformances, the data validator chose to report the medium level analysis of this sample.

Samples 04SD116N-SC-D-1 and 04SD116N-SC-E-1 were both analyzed as medium level soil analyses with 5x dilutions due to the high concentration of target compounds present in the samples. Chlorobenzene exceeded the calibration range in the 5x dilutions of samples 04SD116N-SC-D-1 and 04SD116N-SC-E-1. Sample 04SD116N-SC-D-1 was reanalyzed as medium level soil sample with a dilution of 100x while sample 04SD116N-SC-E-1 was reanalyzed as medium level soil sample with a dilution of 10x. During data validation, the results for chlorobenzene from the medium level analyses with the higher dilutiuons were combined with the remaining results from the medium level analyses with the 5x dilutions in order to report all results within the calibration range while also reporting the lowest achievable RLs.

Sample 04SD116N-SC-F-1 was initially analyzed as a low level soil. The concentration of benzene, chlorobenzene and/or 1,4-dichlorobenzene exceeded the calibration range in the low level analysis of this sample. Sample 04SD116N-SC-F-1 was reanalyzed as a medium level soil sample with a 10x dilution. During data validation, the results for benzene, chlorobenzene and/or 1,4-dichlorobenzene from the medium level analyses were combined with the remaining results from the low level analyses in order to report all results within the calibration range while also reporting the lowest achievable RLs.

All VOCs, except trichloroethene and 1,4-dioxane, have RLs which are less than or equal to the project required detection limits when analyzed without dilution. In all cases where dilutions were performed or where sediment samples were analyzed as medium level soil samples, one or more VOCs exceeded the project required detection limits.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-C-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057924 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 50.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 149.00			Dry Weight
ACETONE	20	5900 U	UG/KG
BENZENE	5.0	2400	UG/KG
BROMOCHLOROMETHANE	5.0	1500 U	UG/KG
BROMODICHLOROMETHANE	5.0	1500 U	UG/KG
BROMOFORM	5.0	1500 U	UG/KG
BROMOMETHANE	5.0	1500 U	UG/KG
2-BUTANONE (MEK)	10	2900 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1500 U	UG/KG
CARBON DISULFIDE	10	2900 U	UG/KG
CARBON TETRACHLORIDE	5.0	1500 U	UG/KG
CHLOROBENZENE	5.0	51000	UG/KG
CHLOROETHANE	10	2900 U	UG/KG
CHLOROFORM	5.0	1500 U	UG/KG
CHLOROMETHANE	5.0	1500 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1500 U	UG/KG
CYCLOHEXANE	5.0	1500 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1500 U	UG/KG
1,2-DIBROMOETHANE	5.0	1500 U	UG/KG
1,3-DICHLOROBENZENE	5.0	120 J	UG/KG
1,4-DICHLOROBENZENE	5.0	1300 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1500 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1500 U	UG/KG
1,1-DICHLOROETHANE	5.0	1500 U	UG/KG
1,2-DICHLOROETHANE	5.0	1500 U	UG/KG
1,1-DICHLOROETHENE	5.0	1500 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1500 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1500 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1500 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1500 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1500 U	UG/KG
1,4-DIOXANE	100	120 ~~29~~000 UJ	UG/KG
ETHYLBENZENE	5.0	400 J	UG/KG
2-HEXANONE	10	2900 U	UG/KG
ISOPROPYLBENZENE	5.0	100 J	UG/KG
METHYL ACETATE	10	220 J	UG/KG
METHYLCYCLOHEXANE	5.0	280 J	UG/KG
METHYLENE CHLORIDE	5.0	1500 U	UG/KG
-METHYL-2-PENTANONE (MIBK)	10	2900 U	UG/KG
TYRENE	5.0	1500 U	UG/KG
1,2,2-TETRACHLOROETHANE	5.0	1500 UJ	UG/KG
TRACHLOROETHENE	5.0	1500 U	UG/KG
UENE	5.0	1500 U	UG/KG
4-TRICHLOROBENZENE	5.0	1500 U	UG/KG
3-TRICHLOROBENZENE	5.0	1500 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-C-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057924 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 50.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 149.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1500 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1500 U	UG/KG
TRICHLOROETHENE	5.0	1500 UJ	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1500 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1500 U	UG/KG
VINYL CHLORIDE	5.0	1500 U	UG/KG
O-XYLENE	5.0	990 J	UG/KG
M+P-XYLENE	5.0	990 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	106	%
TOLUENE-D8	(75 - 128 %)	106	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-D-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057926 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 54.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 770.00			Dry Weight
ACETONE	20	28000 U J	UG/KG
BENZENE	5.0	180000 J	UG/KG
BROMOCHLOROMETHANE	5.0	7100 U J	UG/KG
BROMODICHLOROMETHANE	5.0	7100 U	UG/KG
BROMOFORM	5.0	7100 U	UG/KG
BROMOMETHANE	5.0	7100 U	UG/KG
2-BUTANONE (MEK)	10	14000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	7100 U	UG/KG
CARBON DISULFIDE	10	14000 U	UG/KG
CARBON TETRACHLORIDE	5.0	7100 U	UG/KG
CHLOROBENZENE	5.0	4200000 E J	UG/KG
CHLOROETHANE	10	14000 U J	UG/KG
CHLOROFORM	5.0	7100 U	UG/KG
CHLOROMETHANE	5.0	7100 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7100 U	UG/KG
CYCLOHEXANE	5.0	7100 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	7100 U	UG/KG
1,2-DIBROMOETHANE	5.0	7100 U	UG/KG
1,3-DICHLOROBENZENE	5.0	18000 J	UG/KG
1,4-DICHLOROBENZENE	5.0	57000 J	UG/KG
1,2-DICHLOROBENZENE	5.0	260000 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7100 U J	UG/KG
1,1-DICHLOROETHANE	5.0	7100 U	UG/KG
1,2-DICHLOROETHANE	5.0	7100 U	UG/KG
1,1-DICHLOROETHENE	5.0	7100 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7100 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7100 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7100 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7100 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	7100 U	UG/KG
1,4-DIOXANE	100	570000 U UJ	UG/KG
ETHYLBENZENE	5.0	5300 J	UG/KG
2-HEXANONE	10	14000 U J	UG/KG
ISOPROPYLBENZENE	5.0	7100 U J	UG/KG
METHYL ACETATE	10	14000 U J	UG/KG
METHYLCYCLOHEXANE	5.0	1200 J	UG/KG
METHYLENE CHLORIDE	5.0	7100 U J	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	14000 U J	UG/KG
STYRENE	5.0	7100 U J	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7100 U J	UG/KG
TETRACHLOROETHENE	5.0	7100 U J	UG/KG
TOLUENE	5.0	55000 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	17000 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	3700 J	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-D-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057926 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 54.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 770.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7100 UJ	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7100 UJ	UG/KG
TRICHLOROETHENE	5.0	7100 UJ	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7100 UJ	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7100 U	UG/KG
VINYL CHLORIDE	5.0	7100 U	UG/KG
O-XYLENE	5.0	4800 J	UG/KG
M+P-XYLENE	5.0	17000 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	111	%
TOLUENE-D8	(75 - 128 %)	108	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-D-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057926 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 54.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 15500.00			Dry Weight
ACETONE	20	570000 U	UG/KG
BENZENE	5.0	220000	UG/KG
BROMOCHLOROMETHANE	5.0	140000 U	UG/KG
BROMODICHLOROMETHANE	5.0	140000 U	UG/KG
BROMOFORM	5.0	140000 U	UG/KG
BROMOMETHANE	5.0	140000 U	UG/KG
2-BUTANONE (MEK)	10	280000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	140000 U	UG/KG
CARBON DISULFIDE	10	280000 U	UG/KG
CARBON TETRACHLORIDE	5.0	140000 U	UG/KG
CHLOROBENZENE	5.0	4200000 D	UG/KG
CHLOROETHANE	10	280000 U	UG/KG
CHLOROFORM	5.0	140000 U	UG/KG
CHLOROMETHANE	5.0	140000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	140000 U	UG/KG
CYCLOHEXANE	5.0	140000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	140000 U	UG/KG
1,2-DIBROMOETHANE	5.0	140000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	18000 J	UG/KG
1,4-DICHLOROBENZENE	5.0	66000 J	UG/KG
1,2-DICHLOROBENZENE	5.0	310000	UG/KG
DICHLORODIFLUOROMETHANE	5.0	140000 U	UG/KG
1,1-DICHLOROETHANE	5.0	140000 U	UG/KG
1,2-DICHLOROETHANE	5.0	140000 U	UG/KG
1,1-DICHLOROETHENE	5.0	140000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	140000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	140000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	140000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	140000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	140000 U	UG/KG
1,4-DIOXANE	100	2800000 U	UG/KG
ETHYLBENZENE	5.0	140000 U	UG/KG
2-HEXANONE	10	280000 U	UG/KG
ISOPROPYLBENZENE	5.0	140000 U	UG/KG
METHYL ACETATE	10	280000 U	UG/KG
METHYLCYCLOHEXANE	5.0	140000 U	UG/KG
METHYLENE CHLORIDE	5.0	140000 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	280000 U	UG/KG
STYRENE	5.0	140000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	140000 U	UG/KG
TETRACHLOROETHENE	5.0	140000 U	UG/KG
TOLUENE	5.0	64000 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	22000 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	140000 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-D-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057926 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 54.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/00			
ANALYTICAL DILUTION: 15500.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	140000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	140000 U	UG/KG
TRICHLOROETHENE	5.0	140000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	140000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	140000 U	UG/KG
VINYL CHLORIDE	5.0	140000 U	UG/KG
O-XYLENE	5.0	140000 U	UG/KG
M+P-XYLENE	5.0	20000 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	110	%
TOLUENE-D8	(75 - 128 %)	109	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-D-2

Date Sampled : 12/12/07 13:14 **Order #:** 1057925 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.5

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 153.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	5800 UJ	UG/KG
BENZENE	5.0	1800 J	UG/KG
BROMOCHLOROMETHANE	5.0	1500 UJ	UG/KG
BROMODICHLOROMETHANE	5.0	1500 U	UG/KG
BROMOFORM	5.0	1500 U	UG/KG
BROMOMETHANE	5.0	1500 U	UG/KG
2-BUTANONE (MEK)	10	230 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1500 UJ	UG/KG
CARBON DISULFIDE	10	2900 U	UG/KG
CARBON TETRACHLORIDE	5.0	1500 U	UG/KG
CHLOROBENZENE	5.0	42000 J	UG/KG
CHLOROETHANE	10	2900 UJ	UG/KG
CHLOROFORM	5.0	1500 U	UG/KG
CHLOROMETHANE	5.0	1500 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1500 U	UG/KG
CYCLOHEXANE	5.0	1500 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1500 U	UG/KG
1,2-DIBROMOETHANE	5.0	1500 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1500 U	UG/KG
1,4-DICHLOROBENZENE	5.0	930 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1500 UJ	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1500 U	UG/KG
1,1-DICHLOROETHANE	5.0	1500 U	UG/KG
1,2-DICHLOROETHANE	5.0	1500 U	UG/KG
1,1-DICHLOROETHENE	5.0	1500 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1500 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1500 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1500 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1500 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1500 U	UG/KG
1,4-DIOXANE	100	120 ~~29~~000 UJ	UG/KG
ETHYLBENZENE	5.0	320 J	UG/KG
2-HEXANONE	10	2900 UJ	UG/KG
ISOPROPYLBENZENE	5.0	1500 UJ	UG/KG
METHYL ACETATE	10	340 J	UG/KG
METHYLCYCLOHEXANE	5.0	210 J	UG/KG
METHYLENE CHLORIDE	5.0	110 J	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	2900 UJ	UG/KG
STYRENE	5.0	1500 UJ	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1500 UJ	UG/KG
TETRACHLOROETHENE	5.0	1500 UJ	UG/KG
TOLUENE	5.0	1500 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1500 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1500 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-D-2

Date Sampled : 12/12/07 13:14 **Order #:** 1057925 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 153.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1500 UJ	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1500 UJ	UG/KG
TRICHLOROETHENE	5.0	1500 UJ	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1500 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1500 U	UG/KG
VINYL CHLORIDE	5.0	1500 U	UG/KG
O-XYLENE	5.0	800 J	UG/KG
M+P-XYLENE	5.0	880 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	108	%
TOLUENE-D8	(75 - 128 %)	105	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	105	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-E-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057927 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.0

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 695.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	27000 U	UG/KG
BENZENE	5.0	58000	UG/KG
BROMOCHLOROMETHANE	5.0	6700 U	UG/KG
BROMODICHLOROMETHANE	5.0	6700 U	UG/KG
BROMOFORM	5.0	6700 U	UG/KG
BROMOMETHANE	5.0	6700 U	UG/KG
2-BUTANONE (MEK)	10	13000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6700 U	UG/KG
CARBON DISULFIDE	10	13000 U	UG/KG
CARBON TETRACHLORIDE	5.0	6700 U	UG/KG
CHLOROBENZENE	5.0	VS ~~1300000~~ E	UG/KG
CHLOROETHANE	10	13000 U	UG/KG
CHLOROFORM	5.0	6700 U	UG/KG
CHLOROMETHANE	5.0	6700 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6700 U	UG/KG
CYCLOHEXANE	5.0	6700 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6700 U	UG/KG
1,2-DIBROMOETHANE	5.0	6700 U	UG/KG
1,3-DICHLOROBENZENE	5.0	11000	UG/KG
1,4-DICHLOROBENZENE	5.0	31000	UG/KG
1,2-DICHLOROBENZENE	5.0	7500	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6700 U	UG/KG
1,1-DICHLOROETHANE	5.0	6700 U	UG/KG
1,2-DICHLOROETHANE	5.0	6700 U	UG/KG
1,1-DICHLOROETHENE	5.0	6700 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6700 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6700 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6700 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6700 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6700 U	UG/KG
1,4-DIOXANE	100	54 ~~130000~~ UJ	UG/KG
ETHYLBENZENE	5.0	1900 J	UG/KG
2-HEXANONE	10	13000 U	UG/KG
ISOPROPYLBENZENE	5.0	6700 U	UG/KG
METHYL ACETATE	10	13000 U	UG/KG
METHYLCYCLOHEXANE	5.0	6700 U	UG/KG
METHYLENE CHLORIDE	5.0	6700 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13000 U	UG/KG
STYRENE	5.0	6700 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6700 UJ	UG/KG
TETRACHLOROETHENE	5.0	6700 U	UG/KG
TOLUENE	5.0	8500	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	11000	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	2900 J	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-E-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057927 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 695.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6700 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6700 U	UG/KG
TRICHLOROETHENE	5.0	6700 UJ	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6700 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6700 U	UG/KG
VINYL CHLORIDE	5.0	6700 U	UG/KG
O-XYLENE	5.0	1700 J	UG/KG
M+P-XYLENE	5.0	5800 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	111	%
TOLUENE-D8	(75 - 128 %)	106	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-E-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057927 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 6950.00			Dry Weight
ACETONE	20	270000 U	UG/KG
BENZENE	5.0	54000 J	UG/KG
BROMOCHLOROMETHANE	5.0	67000 U	UG/KG
BROMODICHLOROMETHANE	5.0	67000 U	UG/KG
BROMOFORM	5.0	67000 U	UG/KG
BROMOMETHANE	5.0	67000 U	UG/KG
2-BUTANONE (MEK)	10	130000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	67000 U	UG/KG
CARBON DISULFIDE	10	130000 U	UG/KG
CARBON TETRACHLORIDE	5.0	67000 U	UG/KG
CHLOROBENZENE	5.0	1500000 D	UG/KG
CHLOROETHANE	10	130000 U	UG/KG
CHLOROFORM	5.0	67000 U	UG/KG
CHLOROMETHANE	5.0	67000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	67000 U	UG/KG
CYCLOHEXANE	5.0	67000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	67000 U	UG/KG
1,2-DIBROMOETHANE	5.0	67000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	11000 J	UG/KG
1,4-DICHLOROBENZENE	5.0	35000 J	UG/KG
1,2-DICHLOROBENZENE	5.0	6500 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	67000 U	UG/KG
1,1-DICHLOROETHANE	5.0	67000 U	UG/KG
1,2-DICHLOROETHANE	5.0	67000 U	UG/KG
1,1-DICHLOROETHENE	5.0	67000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	67000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	67000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	67000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	67000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	67000 U	UG/KG
1,4-DIOXANE	100	1300000 U	UG/KG
ETHYLBENZENE	5.0	67000 U	UG/KG
2-HEXANONE	10	130000 U	UG/KG
ISOPROPYLBENZENE	5.0	67000 U	UG/KG
METHYL ACETATE	10	130000 U	UG/KG
METHYLCYCLOHEXANE	5.0	67000 U	UG/KG
METHYLENE CHLORIDE	5.0	67000 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	130000 U	UG/KG
STYRENE	5.0	67000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	67000 U	UG/KG
TETRACHLOROETHENE	5.0	67000 U	UG/KG
TOLUENE	5.0	8100 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	11000 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	67000 U	UG/KG

DUP Repeat

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-E-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057927 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/00			
ANALYTICAL DILUTION: 6950.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	67000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	67000 U	UG/KG
TRICHLOROETHENE	5.0	67000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	67000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	67000 U	UG/KG
VINYL CHLORIDE	5.0	67000 U	UG/KG
O-XYLENE	5.0	67000 U	UG/KG
M+P-XYLENE	5.0	6300 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	112	%
TOLUENE-D8	(75 - 128 %)	107	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-F-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057928 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 58.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.23			Dry Weight
ACETONE	20	340 J	UG/KG
BENZENE	5.0	15000 ~~3600 E~~	UG/KG
BROMOCHLOROMETHANE	5.0	10 U	UG/KG
BROMODICHLOROMETHANE	5.0	10 U	UG/KG
BROMOFORM	5.0	10 U	UG/KG
BROMOMETHANE	5.0	10 U	UG/KG
2-BUTANONE (MEK)	10	80 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	10 U	UG/KG
CARBON DISULFIDE	10	5.6 J	UG/KG
CARBON TETRACHLORIDE	5.0	10 U	UG/KG
CHLOROBENZENE	5.0	260000 ~~17000 X~~	UG/KG
CHLOROETHANE	10	21 U	UG/KG
CHLOROFORM	5.0	10 U	UG/KG
CHLOROMETHANE	5.0	10 UJ	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	10 UJ	UG/KG
CYCLOHEXANE	5.0	12 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMOETHANE	5.0	10 U	UG/KG
1,3-DICHLOROBENZENE	5.0	72 J	UG/KG
1,4-DICHLOROBENZENE	5.0	13000 ~~2000 E~~	UG/KG
1,2-DICHLOROBENZENE	5.0	170 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHANE	5.0	10 U	UG/KG
1,2-DICHLOROETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHENE	5.0	10 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	2.0 J	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
1,2-DICHLOROPROPANE	5.0	10 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
1,4-DIOXANE	100	840 ~~210~~ UJ	UG/KG
ETHYLBENZENE	5.0	170 J	UG/KG
2-HEXANONE	10	21 U	UG/KG
ISOPROPYLBENZENE	5.0	24 J	UG/KG
METHYL ACETATE	10	21 U	UG/KG
METHYLCYCLOHEXANE	5.0	140 J	UG/KG
METHYLENE CHLORIDE	5.0	10 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	21 U	UG/KG
STYRENE	5.0	10 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	10 UJ	UG/KG
TETRACHLOROETHENE	5.0	10 U	UG/KG
TOLUENE	5.0	34 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	10 UJ	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	10 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-F-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057928 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 58.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.23			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/KG
TRICHLOROETHENE	5.0	10 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	10 U	UG/KG
VINYL CHLORIDE	5.0	10 U	UG/KG
O-XYLENE	5.0	290 J	UG/KG
M+P-XYLENE	5.0	550 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	116	%
TOLUENE-D8	(75 - 128 %)	155 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	90	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-F-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057928 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 58.7

DATE ANALYZED : 12/21/07
ANALYTICAL DILUTION: 1110.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	38000 U	UG/KG
BENZENE	5.0	15000 D	UG/KG
BROMOCHLOROMETHANE	5.0	9500 U	UG/KG
BROMODICHLOROMETHANE	5.0	9500 U	UG/KG
BROMOFORM	5.0	9500 U	UG/KG
BROMOMETHANE	5.0	9500 U	UG/KG
2-BUTANONE (MEK)	10	19000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	9500 U	UG/KG
CARBON DISULFIDE	10	19000 U	UG/KG
CARBON TETRACHLORIDE	5.0	9500 U	UG/KG
CHLOROBENZENE	5.0	260000 D	UG/KG
CHLOROETHANE	10	19000 U	UG/KG
CHLOROFORM	5.0	9500 U	UG/KG
CHLOROMETHANE	5.0	9500 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	9500 U	UG/KG
CYCLOHEXANE	5.0	9500 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	9500 U	UG/KG
1,2-DIBROMOETHANE	5.0	9500 U	UG/KG
1,3-DICHLOROBENZENE	5.0	9500 U	UG/KG
1,4-DICHLOROBENZENE	5.0	13000 D	UG/KG
1,2-DICHLOROBENZENE	5.0	5100 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	9500 U	UG/KG
1,1-DICHLOROETHANE	5.0	9500 U	UG/KG
1,2-DICHLOROETHANE	5.0	9500 U	UG/KG
1,1-DICHLOROETHENE	5.0	9500 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	9500 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	9500 U	UG/KG
1,2-DICHLOROPROPANE	5.0	9500 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	9500 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	9500 U	UG/KG
1,4-DIOXANE	100	190000 U	UG/KG
ETHYLBENZENE	5.0	9500 U	UG/KG
2-HEXANONE	10	19000 U	UG/KG
ISOPROPYLBENZENE	5.0	9500 U	UG/KG
METHYL ACETATE	10	19000 U	UG/KG
METHYLCYCLOHEXANE	5.0	9500 U	UG/KG
METHYLENE CHLORIDE	5.0	9500 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	19000 U	UG/KG
STYRENE	5.0	9500 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	9500 U	UG/KG
TETRACHLOROETHENE	5.0	9500 U	UG/KG
TOLUENE	5.0	9500 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	9500 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	9500 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-F-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057928 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 58.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/21/00			
ANALYTICAL DILUTION: 1110.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	9500 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	9500 U	UG/KG
TRICHLOROETHENE	5.0	9500 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	9500 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	9500 U	UG/KG
VINYL CHLORIDE	5.0	9500 U	UG/KG
O-XYLENE	5.0	660 J	UG/KG
M+P-XYLENE	5.0	1300 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	111	%
TOLUENE-D8	(75 - 128 %)	109	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-C-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057933 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.36			Dry Weight
ACETONE	20	380	UG/KG
BENZENE	5.0	13 U	UG/KG
BROMOCHLOROMETHANE	5.0	13 U	UG/KG
BROMODICHLOROMETHANE	5.0	13 U	UG/KG
BROMOFORM	5.0	13 U	UG/KG
BROMOMETHANE	5.0	13 U	UG/KG
2-BUTANONE (MEK)	10	100	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	13 U	UG/KG
CARBON DISULFIDE	10	4.4 J	UG/KG
CARBON TETRACHLORIDE	5.0	13 U	UG/KG
CHLOROBENZENE	5.0	170	UG/KG
CHLOROETHANE	10	26 U	UG/KG
CHLOROFORM	5.0	13 U	UG/KG
CHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	13 U	UG/KG
CYCLOHEXANE	5.0	2.5 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMOETHANE	5.0	13 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.1 J	UG/KG
1,4-DICHLOROBENZENE	5.0	13	UG/KG
1,2-DICHLOROBENZENE	5.0	4.6 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHANE	5.0	13 U	UG/KG
1,2-DICHLOROETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHENE	5.0	13 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
1,2-DICHLOROPROPANE	5.0	13 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
1,4-DIOXANE	100	1000 ~~260~~ UJ	UG/KG
ETHYLBENZENE	5.0	13 U	UG/KG
2-HEXANONE	10	26 U	UG/KG
ISOPROPYLBENZENE	5.0	1.4 J	UG/KG
METHYL ACETATE	10	26 U	UG/KG
METHYLCYCLOHEXANE	5.0	13	UG/KG
METHYLENE CHLORIDE	5.0	13 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	26 U	UG/KG
STYRENE	5.0	13 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/KG
TETRACHLOROETHENE	5.0	13 U	UG/KG
TOLUENE	5.0	13 ~~2.1 JB~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	13 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	13 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-C-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057933 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.36			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/KG
TRICHLOROETHENE	5.0	13 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	13 U	UG/KG
VINYL CHLORIDE	5.0	13 U	UG/KG
O-XYLENE	5.0	5.2 J	UG/KG
M+P-XYLENE	5.0	2.5 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	74	%
TOLUENE-D8	(75 - 128 %)	101	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	92	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-D-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057934 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.64			Dry Weight
ACETONE	20	470	UG/KG
BENZENE	5.0	1.2 J	UG/KG
BROMOCHLOROMETHANE	5.0	16 U	UG/KG
BROMODICHLOROMETHANE	5.0	16 U	UG/KG
BROMOFORM	5.0	16 U	UG/KG
BROMOMETHANE	5.0	16 U	UG/KG
2-BUTANONE (MEK)	10	120	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	16 U	UG/KG
CARBON DISULFIDE	10	5.7 J	UG/KG
CARBON TETRACHLORIDE	5.0	16 U	UG/KG
CHLOROBENZENE	5.0	34	UG/KG
CHLOROETHANE	10	31 U	UG/KG
CHLOROFORM	5.0	16 U	UG/KG
CHLOROMETHANE	5.0	16 UJ	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	16 U	UG/KG
CYCLOHEXANE	5.0	7.2 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	16 U	UG/KG
1,2-DIBROMOETHANE	5.0	16 U	UG/KG
1,3-DICHLOROBENZENE	5.0	16 U	UG/KG
1,4-DICHLOROBENZENE	5.0	1.9 J	UG/KG
1,2-DICHLOROBENZENE	5.0	11 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	16 U	UG/KG
1,1-DICHLOROETHANE	5.0	16 U	UG/KG
1,2-DICHLOROETHANE	5.0	16 U	UG/KG
1,1-DICHLOROETHENE	5.0	16 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	16 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	16 U	UG/KG
1,2-DICHLOROPROPANE	5.0	16 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	16 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	16 U	UG/KG
1,4-DIOXANE	100	120 ~~310~~ UJ	UG/KG
ETHYLBENZENE	5.0	16 U	UG/KG
2-HEXANONE	10	31 U	UG/KG
ISOPROPYLBENZENE	5.0	1.9 J	UG/KG
METHYL ACETATE	10	31 U	UG/KG
METHYLCYCLOHEXANE	5.0	76	UG/KG
METHYLENE CHLORIDE	5.0	16 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	31 U	UG/KG
STYRENE	5.0	16 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	16 U	UG/KG
TETRACHLOROETHENE	5.0	16 U	UG/KG
TOLUENE	5.0	3.0 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	16 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	16 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-D-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057934 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 52.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.64			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	16 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	16 U	UG/KG
TRICHLOROETHENE	5.0	16 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	16 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	16 U	UG/KG
VINYL CHLORIDE	5.0	16 U	UG/KG
O-XYLENE	5.0	3.6 J	UG/KG
M+P-XYLENE	5.0	16 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	83	%
TOLUENE-D8	(75 - 128 %)	114	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	90	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-D-2

Date Sampled : 12/12/07 12:55 **Order #:** 1057935 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 51.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.36			Dry Weight
ACETONE	20	390	UG/KG
BENZENE	5.0	0.82 J	UG/KG
BROMOCHLOROMETHANE	5.0	13 U	UG/KG
BROMODICHLOROMETHANE	5.0	13 U	UG/KG
BROMOFORM	5.0	13 U	UG/KG
BROMOMETHANE	5.0	13 U	UG/KG
2-BUTANONE (MEK)	10	100	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	13 U	UG/KG
CARBON DISULFIDE	10	4.5 J	UG/KG
CARBON TETRACHLORIDE	5.0	13 U	UG/KG
CHLOROBENZENE	5.0	53	UG/KG
CHLOROETHANE	10	27 U	UG/KG
CHLOROFORM	5.0	13 U	UG/KG
CHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	13 UJ	UG/KG
CYCLOHEXANE	5.0	9.0 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMOETHANE	5.0	13 U	UG/KG
1,3-DICHLOROBENZENE	5.0	13 UJ	UG/KG
1,4-DICHLOROBENZENE	5.0	13 U	UG/KG
1,2-DICHLOROBENZENE	5.0	13 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHANE	5.0	13 U	UG/KG
1,2-DICHLOROETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHENE	5.0	13 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
1,2-DICHLOROPROPANE	5.0	13 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
1,4-DIOXANE	100	1100 ~~270~~ UJ	UG/KG
ETHYLBENZENE	5.0	13 U	UG/KG
2-HEXANONE	10	27 U	UG/KG
ISOPROPYLBENZENE	5.0	13 U	UG/KG
METHYL ACETATE	10	27 U	UG/KG
METHYLCYCLOHEXANE	5.0	90	UG/KG
METHYLENE CHLORIDE	5.0	13 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	27 U	UG/KG
STYRENE	5.0	13 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	13 UJ	UG/KG
TETRACHLOROETHENE	5.0	13 U	UG/KG
TOLUENE	5.0	13 ~~4.9 JB~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	13 UJ	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	13 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-D-2

Date Sampled : 12/12/07 12:55 **Order #:** 1057935 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 51.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.36			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/KG
TRICHLOROETHENE	5.0	13 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	13 U	UG/KG
VINYL CHLORIDE	5.0	13 U	UG/KG
O-XYLENE	5.0	5.9 J	UG/KG
M+P-XYLENE	5.0	3.3 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	79	%
TOLUENE-D8	(75 - 128 %)	126	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	89	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-D-2

Date Sampled : 12/12/07 12:55 **Order #:** 1057935 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 51.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.27			Dry Weight
ACETONE	20	610 E	UG/KG
BENZENE	5.0	1.7 J	UG/KG
BROMOCHLOROMETHANE	5.0	12 U	UG/KG
BROMODICHLOROMETHANE	5.0	12 U	UG/KG
BROMOFORM	5.0	12 U	UG/KG
BROMOMETHANE	5.0	12 U	UG/KG
2-BUTANONE (MEK)	10	140	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	12 U	UG/KG
CARBON DISULFIDE	10	7.4 J	UG/KG
CARBON TETRACHLORIDE	5.0	12 U	UG/KG
CHLOROBENZENE	5.0	78	UG/KG
CHLOROETHANE	10	25 U	UG/KG
CHLOROFORM	5.0	12 U	UG/KG
CHLOROMETHANE	5.0	12 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	12 U	UG/KG
CYCLOHEXANE	5.0	10 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	12 U	UG/KG
1,2-DIBROMOETHANE	5.0	12 U	UG/KG
1,3-DICHLOROBENZENE	5.0	12 U	UG/KG
1,4-DICHLOROBENZENE	5.0	3.5 J	UG/KG
1,2-DICHLOROBENZENE	5.0	19	UG/KG
DICHLORODIFLUOROMETHANE	5.0	12 U	UG/KG
1,1-DICHLOROETHANE	5.0	12 U	UG/KG
1,2-DICHLOROETHANE	5.0	12 U	UG/KG
1,1-DICHLOROETHENE	5.0	12 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	12 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	12 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1.3 J	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	12 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	12 U	UG/KG
1,4-DIOXANE	100	250 U	UG/KG
ETHYLBENZENE	5.0	12 U	UG/KG
2-HEXANONE	10	25 U	UG/KG
ISOPROPYLBENZENE	5.0	3.1 J	UG/KG
METHYL ACETATE	10	25 U	UG/KG
METHYLCYCLOHEXANE	5.0	110	UG/KG
METHYLENE CHLORIDE	5.0	12 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/KG
STYRENE	5.0	12 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	12 U	UG/KG
TETRACHLOROETHENE	5.0	12 U	UG/KG
TOLUENE	5.0	6.3 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	12 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	12 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-D-2

Date Sampled : 12/12/07 12:55 **Order #:** 1057935 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 51.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/00			
ANALYTICAL DILUTION: 1.27			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	12 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	12 U	UG/KG
TRICHLOROETHENE	5.0	12 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	12 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	12 U	UG/KG
VINYL CHLORIDE	5.0	12 U	UG/KG
O-XYLENE	5.0	7.0 J	UG/KG
M+P-XYLENE	5.0	6.3 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	78	%
TOLUENE-D8	(75 - 128 %)	132 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	92	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-E-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057936 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 61.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.33			Dry Weight
ACETONE	20	86 U	UG/KG
BENZENE	5.0	11 U	UG/KG
BROMOCHLOROMETHANE	5.0	11 U	UG/KG
BROMODICHLOROMETHANE	5.0	11 U	UG/KG
BROMOFORM	5.0	11 U	UG/KG
BROMOMETHANE	5.0	11 U	UG/KG
2-BUTANONE (MEK)	10	16 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	11 U	UG/KG
CARBON DISULFIDE	10	1.9 J	UG/KG
CARBON TETRACHLORIDE	5.0	11 U	UG/KG
CHLOROBENZENE	5.0	11 U	UG/KG
CHLOROETHANE	10	22 U	UG/KG
CHLOROFORM	5.0	11 U	UG/KG
CHLOROMETHANE	5.0	11 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	11 U	UG/KG
CYCLOHEXANE	5.0	1.4 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	11 U	UG/KG
1,2-DIBROMOETHANE	5.0	11 U	UG/KG
1,3-DICHLOROBENZENE	5.0	11 U	UG/KG
1,4-DICHLOROBENZENE	5.0	11 U	UG/KG
1,2-DICHLOROBENZENE	5.0	11 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	11 U	UG/KG
1,1-DICHLOROETHANE	5.0	11 U	UG/KG
1,2-DICHLOROETHANE	5.0	11 U	UG/KG
1,1-DICHLOROETHENE	5.0	11 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	11 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	11 U	UG/KG
1,2-DICHLOROPROPANE	5.0	11 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	11 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	11 U	UG/KG
1,4-DIOXANE	100	860 ~~220~~ UJ	UG/KG
ETHYLBENZENE	5.0	11 U	UG/KG
2-HEXANONE	10	22 U	UG/KG
ISOPROPYLBENZENE	5.0	11 U	UG/KG
METHYL ACETATE	10	22 U	UG/KG
METHYLCYCLOHEXANE	5.0	9.2 J	UG/KG
METHYLENE CHLORIDE	5.0	11 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	22 U	UG/KG
STYRENE	5.0	11 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	11 U	UG/KG
TETRACHLOROETHENE	5.0	11 U	UG/KG
TOLUENE	5.0	1.9 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	11 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1.3 J	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-E-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057936 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 61.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.33			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	11 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	11 U	UG/KG
TRICHLOROETHENE	5.0	11 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	11 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	11 U	UG/KG
VINYL CHLORIDE	5.0	11 U	UG/KG
O-XYLENE	5.0	11 U	UG/KG
M+P-XYLENE	5.0	11 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	87	%
TOLUENE-D8	(75 - 128 %)	101	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	89	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-F-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057937 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 56.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.47			Dry Weight
ACETONE	20	350	UG/KG
BENZENE	5.0	13 U	UG/KG
BROMOCHLOROMETHANE	5.0	13 U	UG/KG
BROMODICHLOROMETHANE	5.0	13 U	UG/KG
BROMOFORM	5.0	13 U	UG/KG
BROMOMETHANE	5.0	13 U	UG/KG
2-BUTANONE (MEK)	10	80	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	13 U	UG/KG
CARBON DISULFIDE	10	4.4 J	UG/KG
CARBON TETRACHLORIDE	5.0	13 U	UG/KG
CHLOROBENZENE	5.0	5.1 J	UG/KG
CHLOROETHANE	10	26 U	UG/KG
CHLOROFORM	5.0	13 U	UG/KG
CHLOROMETHANE	5.0	13 UJ	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	13 U	UG/KG
CYCLOHEXANE	5.0	4.2 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMOETHANE	5.0	13 U	UG/KG
1,3-DICHLOROBENZENE	5.0	13 U	UG/KG
1,4-DICHLOROBENZENE	5.0	13 U	UG/KG
1,2-DICHLOROBENZENE	5.0	13 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHANE	5.0	13 U	UG/KG
1,2-DICHLOROETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHENE	5.0	13 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
1,2-DICHLOROPROPANE	5.0	13 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
1,4-DIOXANE	100	1000 ~~260~~ UJ	UG/KG
ETHYLBENZENE	5.0	13 U	UG/KG
2-HEXANONE	10	26 U	UG/KG
ISOPROPYLBENZENE	5.0	13 U	UG/KG
METHYL ACETATE	10	26 U	UG/KG
METHYLCYCLOHEXANE	5.0	39	UG/KG
METHYLENE CHLORIDE	5.0	13 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	26 U	UG/KG
STYRENE	5.0	13 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/KG
TETRACHLOROETHENE	5.0	13 U	UG/KG
TOLUENE	5.0	2.7 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	13 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	13 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-F-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057937 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 56.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.47			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/KG
TRICHLOROETHENE	5.0	13 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	13 U	UG/KG
VINYL CHLORIDE	5.0	13 U	UG/KG
O-XYLENE	5.0	13 U	UG/KG
M+P-XYLENE	5.0	13 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	88	%
TOLUENE-D8	(75 - 128 %)	110	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	93	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-G-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057938 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 80.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.01			Dry Weight
ACETONE	20	57 UJ	UG/KG
BENZENE	5.0	6.3 UJ	UG/KG
BROMOCHLOROMETHANE	5.0	6.3 UJ	UG/KG
BROMODICHLOROMETHANE	5.0	6.3 UJ	UG/KG
BROMOFORM	5.0	~~6.3 U~~ R	UG/KG
BROMOMETHANE	5.0	6.3 UJ	UG/KG
2-BUTANONE (MEK)	10	13 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.3 U	UG/KG
CARBON DISULFIDE	10	2.4 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.3 UJ	UG/KG
CHLOROBENZENE	5.0	~~6.3 U~~ R	UG/KG
CHLOROETHANE	10	13 UJ	UG/KG
CHLOROFORM	5.0	6.3 UJ	UG/KG
CHLOROMETHANE	5.0	6.3 UJ	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	~~6.3 U~~ R	UG/KG
CYCLOHEXANE	5.0	6.3 UJ	UG/KG
DIBROMOCHLOROMETHANE	5.0	~~6.3 U~~ R	UG/KG
1,2-DIBROMOETHANE	5.0	~~6.3 U~~ R	UG/KG
1,3-DICHLOROBENZENE	5.0	~~6.3 U~~ R	UG/KG
1,4-DICHLOROBENZENE	5.0	~~6.3 U~~ R	UG/KG
1,2-DICHLOROBENZENE	5.0	~~6.3 U~~ R	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.3 UJ	UG/KG
1,1-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.3 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.3 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.3 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.3 U R	UG/KG
1,4-DIOXANE	100	500 ~~130~~ UJ	UG/KG
ETHYLBENZENE	5.0	~~6.3 U~~ R	UG/KG
2-HEXANONE	10	~~13 U~~ R	UG/KG
ISOPROPYLBENZENE	5.0	~~6.3 U~~ R	UG/KG
METHYL ACETATE	10	13 UJ	UG/KG
METHYLCYCLOHEXANE	5.0	6.3 U	UG/KG
METHYLENE CHLORIDE	5.0	6.3 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	~~13 U~~ R	UG/KG
STYRENE	5.0	~~6.3 U~~ R	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	~~6.3 U~~ R	UG/KG
TETRACHLOROETHENE	5.0	~~6.3 U~~ R	UG/KG
TOLUENE	5.0	~~6.3 U~~ R	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	~~6.3 U~~ R	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	~~6.3 U~~ R	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-G-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057938 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 80.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.01			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.3 U J	UG/KG
1,1,2-TRICHLOROETHANE	5.0	~~6.3 U~~ R	UG/KG
TRICHLOROETHENE	5.0	6.3 U J	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.3 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.3 U	UG/KG
VINYL CHLORIDE	5.0	6.3 U	UG/KG
O-XYLENE	5.0	~~6.3 U~~ R	UG/KG
M+P-XYLENE	5.0	~~6.3 U~~ R	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	49 *	%
TOLUENE-D8	(75 - 128 %)	145 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	173 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-G-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057938 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 80.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 0.83			Dry Weight
ACETONE	20	71	UG/KG
BENZENE	5.0	5.2 U	UG/KG
BROMOCHLOROMETHANE	5.0	5.2 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.2 U	UG/KG
BROMOFORM	5.0	5.2 U	UG/KG
BROMOMETHANE	5.0	5.2 U	UG/KG
2-BUTANONE (MEK)	10	10 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.2 U	UG/KG
CARBON DISULFIDE	10	2.5 J	UG/KG
CARBON TETRACHLORIDE	5.0	5.2 U	UG/KG
CHLOROBENZENE	5.0	11	UG/KG
CHLOROETHANE	10	10 U	UG/KG
CHLOROFORM	5.0	5.2 U	UG/KG
CHLOROMETHANE	5.0	5.2 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.2 U	UG/KG
CYCLOHEXANE	5.0	5.2 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.2 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.2 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.2 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.2 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.2 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.2 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.2 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.2 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.2 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.2 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.2 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.2 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.2 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.2 U	UG/KG
1,4-DIOXANE	100	100 U	UG/KG
ETHYLBENZENE	5.0	5.2 U	UG/KG
2-HEXANONE	10	10 U	UG/KG
ISOPROPYLBENZENE	5.0	5.2 U	UG/KG
METHYL ACETATE	10	10 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.2 U	UG/KG
METHYLENE CHLORIDE	5.0	5.2 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/KG
STYRENE	5.0	5.2 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.2 U	UG/KG
TETRACHLOROETHENE	5.0	5.2 U	UG/KG
TOLUENE	5.0	5.2 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.2 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.2 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-G-1

Date Sampled : 12/12/07 12:55 **Order #:** 1057938 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 80.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/00			
ANALYTICAL DILUTION: 0.83			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.2 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.2 U	UG/KG
TRICHLOROETHENE	5.0	5.2 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.2 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.2 U	UG/KG
VINYL CHLORIDE	5.0	5.2 U	UG/KG
O-XYLENE	5.0	5.2 U	UG/KG
M+P-XYLENE	5.0	5.2 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	48 *	%
TOLUENE-D8	(75 - 128 %)	160 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	179 *	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-E-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057947 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 62.7

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 298.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	~~590 J~~ 9500 U	UG/KG
BENZENE	5.0	2400 U	UG/KG
BROMOCHLOROMETHANE	5.0	2400 U	UG/KG
BROMODICHLOROMETHANE	5.0	2400 U	UG/KG
BROMOFORM	5.0	2400 U	UG/KG
BROMOMETHANE	5.0	2400 U	UG/KG
2-BUTANONE (MEK)	10	350 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	2400 U	UG/KG
CARBON DISULFIDE	10	4800 U	UG/KG
CARBON TETRACHLORIDE	5.0	2400 U	UG/KG
CHLOROBENZENE	5.0	18000 J	UG/KG
CHLOROETHANE	10	4800 U	UG/KG
CHLOROFORM	5.0	2400 U	UG/KG
CHLOROMETHANE	5.0	2400 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	2400 U	UG/KG
CYCLOHEXANE	5.0	2400 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	2400 U	UG/KG
1,2-DIBROMOETHANE	5.0	2400 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1400 J	UG/KG
1,4-DICHLOROBENZENE	5.0	5300	UG/KG
1,2-DICHLOROBENZENE	5.0	330 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	2400 U	UG/KG
1,1-DICHLOROETHANE	5.0	2400 U	UG/KG
1,2-DICHLOROETHANE	5.0	2400 U	UG/KG
1,1-DICHLOROETHENE	5.0	2400 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	2400 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	2400 U	UG/KG
1,2-DICHLOROPROPANE	5.0	2400 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	2400 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	2400 U	UG/KG
1,4-DIOXANE	100	190 ~~48000~~ UJ	UG/KG
ETHYLBENZENE	5.0	2400 U	UG/KG
2-HEXANONE	10	4800 U	UG/KG
ISOPROPYLBENZENE	5.0	2400 U	UG/KG
METHYL ACETATE	10	380 J	UG/KG
METHYLCYCLOHEXANE	5.0	2400 U	UG/KG
METHYLENE CHLORIDE	5.0	2400 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	4800 U	UG/KG
STYRENE	5.0	2400 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	2400 U	UG/KG
TETRACHLOROETHENE	5.0	2400 U	UG/KG
TOLUENE	5.0	320 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	530 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	2400 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-E-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057947 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 62.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 298.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	2400 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	2400 U	UG/KG
TRICHLOROETHENE	5.0	2400 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	2400 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	2400 U	UG/KG
VINYL CHLORIDE	5.0	2400 U	UG/KG
O-XYLENE	5.0	190 J	UG/KG
M+P-XYLENE	5.0	610 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	109	%
TOLUENE-D8	(75 - 128 %)	106	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-E-2

Date Sampled : 12/12/07 12:26 **Order #:** 1057950 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 63.0

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 250.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	7900 U ~~540 J~~	UG/KG
BENZENE	5.0	150 J	UG/KG
BROMOCHLOROMETHANE	5.0	2000 U	UG/KG
BROMODICHLOROMETHANE	5.0	2000 U	UG/KG
BROMOFORM	5.0	2000 U	UG/KG
BROMOMETHANE	5.0	2000 U	UG/KG
2-BUTANONE (MEK)	10	370 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	2000 U	UG/KG
CARBON DISULFIDE	10	4000 U	UG/KG
CARBON TETRACHLORIDE	5.0	2000 U	UG/KG
CHLOROBENZENE	5.0	38000 J	UG/KG
CHLOROETHANE	10	4000 U	UG/KG
CHLOROFORM	5.0	2000 U	UG/KG
CHLOROMETHANE	5.0	2000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	2000 U	UG/KG
CYCLOHEXANE	5.0	2000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	2000 U	UG/KG
1,2-DIBROMOETHANE	5.0	2000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1900 J	UG/KG
1,4-DICHLOROBENZENE	5.0	7600	UG/KG
1,2-DICHLOROBENZENE	5.0	270 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	2000 U	UG/KG
1,1-DICHLOROETHANE	5.0	2000 U	UG/KG
1,2-DICHLOROETHANE	5.0	2000 U	UG/KG
1,1-DICHLOROETHENE	5.0	2000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	2000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	2000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	2000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	2000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	2000 U	UG/KG
1,4-DIOXANE	100	16 ~~0~~ 0000 UJ	UG/KG
ETHYLBENZENE	5.0	2000 U	UG/KG
2-HEXANONE	10	4000 U	UG/KG
ISOPROPYLBENZENE	5.0	2000 U	UG/KG
METHYL ACETATE	10	460 J	UG/KG
METHYLCYCLOHEXANE	5.0	2000 U	UG/KG
METHYLENE CHLORIDE	5.0	2000 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	4000 U	UG/KG
STYRENE	5.0	2000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	2000 U	UG/KG
TETRACHLOROETHENE	5.0	2000 U	UG/KG
TOLUENE	5.0	440 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	490 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	2000 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-E-2

Date Sampled : 12/12/07 12:26 **Order #:** 1057950 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 63.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 250.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	2000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	2000 U	UG/KG
TRICHLOROETHENE	5.0	2000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	2000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	2000 U	UG/KG
VINYL CHLORIDE	5.0	2000 U	UG/KG
O-XYLENE	5.0	330 J	UG/KG
M+P-XYLENE	5.0	1200 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	110	%
TOLUENE-D8	(75 - 128 %)	107	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-F-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057951 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 49.2

DATE ANALYZED : 12/21/07
ANALYTICAL DILUTION: 160.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	510 J	UG/KG
BENZENE	5.0	100 J	UG/KG
BROMOCHLOROMETHANE	5.0	1600 UJ	UG/KG
BROMODICHLOROMETHANE	5.0	1600 U	UG/KG
BROMOFORM	5.0	1600 U	UG/KG
BROMOMETHANE	5.0	1600 U	UG/KG
2-BUTANONE (MEK)	10	160 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1600 UJ	UG/KG
CARBON DISULFIDE	10	3300 U	UG/KG
CARBON TETRACHLORIDE	5.0	1600 U	UG/KG
CHLOROBENZENE	5.0	6100 DJ	UG/KG
CHLOROETHANE	10	3300 UJ	UG/KG
CHLOROFORM	5.0	1600 U	UG/KG
CHLOROMETHANE	5.0	1600 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1600 U	UG/KG
CYCLOHEXANE	5.0	1600 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1600 U	UG/KG
1,2-DIBROMOETHANE	5.0	1600 U	UG/KG
1,3-DICHLOROBENZENE	5.0	300 J	UG/KG
1,4-DICHLOROBENZENE	5.0	960 J	UG/KG
1,2-DICHLOROBENZENE	5.0	140 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1600 UJ	UG/KG
1,1-DICHLOROETHANE	5.0	1600 U	UG/KG
1,2-DICHLOROETHANE	5.0	1600 U	UG/KG
1,1-DICHLOROETHENE	5.0	1600 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1600 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1600 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1600 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1600 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1600 U	UG/KG
1,4-DIOXANE	100	130000 UJ	UG/KG
ETHYLBENZENE	5.0	1600 U	UG/KG
2-HEXANONE	10	3300 U	UG/KG
ISOPROPYLBENZENE	5.0	110 J	UG/KG
METHYL ACETATE	10	450 J	UG/KG
METHYLCYCLOHEXANE	5.0	1600 UJ	UG/KG
METHYLENE CHLORIDE	5.0	1600 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	3300 U	UG/KG
STYRENE	5.0	1600 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1600 U	UG/KG
TETRACHLOROETHENE	5.0	1600 U	UG/KG
TOLUENE	5.0	150 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	570 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1600 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-F-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057951 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 49.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/21/00			
ANALYTICAL DILUTION: 160.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1600 UJ	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1600 U	UG/KG
TRICHLOROETHENE	5.0	1600 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1600 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1600 U	UG/KG
VINYL CHLORIDE	5.0	1600 U	UG/KG
O-XYLENE	5.0	300 J	UG/KG
M+P-XYLENE	5.0	300 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	115	%
TOLUENE-D8	(75 - 128 %)	110	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

Don't repeat

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-F-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057951 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 49.2

DATE ANALYZED : 12/18/07
ANALYTICAL DILUTION: 1.24

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	330 J	UG/KG
BENZENE	5.0	7.7 J	UG/KG
BROMOCHLOROMETHANE	5.0	13 U	UG/KG
BROMODICHLOROMETHANE	5.0	13 U	UG/KG
BROMOFORM	5.0	13 U	UG/KG
BROMOMETHANE	5.0	13 U	UG/KG
2-BUTANONE (MEK)	10	69 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	13 U	UG/KG
CARBON DISULFIDE	10	13 J	UG/KG
CARBON TETRACHLORIDE	5.0	13 U	UG/KG
CHLOROBENZENE	5.0	6100 ~~2000 E~~ J	UG/KG
CHLOROETHANE	10	25 U	UG/KG
CHLOROFORM	5.0	13 U	UG/KG
CHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	13 U	UG/KG
CYCLOHEXANE	5.0	13 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMOETHANE	5.0	13 U	UG/KG
1,3-DICHLOROBENZENE	5.0	120 J	UG/KG
1,4-DICHLOROBENZENE	5.0	280	UG/KG
1,2-DICHLOROBENZENE	5.0	22	UG/KG
DICHLORODIFLUOROMETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHANE	5.0	13 U	UG/KG
1,2-DICHLOROETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHENE	5.0	13 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
1,2-DICHLOROPROPANE	5.0	13 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
1,4-DIOXANE	100	1000 ~~250~~ UJ	UG/KG
ETHYLBENZENE	5.0	4.1 J	UG/KG
2-HEXANONE	10	25 U	UG/KG
ISOPROPYLBENZENE	5.0	43 J	UG/KG
METHYL ACETATE	10	25 U	UG/KG
METHYLCYCLOHEXANE	5.0	49 J	UG/KG
METHYLENE CHLORIDE	5.0	13 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/KG
STYRENE	5.0	13 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/KG
TETRACHLOROETHENE	5.0	13 U	UG/KG
TOLUENE	5.0	12 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	13 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	13 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

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ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-F-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057951 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 49.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 1.24			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	13 U J	UG/KG
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/KG
TRICHLOROETHENE	5.0	13 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	0.98 J	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	13 U J	UG/KG
VINYL CHLORIDE	5.0	13 U J	UG/KG
O-XYLENE	5.0	150 J	UG/KG
M+P-XYLENE	5.0	81 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	61	%
TOLUENE-D8	(75 - 128 %)	107	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	93	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-G-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057952 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 58.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.18			Dry Weight
ACETONE	20	330	UG/KG
BENZENE	5.0	10 U	UG/KG
BROMOCHLOROMETHANE	5.0	10 U	UG/KG
BROMODICHLOROMETHANE	5.0	10 U	UG/KG
BROMOFORM	5.0	10 U	UG/KG
BROMOMETHANE	5.0	10 U	UG/KG
2-BUTANONE (MEK)	10	79	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	10 U	UG/KG
CARBON DISULFIDE	10	4.8 J	UG/KG
CARBON TETRACHLORIDE	5.0	10 U	UG/KG
CHLOROBENZENE	5.0	10 ~~5.1 J~~ U	UG/KG
CHLOROETHANE	10	20 U	UG/KG
CHLOROFORM	5.0	10 U	UG/KG
CHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	10 UJ	UG/KG
CYCLOHEXANE	5.0	1.5 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMOETHANE	5.0	10 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10 UJ	UG/KG
1,4-DICHLOROBENZENE	5.0	10 U	UG/KG
1,2-DICHLOROBENZENE	5.0	10 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHANE	5.0	10 U	UG/KG
1,2-DICHLOROETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHENE	5.0	10 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
1,2-DICHLOROPROPANE	5.0	10 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
1,4-DIOXANE	100	800 ~~200~~ UJ	UG/KG
ETHYLBENZENE	5.0	1.1 J	UG/KG
2-HEXANONE	10	20 U	UG/KG
ISOPROPYLBENZENE	5.0	10 U	UG/KG
METHYL ACETATE	10	20 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.8 J	UG/KG
METHYLENE CHLORIDE	5.0	10 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/KG
STYRENE	5.0	10 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	10 UJ	UG/KG
TETRACHLOROETHENE	5.0	10 U	UG/KG
TOLUENE	5.0	3.9 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	10 UJ	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	10 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-G-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057952 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303 **Percent Solid:** 58.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.18			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/KG
TRICHLOROETHENE	5.0	10 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	10 U	UG/KG
VINYL CHLORIDE	5.0	10 U	UG/KG
O-XYLENE	5.0	10 U	UG/KG
M+P-XYLENE	5.0	1.2 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	80	%
TOLUENE-D8	(75 - 128 %)	105	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	94	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB5-SC-3

Date Sampled : 12/12/07 14:40 **Order #:** 1058168 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741303 **Analytical Run** 155361

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.5 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100 U~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 UJ	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB5-SC-3

Date Sampled : 12/12/07 14:40 **Order #:** 1058168 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741303 **Analytical Run** 155361

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 UJ	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	111	%
TOLUENE-D8	(88 - 124 %)	109	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB6-SC-3

Date Sampled : 12/12/07 15:47 **Order #:** 1058169 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741303 **Analytical Run** 155361

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.9 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 UJ	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB6-SC-3

Date Sampled : 12/12/07 15:47 **Order #:** 1058169 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741303 **Analytical Run** 155361

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 UJ	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	109	%
TOLUENE-D8	(88 - 124 %)	107	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 8

Date Sampled : 12/12/07 09:45 **Order #:** 1058185 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741303 **Analytical Run** 155361

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 U	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 ~~0.30 JB~~ U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 UJ	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 8

Date Sampled : 12/12/07 09:45 **Order #:** 1058185 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741303 **Analytical Run** 155361

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 UJ	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	109	%
TOLUENE-D8	(88 - 124 %)	104	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	110	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 9

Date Sampled : 12/12/07 09:45 **Order #:** 1058186 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741303 **Analytical Run** 155361

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 U	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 UJ	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 9

Date Sampled : 12/12/07 09:45 **Order #:** 1058186 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741303 **Analytical Run** 155361

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 UJ	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	110	%
TOLUENE-D8	(88 - 124 %)	107	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	105	%

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Memorandum

Date: February 29, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation
Inorganic Analyses
Subsurficial Sediment Sampling, December 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2741303

Distribution: L. Herberich/Westford

00760-171-525 File
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SUMMARY

Limited validation was performed on the data for 15 sediment samples and two aqueous equipment blanks analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 7470A, 7471, and 7740 and/or total organic carbon (TOC) according to the Lloyd Kahn method. The samples were collected at the BASF Site in Rensselaer, NY on December 12, 2007 and submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741303.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

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SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD116N-SC-C-1	04SD116N-SC-D-1
04SD116N-SC-D-2 (Field duplicate of 04SD116N-SC-D-1)	04SD116N-SC-E-1
04SD116N-SC-F-1	04SD121N-SC-C-1
04SD121N-SC-D-1	04SD121N-SC-D-2 (Field duplicate of 04SD121N-SC-D-1)
04SD121N-SC-E-1	04SD121N-SC-F-1
04SD121N-SC-G-1	04SD122N-SC-E-1
04SD122N-SC-E-2 (Field duplicate of 04SD122N-SC-E-1)	04SD122N-SC-F-1
04SD122N-SC-G-1	04SD-EB5-SC-3 (equipment blank)
04SD-EB6-SC-3 (equipment blank)	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancies were noted.

- The sampling time was not listed on the COC for samples 04SD116N-SC-D-1, 04SD116N-SC-D-2, 04SD116N-SC-E-1, and 04SD116N-SC-F-1, 04SD121N-SC-D-1 and 04SD121N-SC-

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D-2. The laboratory used the sampling times listed on the bottles to log in the samples. No validation action was taken on this basis.

- The sampling date was not listed on the COC for samples 04SD116N-SC-C-1, 04SD116N-SC-D-1, 04SD116N-SC-D-2, 04SD116N-SC-E-1, and 04SD116N-SC-F-1. The laboratory used the sampling dates listed on the bottles to log in the samples. No validation action was taken on this basis.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were digested and/or analyzed within the method and QAPP specified holding times.

Calibrations

TAL Metals

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the laboratory's reporting limit (RL) with the exceptions of barium which was spiked at 10x the RL and antimony which was spiked at 6x the RL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes with the exceptions of aluminum and lead. The following table summarizes the standard recoveries that fell outside the QC acceptance criteria and the associated samples.

Date Analyzed	Standard	Analyte	%R	True Value CRI
12/28/07	CRI2	Lead	134	10 µg/L
12/28/07	CRI3	Aluminum	61	200 µg/L
12/28/07	CRI3	Lead	140	10 µg/L
Associated Samples: 04SD-EB5-SC-3 and 04SD-EB6-SC-3				

Sample results were qualified as follows:

- If the %R was >130% but <180%, and the positive sample result was < 2x the concentration of the check standard, then the positive result was qualified as estimated (J).
- If the %R was >130% but <180%, then the nondetect result was accepted unqualified.
- If the %R was <70% but >50%, and the positive sample result was < 2x the concentration of the check standard, then the positive result was qualified as estimated (J).
- If the %R was <70% but >50%, then the nondetect result was qualified as estimated (UJ).

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TOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

TAL Metals

Target analytes were not detected in the laboratory method blanks or in the initial and continuing calibration blanks (ICBs/CCBs) associated with all samples in this sample set. Lead was detected in equipment blanks 04SD-EB5-SC-3 and 04SD-EB6-SC-3 at concentrations greater than the laboratory reporting limits (RLs). Qualification of the sample results was not required since the concentration of lead detected in all sediment samples exceeded 10x the concentration detected in the associated equipment blank sample. The following table summarizes the blank contamination detected in the equipment blank samples and the associated samples.

Source of Contamination	Analyte	Concentration (µg/L)	Associated Samples
04SD-EB5-SC-3 (equipment blank)	Lead	6.9	04SD121N-SC-C-1, 04SD121N-SC-D-1 04SD121N-SC-D-2, 04SD122N-SC-E-1 04SD122N-SC-E-2, 04SD122N-SC-F-1 04SD122N-SC-G-1
04SD-EB5-SC-3 (equipment blank)	Lead	5.2	04SD121N-SC-E-1, 04SD121N-SC-F-1 04SD121N-SC-G-1, 04SD116N-SC-C-1 04SD116N-SC-D-1, 04SD116N-SC-D-2 04SD116N-SC-E-1, 04SD116N-SC-F-1

TOC

An equipment blank was not submitted with the samples in this sample set. No validation action was taken on this basis.

TOC was not detected in the laboratory method blank or in the ICB/CCBs associated with all samples in this sample set.

ICP Interference Check Sample Results

TAL Metals

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

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MS Results

TAL Metals

An MS analysis was performed on sample 04SD116N-SC-C-1 for all analytes in association with the sediment samples in this data set. With the following exception, the %Rs of the spiked target analytes were all within the QC acceptance criteria for sample results that were <4x the amount spiked.

Analyte	MS %R	QC Acceptance Range	Actions (Detects/Nondetects)
Antimony	74	75-125%	Estimate J/UJ
Associated Samples: All sediment samples in this data set.			

The ICP post-digestion spike (PDS) was performed on sample 04SD116N-SC-C-1 for all analytes except selenium and mercury. The %Rs of the post-digestion spike were within the QC acceptance criteria for sample results that were <4x the amount spiked.

TOC

An MS analysis was not performed on a sample from this sample set. No validation action was taken on this basis.

Laboratory Duplicate Results

TAL Metals

A laboratory duplicate analysis was performed on sample 04SD116N-SC-C-1. The relative percent differences (RPDs) met the QC acceptance criteria for all analytes.

TOC

A laboratory duplicate analysis was not performed on a sample from this sample set. No validation action was taken on this basis.

Field Duplicate Results

TAL Metals

Samples 04SD116N-SC-D-1/04SD116N-SC-D-2, 04SD121N-SC-D-1/04SD121N-SC-D-2, and 04SD122N-SC-E-1/04SD122N-SC-E-2 were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD116N-SC-D-1 and 04SD116N-SC-D-2.

Analyte	04SD116N-SC-D-1 (mg/Kg)	04SD116N-SC-D-2 (mg/Kg)	RPD
Aluminum	16900	18800	11
Antimony	1.8 U	3.0	NC
Arsenic	11.5	13.3	15

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Analyte	04SD116N-SC-D-1 (mg/Kg)	04SD116N-SC-D-2 (mg/Kg)	RPD
Barium	168	232	32
Cadmium	9.1	14.6	46
Calcium	7600	8820	15
Chromium	246	332	30
Cobalt	14.2	13.5	5
Copper	211	228	8
Iron	27200	29600	8
Lead	247	329	28
Magnesium	7010	6940	1
Manganese	666	950	35
Mercury	0.85	1.0	16
Nickel	38.2	33.8	12
Potassium	2290	2670	15
Silver	2.3	2.6	12
Vanadium	32.6	42.0	25
Zinc	442	554	22
Criteria: RPD ≤35% if both results are >5x SQL.			

NC-Not calculable due to a nondetect result in the original or duplicate sample

Results for samples 04SD116N-SC-D-1 and 04SD116N-SC-D-2 were qualified as follows.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD121N-SC-D-1 and 04SD121N-SC-D-2.

Analyte	04SD121N-SC-D-1 (mg/Kg)	04SD121N-SC-D-2 (mg/Kg)	RPD
Aluminum	16500	16600	1
Arsenic	23.5	19.9	17
Barium	182	160	13
Cadmium	3.1	2.1	38
Calcium	6580	7190	9
Chromium	143	110	26
Cobalt	13.2	13.5	2
Copper	191	179	6
Iron	30300	29100	4
Lead	317	273	15
Magnesium	6860	7410	8
Manganese	627	570	10

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Analyte	04SD121N-SC-D-1 (mg/Kg)	04SD121N-SC-D-2 (mg/Kg)	RPD
Mercury	3.9	2.4	48
Nickel	30.1	29.7	1
Potassium	2350	2320	1
Silver	2.4	3.0	22
Vanadium	29.1	29.2	0.3
Zinc	491	426	14
Criteria: RPD ≤35% if both results are >5x SQL.			

Results for samples 04SD121N-SC-D-1 and 04SD121N-SC-D-2 were qualified as follows.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD122N-SC-E-1 and 04SD122N-SC-E-2. All RPDs met the QC acceptance criteria.

Analyte	04SD122N-SC-E-1 (mg/Kg)	04SD122N-SC-E-2 (mg/Kg)	RPD
Aluminum	12000	12800	6
Arsenic	11.7	11.8	1
Barium	133	123	8
Cadmium	4.1	3.0	31
Calcium	4820	5640	16
Chromium	216	183	17
Cobalt	9.3	10.0	7
Copper	140	151	8
Iron	21300	23700	11
Lead	355	379	7
Magnesium	4950	5430	9
Manganese	453	481	6
Mercury	1.8	1.3	32
Nickel	24.8	25.7	4
Potassium	1530	1590	4
Silver	1.8	1.7	6
Vanadium	24.9	25.0	0.4
Zinc	537	404	28
Criteria: RPD ≤35% if both results are >5x SQL.			

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TOC

Samples 04SD116N-SC-D-1/04SD116N-SC-D-2, 04SD121N-SC-D-1/04SD121N-SC-D-2, and 04SD122N-SC-E-1/04SD122N-SC-E-2 were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPD of TOC in field duplicate samples 04SD116N-SC-D-1 and 04SD116N-SC-D-2. The RPD of TOC was within the acceptance criteria.

Compound	04SD116N-SC-D-1 (mg/Kg)	04SD116N-SC-D-2 (mg/Kg)	RPD
TOC	46200	38800	17
Criteria: RPD ≤35% if both results are >5x RL.			

The following table summarizes the RPD of TOC in field duplicate samples 04SD121N-SC-D-1 and 04SD121N-SC-D-2. The RPD of TOC was within the acceptance criteria.

Compound	04SD121N-SC-D-1 (mg/Kg)	04SD121N-SC-D-2 (mg/Kg)	RPD
TOC	63900	56000	13
Criteria: RPD ≤35% if both results are >5x RL.			

The following table summarizes the RPD of TOC in field duplicate samples 04SD122N-SC-E-1 and 04SD122N-SC-E-2. The RPD of TOC was within the acceptance criteria.

Compound	04SD122N-SC-E-1 (mg/Kg)	04SD122N-SC-E-2 (mg/Kg)	RPD
TOC	27800	22500	21
Criteria: RPD ≤35% if both results are >5x RL.			

LCS Results

TAL Metals

The LCSs associated with the sediment samples met the vendor's QC acceptance limits.

The LCSs associated with the aqueous equipment blank samples met the 80-120% recovery criteria.

TOC

The LCS associated with the sediment samples met the laboratory QC acceptance limits.

ICP Serial Dilution Results

TAL Metals

Serial dilution analyses were performed on sediment sample 04SD116N-SC-C-1 for all ICP metals; and on aqueous equipment blank sample 04SD-EB6-SC-3 for all ICP metals in association with all

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samples in this data set. All analytes met the percent difference (%D) QC acceptance criteria in the serial dilution analyses of samples 04SD116N-SC-C-1and 04SD-EB6-SC-3.

Sample Quantitation/Detection Limit Results

The percent (%) solids content for all samples was greater than 50% with the following exception: 04SD122N-SC-F-1 (49.2%). The positive and nondetect results for TAL metals in samples 04SD122-SC-F-1 were qualified as estimated (J, UJ).

TAL Metals

All metals results were reported to the sample quantitation limit (SQL). Due to software limitations, metal results greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantitation limits were achieved for all metals except and sodium.

The following table summarizes the SQL that exceeded the project-specific quantitation limit listed in the QAPP. No validation action was taken other than to note this discrepancy.

Analyte	Laboratory SQL (mg/Kg)	Project QL (mg/Kg)
Sodium	100	1.0

The following table summarizes the samples that were analyzed at dilutions due to the elevated concentration of these analytes in the respective samples. Sample results were adjusted accordingly.

Sample ID	Analyte	Dilution
04SD116N-SC-C-1	Zinc	5x
04SD116N-SC-D-1	Zinc	5x
04SD116N-SC-D-2	Zinc	5x
04SD116N-SC-E-1	Zinc	5x
	Mercury	5x
04SD116N-SC-F-1	Mercury	5x
04SD121N-SC-D-1	Zinc	5x
	Mercury	5x
04SD121N-SC-D-2	Zinc	5x
04SD121N-SC-G-1	Calcium	5x
	Selenium	5x
04SD122N-SC-E-1	Zinc	5x
04SD122N-SC-E-2	Zinc	5x
04SD122N-SC-F-1	Zinc	5x
04SD122N-SC-G-1	Iron	5x
	Manganese	5x
	Selenium	5x

TOC

Due to software limitation, the TOC SQL reported for all surface sediment samples was 300 mg/Kg even though the initial weights varied on a sample-by-sample basis. No actions were taken other than to note this discrepancy.

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD116N-SC-C-1

tract: R2741303

Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

:ix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057924

ɜl (low/med): LOW Date Received: 12/13/07

›lids: 50.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17700			P
7440-36-0	Antimony	3.7	J	N	P
7440-38-2	Arsenic	10.8			P
7440-39-3	Barium	212			P
7440-41-7	Beryllium	0.99	U		P
7440-43-9	Cadmium	14.5			P
7440-70-2	Calcium	9770			P
7440-47-3	Chromium	350			P
7440-48-4	Cobalt	14.7			P
7440-50-8	Copper	130			P
7439-89-6	Iron	31000			P
7439-92-1	Lead	396		*	P
7439-95-4	Magnesium	7710			P
7439-96-5	Manganese	1080			P
7439-97-6	Mercury	1.2			CV
7440-02-0	Nickel	34.6			P
7440-09-7	Potassium	2370			P
7782-49-2	Selenium	0.99	U		F
7440-22-4	Silver	2.4			P
7440-23-5	Sodium	198	U		P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	39.6			P
7440-66-6	Zinc	421			P

or Before: GREY Clarity Before: Texture: MEDIUM

or After: YELLOW Clarity After: CLEAR Artifacts:

ments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD116N-SC-D-1

ntract: R2741303

b Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057926

vel (low/med): LOW Date Received: 12/13/07

Solids: 54.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16900			P
7440-36-0	Antimony	1.8	UJ	N	P
7440-38-2	Arsenic	11.5			P
7440-39-3	Barium	168			P
7440-41-7	Beryllium	0.91	U		P
7440-43-9	Cadmium	9.1		J	P
7440-70-2	Calcium	7600			P
7440-47-3	Chromium	246			P
7440-48-4	Cobalt	14.2			P
7440-50-8	Copper	211			P
7439-89-6	Iron	27200			P
7439-92-1	Lead	247		*	P
7439-95-4	Magnesium	7010			P
7439-96-5	Manganese	666			P
7439-97-6	Mercury	0.85			CV
7440-02-0	Nickel	38.2			P
7440-09-7	Potassium	2290			P
7782-49-2	Selenium	0.92	U		F
7440-22-4	Silver	2.3			P
7440-23-5	Sodium	182	U		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	32.6			P
7440-66-6	Zinc	442			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD116N-SC-D-2

Contract: R2741303

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057925

Level (low/med): LOW Date Received: 12/13/07

% Solids: 52.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18800			P
7440-36-0	Antimony	3.0	J	N	P
7440-38-2	Arsenic	13.3			P
7440-39-3	Barium	232			P
7440-41-7	Beryllium	0.94	U		P
7440-43-9	Cadmium	14.6		J	P
7440-70-2	Calcium	8820			P
7440-47-3	Chromium	332			P
7440-48-4	Cobalt	13.5			P
7440-50-8	Copper	228			P
7439-89-6	Iron	29600			P
7439-92-1	Lead	329		N	P
7439-95-4	Magnesium	6940			P
7439-96-5	Manganese	950			P
7439-97-6	Mercury	1.0			CV
7440-02-0	Nickel	33.8			P
7440-09-7	Potassium	2670			P
7782-49-2	Selenium	0.92	U		F
7440-22-4	Silver	2.6			P
7440-23-5	Sodium	189	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	42.0			P
7440-66-6	Zinc	554			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD116N-SC-E-1

ontract: R2741303

ab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057927

evel (low/med): LOW Date Received: 12/13/07

Solids: 52.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18700			P
7440-36-0	Antimony	4.3	J	N	P
7440-38-2	Arsenic	21.8			P
7440-39-3	Barium	258			P
7440-41-7	Beryllium	0.93	U		P
7440-43-9	Cadmium	20.0			P
7440-70-2	Calcium	8690			P
7440-47-3	Chromium	429			P
7440-48-4	Cobalt	12.6			P
7440-50-8	Copper	200			P
7439-89-6	Iron	27700			P
7439-92-1	Lead	403		N	P
7439-95-4	Magnesium	6850			P
7439-96-5	Manganese	538			P
7439-97-6	Mercury	3.5			CV
7440-02-0	Nickel	41.7			P
7440-09-7	Potassium	2360			P
7782-49-2	Selenium	0.94	U		F
7440-22-4	Silver	2.9			P
7440-23-5	Sodium	187	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	45.1			P
7440-66-6	Zinc	743			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD116N-SC-F-1

Contract: R2741303

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-(

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057928

Level (low/med): LOW Date Received: 12/13/07

% Solids: 58.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16500			P
7440-36-0	Antimony	1.7	U	N	P
7440-38-2	Arsenic	19.2			P
7440-39-3	Barium	159			P
7440-41-7	Beryllium	0.84			P
7440-43-9	Cadmium	2.2			P
7440-70-2	Calcium	7110			P
7440-47-3	Chromium	104			P
7440-48-4	Cobalt	13.9			P
7440-50-8	Copper	117			P
7439-89-6	Iron	29400			P
7439-92-1	Lead	248		*	P
7439-95-4	Magnesium	7450			P
7439-96-5	Manganese	718			P
7439-97-6	Mercury	4.7			CV
7440-02-0	Nickel	29.6			P
7440-09-7	Potassium	2160			P
7782-49-2	Selenium	0.83	U		F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	167	U		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	26.2			P
7440-66-6	Zinc	311			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD121N-SC-C-1

ontract: R2741303

ab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057933

evel (low/med): LOW Date Received: 12/13/07

Solids: 52.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15400			P
7440-36-0	Antimony	1.8	U	N	P
7440-38-2	Arsenic	14.3			P
7440-39-3	Barium	155			P
7440-41-7	Beryllium	0.92	U		P
7440-43-9	Cadmium	3.1			P
7440-70-2	Calcium	6370			P
7440-47-3	Chromium	135			P
7440-48-4	Cobalt	12.8			P
7440-50-8	Copper	137			P
7439-89-6	Iron	26500			P
7439-92-1	Lead	277		N	P
7439-95-4	Magnesium	6580			P
7439-96-5	Manganese	655			P
7439-97-6	Mercury	2.3			CV
7440-02-0	Nickel	28.4			P
7440-09-7	Potassium	2260			P
7782-49-2	Selenium	0.93	U		F
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	183	U		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	29.1			P
7440-66-6	Zinc	337			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD121N-SC-D-1

ntract: R2741303

b Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057934

vel (low/med): LOW Date Received: 12/13/07

Solids: 52.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16500			P
7440-36-0	Antimony	1.8	UJ	N	P
7440-38-2	Arsenic	23.5			P
7440-39-3	Barium	182			P
7440-41-7	Beryllium	0.92	U		P
7440-43-9	Cadmium	3.1			P
7440-70-2	Calcium	6580			P
7440-47-3	Chromium	143			P
7440-48-4	Cobalt	13.2			P
7440-50-8	Copper	191			P
7439-89-6	Iron	30300			P
7439-92-1	Lead	317		J	P
7439-95-4	Magnesium	6860			P
7439-96-5	Manganese	627			P
7439-97-6	Mercury	3.9		J	CV
7440-02-0	Nickel	30.1			P
7440-09-7	Potassium	2350			P
7782-49-2	Selenium	0.91	U		F
7440-22-4	Silver	2.4			P
7440-23-5	Sodium	184	U		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	29.1			P
7440-66-6	Zinc	491			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD121N-SC-D-2

Contract: R2741303

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057935

Level (low/med): LOW Date Received: 12/13/07

% Solids: 51.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16600			P
7440-36-0	Antimony	1.9	U	J N	P
7440-38-2	Arsenic	19.9			P
7440-39-3	Barium	160			P
7440-41-7	Beryllium	0.95	U		P
7440-43-9	Cadmium	2.1			P
7440-70-2	Calcium	7190			P
7440-47-3	Chromium	110			P
7440-48-4	Cobalt	13.5			P
7440-50-8	Copper	179			P
7439-89-6	Iron	29100			P
7439-92-1	Lead	273		*	P
7439-95-4	Magnesium	7410			P
7439-96-5	Manganese	570			P
7439-97-6	Mercury	2.4		J	CV
7440-02-0	Nickel	29.7			P
7440-09-7	Potassium	2320			P
7782-49-2	Selenium	0.93	U		P
7440-22-4	Silver	3.0			P
7440-23-5	Sodium	190	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	29.2			P
7440-66-6	Zinc	426			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD121N-SC-E-1

Contract: R2741303

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-(

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057936

Level (low/med): LOW Date Received: 12/13/07

Solids: 61.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12300			P
7440-36-0	Antimony	1.6	U	N	P
7440-38-2	Arsenic	10.2			P
7440-39-3	Barium	124			P
7440-41-7	Beryllium	0.81	U		P
7440-43-9	Cadmium	1.5			P
7440-70-2	Calcium	5890			P
7440-47-3	Chromium	61.1			P
7440-48-4	Cobalt	10.9			P
7440-50-8	Copper	87.5			P
7439-89-6	Iron	23600			P
7439-92-1	Lead	215		*	P
7439-95-4	Magnesium	5830			P
7439-96-5	Manganese	478			P
7439-97-6	Mercury	1.4			CV
7440-02-0	Nickel	22.6			P
7440-09-7	Potassium	1760			P
7782-49-2	Selenium	0.78	U		F
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium	162	U		P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	20.7			P
7440-66-6	Zinc	254			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD121N-SC-F-1

ontract: R2741303

ab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057937

evel (low/med): LOW Date Received: 12/13/07

Solids: 56.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15100			P
7440-36-0	Antimony	1.7	U	N	P
7440-38-2	Arsenic	17.1			P
7440-39-3	Barium	206			P
7440-41-7	Beryllium	0.87	U		P
7440-43-9	Cadmium	2.3			P
7440-70-2	Calcium	7060			P
7440-47-3	Chromium	94.7			P
7440-48-4	Cobalt	12.6			P
7440-50-8	Copper	215			P
7439-89-6	Iron	27100			P
7439-92-1	Lead	270			P
7439-95-4	Magnesium	6850			P
7439-96-5	Manganese	527			P
7439-97-6	Mercury	2.4			CV
7440-02-0	Nickel	27.0			P
7440-09-7	Potassium	2080			P
7782-49-2	Selenium	0.85	U		F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	175	U		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	28.3			P
7440-66-6	Zinc	347			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD121N-SC-G-1

Contract: R2741303

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-(

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057938

Level (low/med): LOW Date Received: 12/13/07

% Solids: 80.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16500			P
7440-36-0	Antimony	1.2	U	J N	P
7440-38-2	Arsenic	9.1			P
7440-39-3	Barium	126			P
7440-41-7	Beryllium	0.91			P
7440-43-9	Cadmium	0.61	U		P
7440-70-2	Calcium	30300			P
7440-47-3	Chromium	23.1			P
7440-48-4	Cobalt	15.1			P
7440-50-8	Copper	39.6			P
7439-89-6	Iron	31800			P
7439-92-1	Lead	17.6		J	P
7439-95-4	Magnesium	11900			P
7439-96-5	Manganese	699			P
7439-97-6	Mercury	0.07			CV
7440-02-0	Nickel	33.6			P
7440-09-7	Potassium	3090			P
7782-49-2	Selenium	3.1	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	197			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	29.6			P
7440-66-6	Zinc	76.5			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD122N-SC-E-1

Contract: R2741303

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-(

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057947

Level (low/med): LOW Date Received: 12/13/07

% Solids: 62.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12000			P
7440-36-0	Antimony	1.5	U	N	P
7440-38-2	Arsenic	11.7			P
7440-39-3	Barium	133			P
7440-41-7	Beryllium	0.77	U		P
7440-43-9	Cadmium	4.1			P
7440-70-2	Calcium	4820			P
7440-47-3	Chromium	216			P
7440-48-4	Cobalt	9.3			P
7440-50-8	Copper	140			P
7439-89-6	Iron	21300			P
7439-92-1	Lead	355		J	P
7439-95-4	Magnesium	4950			P
7439-96-5	Manganese	453			P
7439-97-6	Mercury	1.8			CV
7440-02-0	Nickel	24.8			P
7440-09-7	Potassium	1530			P
7782-49-2	Selenium	0.77	U		F
7440-22-4	Silver	1.8			P
7440-23-5	Sodium	153	U		P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	24.9			P
7440-66-6	Zinc	537			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD122N-SC-E-2

ntract: R2741303

b Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057950

vel (low/med): LOW Date Received: 12/13/07

Solids: 63.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12800			P
7440-36-0	Antimony	1.5	U	J N	P
7440-38-2	Arsenic	11.8			P
7440-39-3	Barium	123			P
7440-41-7	Beryllium	0.77	U		P
7440-43-9	Cadmium	3.0			P
7440-70-2	Calcium	5640			P
7440-47-3	Chromium	183			P
7440-48-4	Cobalt	10.0			P
7440-50-8	Copper	151			P
7439-89-6	Iron	23700			P
7439-92-1	Lead	379		J	P
7439-95-4	Magnesium	5430			P
7439-96-5	Manganese	481			P
7439-97-6	Mercury	1.3			CV
7440-02-0	Nickel	25.7			P
7440-09-7	Potassium	1590			P
7782-49-2	Selenium	0.79	U		F
7440-22-4	Silver	1.7			P
7440-23-5	Sodium	154	U		P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	25.0			P
7440-66-6	Zinc	404			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD122N-SC-F-1

ontract: R2741303

ab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-(

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057951

evel (low/med): LOW Date Received: 12/13/07

Solids: 49.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19400	J		P
7440-36-0	Antimony	3.2		N	P
7440-38-2	Arsenic	14.9			P
7440-39-3	Barium	238			P
7440-41-7	Beryllium	1.0	UJ		P
7440-43-9	Cadmium	8.1	J		P
7440-70-2	Calcium	7190			P
7440-47-3	Chromium	463			P
7440-48-4	Cobalt	13.0			P
7440-50-8	Copper	301			P
7439-89-6	Iron	28200			P
7439-92-1	Lead	398			P
7439-95-4	Magnesium	6830			P
7439-96-5	Manganese	533			P
7439-97-6	Mercury	3.3			CV
7440-02-0	Nickel	38.7			P
7440-09-7	Potassium	2480			P
7782-49-2	Selenium	0.99	UJ		F
7440-22-4	Silver	3.4	J		P
7440-23-5	Sodium	263	J		P
7440-28-0	Thallium	2.0	UJ		P
7440-62-2	Vanadium	40.7	J		P
7440-66-6	Zinc	1080	J		P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD122N-SC-G-1

ontract: R2741303

ab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-(

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057952

evel (low/med): LOW Date Received: 12/13/07

Solids: 58.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13000			P
7440-36-0	Antimony	1.7	U	J N	P
7440-38-2	Arsenic	10.0			P
7440-39-3	Barium	142			P
7440-41-7	Beryllium	0.84	U		P
7440-43-9	Cadmium	1.6			P
7440-70-2	Calcium	23000			P
7440-47-3	Chromium	44.7			P
7440-48-4	Cobalt	12.1			P
7440-50-8	Copper	86.0			P
7439-89-6	Iron	59600			P
7439-92-1	Lead	102		N	P
7439-95-4	Magnesium	9080			P
7439-96-5	Manganese	1930			P
7439-97-6	Mercury	1.2			CV
7440-02-0	Nickel	25.8			P
7440-09-7	Potassium	2230			P
7782-49-2	Selenium	4.3	U		F
7440-22-4	Silver	1.8			P
7440-23-5	Sodium	234			P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	23.3			P
7440-66-6	Zinc	187			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD-EB5-SC-3

Contract: R2741303

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

Matrix (soil/water): WATER Lab Sample ID: 1058168

Level (low/med): LOW Date Received: 12/13/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	~~U~~	UJ	P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	6.9			P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD-EB6-SC-3

Contract: R2741303

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

Matrix (soil/water): WATER Lab Sample ID: 1058169

Level (low/med): LOW Date Received: 12/13/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U	UJ	P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	5.2			P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-C-1

Date Sampled : 12/12/07 13:14 Order #: 1057924 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	50.6	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	42000	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-D-1

Date Sampled : 12/12/07 13:14 Order #: 1057926 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	54.4	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	46200	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-D-2

Date Sampled : 12/12/07 13:14 Order #: 1057925 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	52.5	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	38800	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-E-1

Date Sampled : 12/12/07 13:14 Order #: 1057927 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	52.0	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	54700	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-F-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057928 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	58.7	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	70100	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-C-1

Date Sampled : 12/12/07 12:55 Order #: 1057933 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	52.4	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	51400	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-D-1

Date Sampled : 12/12/07 12:55 Order #: 1057934 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	52.9	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	63900	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-D-2

Date Sampled : 12/12/07 12:55 **Order #:** 1057935 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	51.2	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	56000	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-E-1

Date Sampled : 12/12/07 12:55 Order #: 1057936 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	61.8	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	41900	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-F-1

Date Sampled : 12/12/07 12:55 Order #: 1057937 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	56.6	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	72600	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD121N-SC-G-1

Date Sampled : 12/12/07 12:55 Order #: 1057938 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	80.2	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3240	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-E-1

Date Sampled : 12/12/07 12:26 Order #: 1057947 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	62.7	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	27800	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-E-2

Date Sampled : 12/12/07 12:26 Order #: 1057950 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	63.0	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	22500	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-F-1

Date Sampled : 12/12/07 12:26 Order #: 1057951 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	49.2	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	56300	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-G-1

Date Sampled : 12/12/07 12:26 Order #: 1057952 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741303

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	58.3	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	34400	MG/KG	12/17/07	08:30	1.0

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Memorandum

Date: February 8, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation, VOC Analysis
Subsurficial Sediment Sampling, December 2007
BASF Rensselaer Site, NY
CAS Submission # R2741302

Distribution: L. Herberich/Westford

00760-171-525 File
BR025voclms.doc

SUMMARY

Limited validation was performed on the data for 13 sediment samples, two equipment blanks, and two trip blanks analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The sediment samples were collected at the BASF site in Rensselaer, NY, on December 12, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741302.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data appear valid as reported and may be used for decision making purposes. Selected data points in three sediment samples were rejected due to very low internal standard area recoveries. Selected other data points were qualified as undetected (U) due to blank contamination or were qualified due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD123N-SC-C-1	04SD123N-SC-D-1
04SD123N-SC-E-1	04SD123N-SC-F-1
04SD123N-SC-G-1	04SD123N-SC-G-2 (Field duplicate of 04SD123N-SC-G-1)
04SD129N-SC-C-1	04SD129N-SC-D-1

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Sample IDs	
04SD129N-SC-E-1	04SD129N-SC-E-2 (Field duplicate of 04SD129N-SC-E-1)
04SD129N-SC-F-1	04SD129N-SC-G-1
04SD129N-SC-H-1	04SD-EB3-SC-3 (equipment blank)
04SD-EB4-SC-3 (equipment blank)	Trip Blank 1
Trip Blank 6	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard (IS) recoveries
- Sample quantitation/reporting limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancies were noted.

- Trip Blank 5 was listed on the COC for VOC analysis. All three vials for this trip blank were received broken at the laboratory. The analysis of this sample was therefore cancelled.

- One of three VOC vials for Trip Blank 6 contained a large air bubble as noted by the laboratory on the Cooler Receipt and Preservation Check Form. The laboratory performed the VOC analysis on one of the remaining two vials. No validation action was taken on this basis.

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Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were analyzed within the method-specified holding time.

GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations (IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 10/02/07 (MSVOA7)	1,4-Dioxane	0.006	J/UJ*
Associated samples: 04SD123N-SC-C-1, 04SD129N-SC-E-1, 04SD129N-SC-E-2, 04SD-EB3-SC-3, 04SD-EB4-SC-3, Trip Blank 1, and Trip Blank 6			
IC 10/03/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 04SD123N-SC-D-1, 04SD123N-SC-E-1, 04SD123N-SC-F-1, 04SD123N-SC-G-1RE, 04SD123N-SC-G-2, 04SD129N-SC-C-1, 04SD129N-SC-D-1, 04SD129N-SC-F-1, 04SD129N-SC-G-1, 04SD129N-SC-H-1			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			
RE – Reanalysis			

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Calibration (Instrument ID)	Compound	RRF	%D	Actions (Detects/Nondetects)
CC 12/15/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated samples: 04SD123N-SC-F-1, 04SD123N-SC-G-2, 04SD129N-SC-C-1, and 04SD129F-SC-D-1				
CC 12/17/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated samples: 04SD123N-SC-D-1, 04SD123N-SC-E-1, 04SD129N-SC-F-1, and 04SD129N-SC-G-1				
CC 12/19/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated samples: 04SD129N-SC-H-1 and 04SD123N-SC-G-1RE				
CC 12/19/07 (MSVOA7)	1,4-Dioxane	0.005	ok	J/UJ*
	2-Butanone	ok	25.6	J/UJ
	4-Methyl-2-pentanone	ok	20.7	J/UJ
	2-Hexanone	ok	21.6	J/UJ
	1,1,2,2-Tetrachloroethane	ok	27.4	J/UJ
	1,2-Dibromo-3-chloropropane	ok	27.0	J/UJ
Associated samples: Trip Blank 1, Trip Blank 6, 04SD-EB3-SC-3, 04SD-EB4-SC-3, 04SD129N-SC-E-1, and 04SD123N-SC-C-1				
CC 12/20/07 (MSVOA7)	1,4-Dioxane	0.005	ok	J/UJ*
Associated sample: 04SD129N-SC-E-2				
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.				
RE - Reanalysis				

Laboratory Blanks/Equipment Blanks/Trip Blanks

Several target compounds were detected in the laboratory method blanks, equipment blank, and trip blanks associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected and the associated samples.

Blank type (lab ID)	Compound	Concentration (units)
Method (WAT BLK4)	Methylene chloride	0.31 J µg/L
Associated samples: Trip Blank 1, Trip Blank 6, 04SD-EB3-SC-3, and 04SD-EB4-SC-3.		
Method (SOIL BLK2)	Methylene chloride	0.36 J µg/Kg
Associated samples: 04SD123N-SC-D-1, 04SD123N-SC-E-1, and 04SD129N-SC-F-1		
Method (SOIL BLK3)	Chlorobenzene	0.43 J µg/Kg
Associated samples: 04SD129N-SC-H-1 and 04SD123N-SC-G-1RE		
04SD-EB3-SC-3 (equipment)	Acetone	1.7 J µg/L
Associated samples: All sediment samples in this data set.		
RE – reanalysis		

Sample results were qualified as follows:

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For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	≤ RL	Report sample RL value with a U
		> RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**

* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.
**Based on ENSR professional judgment
RL (Reporting Limit) is equivalent to the lowest calibration standard

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC detected	Detects	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**

* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.
**Based on ENSR professional judgment
RL (Reporting Limit) is equivalent to the lowest calibration standard
TIC = Tentatively Identified Compound

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Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses with the following exceptions.

Sample	%R DBFM	%R Tol-d8	%R BFB	Actions (Detects/Nondetects)
04SD123N-SC-F-1	ok	133	34	J/UJ
04SD123N-SC-G-1RE	218	165	37	J/UJ
04SD123N-SC-G-2	233	158	41	J/UJ
Note: Several nondetect results for sample 04SD123N-SC-F-1 were rejected (R) due to very low internal standard (IS) recoveries. Most to all nondetect results for samples 04SD123N-SC-G-1RE and 04SD123N-SC-G-2 were rejected (R) due to very low IS recoveries. (See discussion below under **Internal Standards**)				
DBFM – Dibromofluoromethane Tol-d8 – Toluene-d8 BFB- Bromofluorobenzene RE - Reanalysis				

The initial analysis of sample 04SD123N-SC-G-1 had all internal standard recoveries below 25%. The sample was re-analyzed and the recovery of one of the four internal standards was above 25%. The re-analysis was reported by the validator since it exhibited slightly higher internal standard recoveries.

Samples 04SD123N-SC-F-1 and 04SD123N-SC-G-2 were also reanalyzed due to poor internal standard recoveries in the initial analyses. The initial analyses of these samples were reported by the validator since the internal standard recoveries were slightly higher in the initial analysis.

The laboratory noted in the case narrative that the VOC vials for samples 04SD123N-SC-F-1, 04SD123N-SC-G-1, and 04SD123N-SC-G-2 could have contained small particulate matter between the septum and the sealing lip of the vials. This particulate matter may have caused the purge gas to therefore leak from the vial during analysis of the samples thereby causing the poor surrogate recoveries and the low bias in the internal standard area recoveries.

MS/MSD Results

MS/MSD analyses were performed on sample 04SD123N-SC-C-1. All target compounds were spiked for the MS and MSD analyses. All %Rs and relative percent differences (RPDs) were within the QC acceptance criteria with the following exception.

Compound	M/S/MSD %R (RPD)	QC Limits %R (RPD)	Actions (Detects/Nondetects)
Dichlorodifluoromethane	ok/132 (ok)	70-130 (30)	Estimate (J)/Accept result
Associated sample: 04SD123N-SC-C-1			

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LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses with the following exceptions.

Compound	LCS %R	QC Limits %R	Actions (Detects/Nondetects)
Dichlorodifluoromethane	136	70-130	Estimate (J)/Accept result
Associated samples: 04SD129N-SC-H-1, 04SD123N-SC-G-1RE.			
Dichlorodifluoromethane	132	70-130	Estimate (J)/Accept result
Associated samples: Trip Blank 1, Trip Blank 6, 04SD-EB3-SC-3, and 04SD-EB4-SC-3.			
Dichlorodifluoromethane	132	70-130	Estimate (J)/Accept result
Associated samples: 04SD129N-SC-E-1 and 04SD123N-SC-C-1			
Dichlorodifluoromethane	141	70-130	Estimate (J)/Accept result
Associated sample: 04SD129N-SC-E-2			

Field Duplicate Results

Samples 04SD123N-SC-G-1/04SD123N-SC-G-2 and 04SD129N-SC-E-1/04SD129N-SC-E-2 were submitted as the field duplicate pairs with this sample set.

The RPDs of the detected compounds in field duplicate samples 04SD123N-SC-G-1/04SD123N-SC-G-2 could not be calculated because all results (except acetone) from sample 04SD123N-SC-G-2 were rejected due to low internal standard areas. No further validation actions are taken on the basis of field duplicate results.

The following table summarizes the RPDs of the detected compounds in field duplicate samples 04SD129N-SC-E-1/04SD129N-SC-E-2. The RPDs for methylcyclohexane and o-xylene were not calculable (NC) due to nondetect results in sample 04SD129N-SC-E-1. Precision for methylcyclohexane and o-xylene was deemed acceptable since the detected results in the field duplicate sample were <5x the RL. All remaining RPDs met the acceptance criteria.

Compound	04SD129N-SC-E-1 (µg/Kg)	04SD129N-SC-E-2 (µg/Kg)	RPD
2-Butanone	190 J	230 J	19
Chlorobenzene	1900	1700	11
1,3-Dichlorobenzene	220 J	290 J	27
1,4-Dichlorobenzene	650 J	750 J	14
Methyl acetate	240 J	390 J	48
Methylcyclohexane	1200 U	150 J	NC
m+p-Xylene	130 J	150 J	14
o-Xylene	1200 U	110 J	NC
Criteria: RPD ≤50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			
NC-Not calculable due to a nondetect result in the original or duplicate sample			

Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses with the following exceptions. Samples 04SD123N-SC-F-1, 04SD123N-SC-G-1, and

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04SD123N-SC-G-2 were reanalyzed by the laboratory. The reanalyses of these samples confirmed the initial low internal standard recoveries. The initial analyses of samples 04SD123N-SC-F-1 and 04SD123N-SC-G-2 and the reanalysis of sample 04SD123N-SC-G-1 were reported by the validator since the internal standard area recoveries were higher.

The laboratory noted in the case narrative that the VOC vials for samples 04SD123N-SC-F-1, 04SD123N-SC-G-1, and 04SD123N-SC-G-2 could have contained small particulate matter between the septum and the sealing lip of the vials. This particulate matter may have caused the purge gas to therefore leak from the vial during analysis of the samples thereby causing the poor surrogate recoveries and the low bias in the internal standard area recoveries.

Sample	Internal Standard Area %R			
	PFB	DFB	CBZ	DCB
04SD123N-SC-F-1	49	ok	45	8
04SD123N-SC-G-1RE	18	29	12	3
04SD123N-SC-G-2	16	23	10	2
PFB – Pentafluorobenzene DFB – 1,4-Difluorobenzene CBZ – d5-Chlorobenzene DCB – d4-Dichlorobenzene RE – reanalysis				

Sample results were qualified as follows:

- If the internal standard area was ≥25% but <50%, positive and nondetect results for compounds quantitated with the noncompliant internal standard were qualified as estimated (J, UJ).
- If the internal standard area was <25%, positive results for compounds quantitated with the noncompliant internal standard were qualified as estimated (J) and nondetect results were rejected (R).
- Sample results that were previously qualified as undetected (U) on the basis of blank contamination were not rejected but were qualified as estimated (UJ) due to the low internal standard recoveries.

Sample Quantitation/Reporting Limits

The percent (%) solids content for all samples was greater than 50%.

Samples 04SD123N-SC-C-1, 04SD129N-SC-E-1, and 04SD129F-SC-E-2 were analyzed as medium level soil analyses due to the high concentration of target compounds present in the samples.

Sample 04SD123N-SC-D-1 was initially analyzed as a low level soil. The concentration of acetone exceeded the calibration range in the low level analysis of this sample. Sample 04SD123N-SC-D-1 was re-analyzed as a medium level soil. During data validation, the result for acetone from the medium level analysis was combined with the remaining results from the low level analysis in order to report all results within the calibration range while also reporting the lowest achievable RLs.

All VOCs, except trichloroethene and 1,4-dioxane, have RLs which are less than or equal to the project required detection limits when analyzed without dilution. In all cases where dilutions were performed or where sediment samples were analyzed as medium level soil samples, one or more VOCs exceeded the project required detection limits.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-C-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057956 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 54.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 123.00			Dry Weight
ACETONE	20	4500 ~~350 J~~ U	UG/KG
BENZENE	5.0	180 J	UG/KG
BROMOCHLOROMETHANE	5.0	1100 U	UG/KG
BROMODICHLOROMETHANE	5.0	1100 U	UG/KG
BROMOFORM	5.0	1100 U	UG/KG
BROMOMETHANE	5.0	1100 U	UG/KG
2-BUTANONE (MEK)	10	2200 UJ	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1100 U	UG/KG
CARBON DISULFIDE	10	84 J	UG/KG
CARBON TETRACHLORIDE	5.0	1100 U	UG/KG
CHLOROBENZENE	5.0	33000	UG/KG
CHLOROETHANE	10	2200 U	UG/KG
CHLOROFORM	5.0	1100 U	UG/KG
CHLOROMETHANE	5.0	1100 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1100 UJ	UG/KG
CYCLOHEXANE	5.0	1100 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1100 U	UG/KG
1,2-DIBROMOETHANE	5.0	1100 U	UG/KG
1,3-DICHLOROBENZENE	5.0	380 J	UG/KG
1,4-DICHLOROBENZENE	5.0	910 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1100 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1100 U	UG/KG
1,1-DICHLOROETHANE	5.0	1100 U	UG/KG
1,2-DICHLOROETHANE	5.0	1100 U	UG/KG
1,1-DICHLOROETHENE	5.0	1100 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1100 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1100 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1100 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1100 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1100 U	UG/KG
1,4-DIOXANE	100	90 ~~22~~000 UJ	UG/KG
ETHYLBENZENE	5.0	69 J	UG/KG
2-HEXANONE	10	2200 UJ	UG/KG
ISOPROPYLBENZENE	5.0	1100 U	UG/KG
METHYL ACETATE	10	270 J	UG/KG
METHYLCYCLOHEXANE	5.0	130 J	UG/KG
METHYLENE CHLORIDE	5.0	1100 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	2200 UJ	UG/KG
STYRENE	5.0	1100 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1100 UJ	UG/KG
TETRACHLOROETHENE	5.0	1100 U	UG/KG
TOLUENE	5.0	1100 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1100 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1100 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-C-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057956 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 54.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 123.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1100 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1100 U	UG/KG
TRICHLOROETHENE	5.0	1100 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1100 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1100 U	UG/KG
VINYL CHLORIDE	5.0	1100 U	UG/KG
O-XYLENE	5.0	140 J	UG/KG
M+P-XYLENE	5.0	130 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	105	%
TOLUENE-D8	(75 - 128 %)	107	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-D-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057957 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 64.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.19			Dry Weight
ACETONE	20	420 J ~~390 E~~	UG/KG
BENZENE	5.0	0.74 J	UG/KG
BROMOCHLOROMETHANE	5.0	9.2 U	UG/KG
BROMODICHLOROMETHANE	5.0	9.2 U	UG/KG
BROMOFORM	5.0	9.2 U	UG/KG
BROMOMETHANE	5.0	9.2 U	UG/KG
2-BUTANONE (MEK)	10	86	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	9.2 U	UG/KG
CARBON DISULFIDE	10	8.8 J	UG/KG
CARBON TETRACHLORIDE	5.0	9.2 U	UG/KG
CHLOROBENZENE	5.0	17	UG/KG
CHLOROETHANE	10	18 U	UG/KG
CHLOROFORM	5.0	9.2 U	UG/KG
CHLOROMETHANE	5.0	9.2 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	9.2 U	UG/KG
CYCLOHEXANE	5.0	6.3 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	9.2 U	UG/KG
1,2-DIBROMOETHANE	5.0	9.2 U	UG/KG
1,3-DICHLOROBENZENE	5.0	9.2 U	UG/KG
1,4-DICHLOROBENZENE	5.0	9.2 U	UG/KG
1,2-DICHLOROBENZENE	5.0	9.2 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	9.2 U	UG/KG
1,1-DICHLOROETHANE	5.0	9.2 U	UG/KG
1,2-DICHLOROETHANE	5.0	9.2 U	UG/KG
1,1-DICHLOROETHENE	5.0	9.2 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	9.2 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	9.2 U	UG/KG
1,2-DICHLOROPROPANE	5.0	9.2 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	9.2 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	9.2 U	UG/KG
1,4-DIOXANE	100	730 ~~180~~ UJ	UG/KG
ETHYLBENZENE	5.0	0.68 J	UG/KG
2-HEXANONE	10	18 U	UG/KG
ISOPROPYLBENZENE	5.0	4.0 J	UG/KG
METHYL ACETATE	10	3.2 J	UG/KG
METHYLCYCLOHEXANE	5.0	37	UG/KG
METHYLENE CHLORIDE	5.0	9.2 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	18 U	UG/KG
STYRENE	5.0	9.2 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	9.2 U	UG/KG
TETRACHLOROETHENE	5.0	9.2 U	UG/KG
TOLUENE	5.0	4.0 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	9.2 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	9.2 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-D-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057957 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 64.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.19			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	9.2 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	9.2 U	UG/KG
TRICHLOROETHENE	5.0	9.2 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	9.2 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	9.2 U	UG/KG
VINYL CHLORIDE	5.0	9.2 U	UG/KG
O-XYLENE	5.0	6.8 J	UG/KG
M+P-XYLENE	5.0	1.8 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	83	%
TOLUENE-D8	(75 - 128 %)	122	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-D-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057957 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 64.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 159.00			Dry Weight
ACETONE	20	420 JD	UG/KG
BENZENE	5.0	1200 U	UG/KG
BROMOCHLOROMETHANE	5.0	1200 U	UG/KG
BROMODICHLOROMETHANE	5.0	1200 U	UG/KG
BROMOFORM	5.0	1200 U	UG/KG
BROMOMETHANE	5.0	1200 U	UG/KG
2-BUTANONE (MEK)	10	260 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1200 U	UG/KG
CARBON DISULFIDE	10	2400 U	UG/KG
CARBON TETRACHLORIDE	5.0	1200 U	UG/KG
CHLOROBENZENE	5.0	280 J	UG/KG
CHLOROETHANE	10	2400 U	UG/KG
CHLOROFORM	5.0	1200 U	UG/KG
CHLOROMETHANE	5.0	1200 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1200 U	UG/KG
CYCLOHEXANE	5.0	1200 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1200 U	UG/KG
1,2-DIBROMOETHANE	5.0	1200 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1200 U	UG/KG
1,4-DICHLOROBENZENE	5.0	1200 U	UG/KG
1,2-DICHLOROBENZENE	5.0	1200 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1200 U	UG/KG
1,1-DICHLOROETHANE	5.0	1200 U	UG/KG
1,2-DICHLOROETHANE	5.0	1200 U	UG/KG
1,1-DICHLOROETHENE	5.0	1200 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1200 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1200 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1200 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1200 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1200 U	UG/KG
1,4-DIOXANE	100	24000 U	UG/KG
ETHYLBENZENE	5.0	1200 U	UG/KG
2-HEXANONE	10	2400 U	UG/KG
ISOPROPYLBENZENE	5.0	1200 U	UG/KG
METHYL ACETATE	10	400 J	UG/KG
METHYLCYCLOHEXANE	5.0	1200 U	UG/KG
METHYLENE CHLORIDE	5.0	1200 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	2400 U	UG/KG
STYRENE	5.0	1200 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1200 U	UG/KG
TETRACHLOROETHENE	5.0	1200 U	UG/KG
TOLUENE	5.0	420 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1200 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1200 U	UG/KG

Not Reported

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-D-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057957 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 64.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07 VB			
ANALYTICAL DILUTION: 159.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1200 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1200 U	UG/KG
TRICHLOROETHENE	5.0	1200 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1200 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1200 U	UG/KG
VINYL CHLORIDE	5.0	1200 U	UG/KG
O-XYLENE	5.0	1200 U	UG/KG
M+P-XYLENE	5.0	1200 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	108	%
TOLUENE-D8	(75 - 128 %)	105	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-E-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057958 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 75.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.15			Dry Weight
ACETONE	20	51 U	UG/KG
BENZENE	5.0	7.7 U	UG/KG
BROMOCHLOROMETHANE	5.0	7.7 U	UG/KG
BROMODICHLOROMETHANE	5.0	7.7 U	UG/KG
BROMOFORM	5.0	7.7 U	UG/KG
BROMOMETHANE	5.0	7.7 U	UG/KG
2-BUTANONE (MEK)	10	7.1 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	7.7 U	UG/KG
CARBON DISULFIDE	10	0.93 J	UG/KG
CARBON TETRACHLORIDE	5.0	7.7 U	UG/KG
CHLOROBENZENE	5.0	11	UG/KG
CHLOROETHANE	10	15 U	UG/KG
CHLOROFORM	5.0	7.7 U	UG/KG
CHLOROMETHANE	5.0	7.7 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7.7 U	UG/KG
CYCLOHEXANE	5.0	7.7 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	7.7 U	UG/KG
1,2-DIBROMOETHANE	5.0	7.7 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.7 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7.7 U	UG/KG
1,2-DICHLOROBENZENE	5.0	7.7 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	7.7 U	UG/KG
1,2-DICHLOROETHANE	5.0	7.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	7.7 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7.7 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	7.7 U	UG/KG
1,4-DIOXANE	100	610 ~~150~~ UJ	UG/KG
ETHYLBENZENE	5.0	7.7 U	UG/KG
2-HEXANONE	10	15 U	UG/KG
ISOPROPYLBENZENE	5.0	7.7 U	UG/KG
METHYL ACETATE	10	15 U	UG/KG
METHYLCYCLOHEXANE	5.0	1.1 J	UG/KG
METHYLENE CHLORIDE	5.0	7.7 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	15 U	UG/KG
STYRENE	5.0	7.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7.7 U	UG/KG
TETRACHLOROETHENE	5.0	7.7 U	UG/KG
TOLUENE	5.0	0.72 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	7.7 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	7.7 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

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Client Sample ID : 04SD123N-SC-E-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057958 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 75.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.15			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7.7 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7.7 U	UG/KG
TRICHLOROETHENE	5.0	7.7 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7.7 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7.7 U	UG/KG
VINYL CHLORIDE	5.0	7.7 U	UG/KG
O-XYLENE	5.0	7.7 U	UG/KG
M+P-XYLENE	5.0	7.7 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	88	%
TOLUENE-D8	(75 - 128 %)	89	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	90	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-F-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057959 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 77.8

DATE ANALYZED : 12/15/07
ANALYTICAL DILUTION: 1.04

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	27 ~~22 U~~ UJ	UG/KG
BENZENE	5.0	6.7 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.7 UJ	UG/KG
BROMODICHLOROMETHANE	5.0	6.7 U	UG/KG
BROMOFORM	5.0	6.7 UJ	UG/KG
BROMOMETHANE	5.0	6.7 UJ	UG/KG
2-BUTANONE (MEK)	10	13 UJ	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.7 UJ	UG/KG
CARBON DISULFIDE	10	13 UJ	UG/KG
CARBON TETRACHLORIDE	5.0	6.7 U	UG/KG
CHLOROBENZENE	5.0	6.7 UJ	UG/KG
CHLOROETHANE	10	13 UJ	UG/KG
CHLOROFORM	5.0	6.7 UJ	UG/KG
CHLOROMETHANE	5.0	6.7 UJ	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	~~6.7 U~~ R	UG/KG
CYCLOHEXANE	5.0	6.7 UJ	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.7 UJ	UG/KG
1,2-DIBROMOETHANE	5.0	6.7 UJ	UG/KG
1,3-DICHLOROBENZENE	5.0	~~6.7 U~~ R	UG/KG
1,4-DICHLOROBENZENE	5.0	~~6.7 U~~	UG/KG
1,2-DICHLOROBENZENE	5.0	~~6.7 U~~	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.7 UJ	UG/KG
1,1-DICHLOROETHANE	5.0	6.7 UJ	UG/KG
1,2-DICHLOROETHANE	5.0	6.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.7 UJ	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.7 UJ	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.7 UJ	UG/KG
1,2-DICHLOROPROPANE	5.0	6.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.7 UJ	UG/KG
1,4-DIOXANE	100	530 ~~130~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.7 UJ	UG/KG
2-HEXANONE	10	13 UJ	UG/KG
ISOPROPYLBENZENE	5.0	6.7 UJ	UG/KG
METHYL ACETATE	10	13 UJ	UG/KG
METHYLCYCLOHEXANE	5.0	6.7 U	UG/KG
METHYLENE CHLORIDE	5.0	6.7 UJ	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 UJ	UG/KG
STYRENE	5.0	6.7 UJ	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	~~6.7 U~~ R	UG/KG
TETRACHLOROETHENE	5.0	6.7 UJ	UG/KG
TOLUENE	5.0	0.58 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	~~6.7 U~~ R	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	~~6.7 U~~ R	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-F-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057959 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 77.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.04			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.7 U J	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.7 U J	UG/KG
TRICHLOROETHENE	5.0	6.7 U J	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.7 U J	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.7 U J	UG/KG
VINYL CHLORIDE	5.0	6.7 U J	UG/KG
O-XYLENE	5.0	6.7 U J	UG/KG
M+P-XYLENE	5.0	6.7 U J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	34 *	%
TOLUENE-D8	(75 - 128 %)	133 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	110	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
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ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-F-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057959 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 77.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.77			Dry Weight
ACETONE	20	130	UG/KG
BENZENE	5.0	4.9 U	UG/KG
BROMOCHLOROMETHANE	5.0	4.9 U	UG/KG
BROMODICHLOROMETHANE	5.0	4.9 U	UG/KG
BROMOFORM	5.0	4.9 U	UG/KG
BROMOMETHANE	5.0	4.9 U	UG/KG
2-BUTANONE (MEK)	10	9.9 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	4.9 U	UG/KG
CARBON DISULFIDE	10	1.2 J	UG/KG
CARBON TETRACHLORIDE	5.0	4.9 U	UG/KG
CHLOROBENZENE	5.0	1.7 JB	UG/KG
CHLOROETHANE	10	9.9 U	UG/KG
CHLOROFORM	5.0	4.9 U	UG/KG
CHLOROMETHANE	5.0	4.9 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	4.9 U	UG/KG
CYCLOHEXANE	5.0	4.9 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	4.9 U	UG/KG
1,2-DIBROMOETHANE	5.0	4.9 U	UG/KG
1,3-DICHLOROBENZENE	5.0	4.9 U	UG/KG
1,4-DICHLOROBENZENE	5.0	4.9 U	UG/KG
1,2-DICHLOROBENZENE	5.0	4.9 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	4.9 U	UG/KG
1,1-DICHLOROETHANE	5.0	4.9 U	UG/KG
1,2-DICHLOROETHANE	5.0	4.9 U	UG/KG
1,1-DICHLOROETHENE	5.0	4.9 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	4.9 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	4.9 U	UG/KG
1,2-DICHLOROPROPANE	5.0	4.9 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	4.9 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	4.9 U	UG/KG
1,4-DIOXANE	100	99 U	UG/KG
ETHYLBENZENE	5.0	4.9 U	UG/KG
2-HEXANONE	10	9.9 U	UG/KG
ISOPROPYLBENZENE	5.0	4.9 U	UG/KG
METHYL ACETATE	10	9.9 U	UG/KG
METHYLCYCLOHEXANE	5.0	4.9 U	UG/KG
METHYLENE CHLORIDE	5.0	4.9 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	9.9 U	UG/KG
STYRENE	5.0	4.9 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	4.9 U	UG/KG
TETRACHLOROETHENE	5.0	4.9 U	UG/KG
TOLUENE	5.0	1.8 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	4.9 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	4.9 U	UG/KG

Dan to Report

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-F-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057959 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 77.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/~~00~~07			
ANALYTICAL DILUTION: 0.77			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	4.9 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	4.9 U	UG/KG
TRICHLOROETHENE	5.0	4.9 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	4.9 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	4.9 U	UG/KG
VINYL CHLORIDE	5.0	4.9 U	UG/KG
O-XYLENE	5.0	4.9 U	UG/KG
M+P-XYLENE	5.0	4.9 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	35 *	%
TOLUENE-D8	(75 - 128 %)	150 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	234 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057960 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 79.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 0.99			Dry Weight
ACETONE	20	230	UG/KG
BENZENE	5.0	6.2 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.2 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.2 U	UG/KG
BROMOFORM	5.0	6.2 U	UG/KG
BROMOMETHANE	5.0	6.2 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.2 U	UG/KG
CARBON DISULFIDE	5.0	2.5 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.2 U	UG/KG
CHLOROBENZENE	5.0	6.2 U	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	6.2 U	UG/KG
CHLOROMETHANE	5.0	6.2 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.2 U	UG/KG
CYCLOHEXANE	5.0	6.2 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.2 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.2 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.2 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.2 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.2 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.2 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.2 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.2 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.2 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.2 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.2 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.2 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.2 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.2 U	UG/KG
1,4-DIOXANE	100	500 ~~120~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.2 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	6.2 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.2 U	UG/KG
METHYLENE CHLORIDE	5.0	6.2 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	6.2 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.2 U	UG/KG
TETRACHLOROETHENE	5.0	6.2 U	UG/KG
TOLUENE	5.0	2.0 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.2 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.2 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057960 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 79.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 0.99			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.2 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.2 U	UG/KG
TRICHLOROETHENE	5.0	6.2 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.2 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.2 U	UG/KG
VINYL CHLORIDE	5.0	6.2 U	UG/KG
O-XYLENE	5.0	6.2 U	UG/KG
M+P-XYLENE	5.0	6.2 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	36 *	%
TOLUENE-D8	(75 - 128 %)	156 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	279 *	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057960 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 79.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/~~00~~07			
ANALYTICAL DILUTION: 1.22			Dry Weight
ACETONE	20	100 UJ	UG/KG
BENZENE	5.0	7.7 UJ	UG/KG
BROMOCHLOROMETHANE	5.0	~~7.7 U~~ R	UG/KG
BROMODICHLOROMETHANE	5.0	7.7 UJ	UG/KG
BROMOFORM	5.0	~~7.7 U~~ R	UG/KG
BROMOMETHANE	5.0	7.7 U	UG/KG
2-BUTANONE (MEK)	10	15 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	~~7.7 U~~	UG/KG
CARBON DISULFIDE	10	2.6 J	UG/KG
CARBON TETRACHLORIDE	5.0	7.7 UJ	UG/KG
CHLOROBENZENE	5.0	~~7.7 U~~ R	UG/KG
CHLOROETHANE	10	15 U	UG/KG
CHLOROFORM	5.0	7.7 U	UG/KG
CHLOROMETHANE	5.0	7.7 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	~~7.7 U~~	UG/KG
CYCLOHEXANE	5.0	0.92 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	~~7.7 U~~ R	UG/KG
1,2-DIBROMOETHANE	5.0	7.7 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.7 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7.7 U	UG/KG
1,2-DICHLOROBENZENE	5.0	7.7 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	~~7.7 U~~	UG/KG
1,2-DICHLOROETHANE	5.0	7.7 UJ	UG/KG
1,1-DICHLOROETHENE	5.0	~~7.7 U~~ R	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	~~7.7 U~~	UG/KG
1,2-DICHLOROPROPANE	5.0	7.7 UJ	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7.7 UJ	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	~~7.7 U~~ R	UG/KG
1,4-DIOXANE	100	610 ~~150~~ UJ	UG/KG
ETHYLBENZENE	5.0	~~7.7 U~~ R	UG/KG
2-HEXANONE	10	15 U	UG/KG
ISOPROPYLBENZENE	5.0	7.7 U	UG/KG
METHYL ACETATE	10	~~15 U~~	UG/KG
METHYLCYCLOHEXANE	5.0	7.7 UJ	UG/KG
METHYLENE CHLORIDE	5.0	~~7.7 U~~ R	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	15 U	UG/KG
STYRENE	5.0	7.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7.7 U	UG/KG
TETRACHLOROETHENE	5.0	~~7.7 U~~	UG/KG
TOLUENE	5.0	1.5 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	~~7.7 U~~ R	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	~~7.7 U~~ R	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-1

Date Sampled : 12/12/07 09:54 **Order #:** 1057960 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 79.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/~~00~~ 07			
ANALYTICAL DILUTION: 1.22			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	~~7.7 U~~ R	UG/KG
1,1,2-TRICHLOROETHANE	5.0	~~7.7 U~~ R	UG/KG
TRICHLOROETHENE	5.0	7.7 UJ ~~7.7 UJ~~ R	UG/KG
TRICHLOROFLUOROMETHANE	5.0	~~7.7 U~~ R	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7.7 U	UG/KG
VINYL CHLORIDE	5.0	7.7 U	UG/KG
O-XYLENE	5.0	7.7 U	UG/KG
M+P-XYLENE	5.0	~~7.7 U~~	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	37 *	%
TOLUENE-D8	(75 - 128 %)	165 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	218 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-2

Date Sampled : 12/12/07 09:54 **Order #:** 1057961 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 79.5

DATE ANALYZED : 12/15/07
ANALYTICAL DILUTION: 1.20

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	120 UJ	UG/KG
BENZENE	5.0	7.5 U R	UG/KG
BROMOCHLOROMETHANE	5.0	7.5 U	UG/KG
BROMODICHLOROMETHANE	5.0	7.5 U	UG/KG
BROMOFORM	5.0	7.5 U	UG/KG
BROMOMETHANE	5.0	7.5 U	UG/KG
2-BUTANONE (MEK)	10	15 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	7.5 U	UG/KG
CARBON DISULFIDE	10	1.9 J	UG/KG
CARBON TETRACHLORIDE	5.0	7.5 U	UG/KG
CHLOROBENZENE	5.0	7.5 U	UG/KG
CHLOROETHANE	10	15 U	UG/KG
CHLOROFORM	5.0	7.5 U	UG/KG
CHLOROMETHANE	5.0	7.5 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7.5 U	UG/KG
CYCLOHEXANE	5.0	7.5 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	7.5 U	UG/KG
1,2-DIBROMOETHANE	5.0	7.5 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.5 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7.5 U	UG/KG
1,2-DICHLOROBENZENE	5.0	7.5 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7.5 U	UG/KG
1,1-DICHLOROETHANE	5.0	7.5 U	UG/KG
1,2-DICHLOROETHANE	5.0	7.5 U	UG/KG
1,1-DICHLOROETHENE	5.0	7.5 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7.5 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7.5 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7.5 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7.5 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	7.5 U	UG/KG
1,4-DIOXANE	100	600 150 U UJ	UG/KG
ETHYLBENZENE	5.0	7.5 U	UG/KG
2-HEXANONE	10	15 U	UG/KG
ISOPROPYLBENZENE	5.0	7.5 U	UG/KG
METHYL ACETATE	10	15 U	UG/KG
METHYLCYCLOHEXANE	5.0	7.5 U	UG/KG
METHYLENE CHLORIDE	5.0	7.5 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	15 U	UG/KG
STYRENE	5.0	7.5 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7.5 U	UG/KG
TETRACHLOROETHENE	5.0	7.5 U	UG/KG
TOLUENE	5.0	2.0 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	7.5 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	7.5 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-2

Date Sampled : 12/12/07 09:54 **Order #:** 1057961 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 79.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.20			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7.5 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7.5 U	UG/KG
TRICHLOROETHENE	5.0	7.5 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7.5 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7.5 U	UG/KG
VINYL CHLORIDE	5.0	7.5 U	UG/KG
O-XYLENE	5.0	7.5 U	UG/KG
M+P-XYLENE	5.0	7.5 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	41 *	%
TOLUENE-D8	(75 - 128 %)	158 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	233 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-2

Date Sampled : 12/12/07 09:54 **Order #:** 1057961 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 79.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/~~00~~07			
ANALYTICAL DILUTION: 0.87			Dry Weight
ACETONE	20	130	UG/KG
BENZENE	5.0	5.5 U	UG/KG
BROMOCHLOROMETHANE	5.0	5.5 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.5 U	UG/KG
BROMOFORM	5.0	5.5 U	UG/KG
BROMOMETHANE	5.0	5.5 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.5 U	UG/KG
CARBON DISULFIDE	10	2.8 J	UG/KG
CARBON TETRACHLORIDE	5.0	5.5 U	UG/KG
CHLOROBENZENE	5.0	5.5 U	UG/KG
CHLOROETHANE	10	11 U	UG/KG
CHLOROFORM	5.0	5.5 U	UG/KG
CHLOROMETHANE	5.0	5.5 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.5 U	UG/KG
CYCLOHEXANE	5.0	5.5 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.5 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.5 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.5 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.5 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.5 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.5 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.5 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.5 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.5 U	UG/KG
1,4-DIOXANE	100	110 U	UG/KG
ETHYLBENZENE	5.0	5.5 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
ISOPROPYLBENZENE	5.0	5.5 U	UG/KG
METHYL ACETATE	10	11 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.5 U	UG/KG
METHYLENE CHLORIDE	5.0	5.5 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.5 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.5 U	UG/KG
TETRACHLOROETHENE	5.0	5.5 U	UG/KG
TOLUENE	5.0	1.6 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.5 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.5 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-2

Date Sampled : 12/12/07 09:54 **Order #:** 1057961 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 79.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.87			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.5 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.5 U	UG/KG
TRICHLOROETHENE	5.0	5.5 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.5 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.5 U	UG/KG
VINYL CHLORIDE	5.0	5.5 U	UG/KG
O-XYLENE	5.0	5.5 U	UG/KG
M+P-XYLENE	5.0	5.5 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	35 *	%
TOLUENE-D8	(75 - 128 %)	184 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	293 *	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-C-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057965 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 81.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.06			Dry Weight
ACETONE	20	26 ~~4.9 J~~ U	UG/KG
BENZENE	5.0	6.5 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.5 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.5 U	UG/KG
BROMOFORM	5.0	6.5 U	UG/KG
BROMOMETHANE	5.0	6.5 U	UG/KG
2-BUTANONE (MEK)	10	13 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.5 U	UG/KG
CARBON DISULFIDE	10	13 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.5 U	UG/KG
CHLOROBENZENE	5.0	6.5 U	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.5 U	UG/KG
CHLOROMETHANE	5.0	6.5 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.5 U	UG/KG
CYCLOHEXANE	5.0	6.5 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.5 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.5 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.5 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.5 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.5 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.5 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.5 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.5 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.5 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.5 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.5 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.5 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.5 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.5 U	UG/KG
1,4-DIOXANE	100	510 ~~130~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.5 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	6.5 U	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.5 U	UG/KG
METHYLENE CHLORIDE	5.0	6.5 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.5 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.5 U	UG/KG
TETRACHLOROETHENE	5.0	6.5 U	UG/KG
TOLUENE	5.0	0.63 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.5 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.5 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-C-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057965 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 81.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.06			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.5 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.5 U	UG/KG
TRICHLOROETHENE	5.0	6.5 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.5 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.5 U	UG/KG
VINYL CHLORIDE	5.0	6.5 U	UG/KG
O-XYLENE	5.0	6.5 U	UG/KG
M+P-XYLENE	5.0	6.5 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	88	%
TOLUENE-D8	(75 - 128 %)	95	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-D-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057966 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 75.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 0.97			Dry Weight
ACETONE	20	52 U	UG/KG
BENZENE	5.0	6.4 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.4 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.4 U	UG/KG
BROMOFORM	5.0	6.4 U	UG/KG
BROMOMETHANE	5.0	6.4 U	UG/KG
2-BUTANONE (MEK)	10	7.1 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.4 U	UG/KG
CARBON DISULFIDE	10	0.46 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.4 U	UG/KG
CHLOROBENZENE	5.0	1.6 J	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.4 U	UG/KG
CHLOROMETHANE	5.0	6.4 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.4 U	UG/KG
CYCLOHEXANE	5.0	6.4 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.4 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.4 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.4 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.4 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.4 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.4 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.4 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.4 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.4 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.4 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.4 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.4 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.4 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.4 U	UG/KG
1,4-DIOXANE	100	510 ~~130~~ U J	UG/KG
ETHYLBENZENE	5.0	6.4 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	6.4 U	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.4 U	UG/KG
METHYLENE CHLORIDE	5.0	6.4 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.4 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.4 U	UG/KG
TETRACHLOROETHENE	5.0	6.4 U	UG/KG
TOLUENE	5.0	0.67 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.4 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.4 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-D-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057966 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 75.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 0.97			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.4 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.4 U	UG/KG
TRICHLOROETHENE	5.0	6.4 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.4 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.4 U	UG/KG
VINYL CHLORIDE	5.0	6.4 U	UG/KG
O-XYLENE	5.0	6.4 U	UG/KG
M+P-XYLENE	5.0	6.4 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	89	%
TOLUENE-D8	(75 - 128 %)	93	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-E-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057967 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 58.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 143.00			Dry Weight
ACETONE	20	4900 ~~330 J~~ U	UG/KG
BENZENE	5.0	1200 U	UG/KG
BROMOCHLOROMETHANE	5.0	1200 U	UG/KG
BROMODICHLOROMETHANE	5.0	1200 U	UG/KG
BROMOFORM	5.0	1200 U	UG/KG
BROMOMETHANE	5.0	1200 U J	UG/KG
2-BUTANONE (MEK)	10	190 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1200 U	UG/KG
CARBON DISULFIDE	10	2500 U	UG/KG
CARBON TETRACHLORIDE	5.0	1200 U	UG/KG
CHLOROBENZENE	5.0	1900	UG/KG
CHLOROETHANE	10	2500 U	UG/KG
CHLOROFORM	5.0	1200 U	UG/KG
CHLOROMETHANE	5.0	1200 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1200 UJ	UG/KG
CYCLOHEXANE	5.0	1200 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1200 U	UG/KG
1,2-DIBROMOETHANE	5.0	1200 U	UG/KG
1,3-DICHLOROBENZENE	5.0	220 J	UG/KG
1,4-DICHLOROBENZENE	5.0	650 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1200 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1200 U	UG/KG
1,1-DICHLOROETHANE	5.0	1200 U	UG/KG
1,2-DICHLOROETHANE	5.0	1200 U	UG/KG
1,1-DICHLOROETHENE	5.0	1200 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1200 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1200 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1200 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1200 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1200 U	UG/KG
1,4-DIOXANE	100	98 ~~25~~000 UJ	UG/KG
ETHYLBENZENE	5.0	1200 U	UG/KG
2-HEXANONE	10	2500 UJ	UG/KG
ISOPROPYLBENZENE	5.0	1200 U	UG/KG
METHYL ACETATE	10	240 J	UG/KG
METHYLCYCLOHEXANE	5.0	1200 U	UG/KG
METHYLENE CHLORIDE	5.0	1200 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	2500 UJ	UG/KG
STYRENE	5.0	1200 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1200 UJ	UG/KG
TETRACHLOROETHENE	5.0	1200 U	UG/KG
TOLUENE	5.0	1200 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1200 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1200 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-E-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057967 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 58.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 143.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1200 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1200 U	UG/KG
TRICHLOROETHENE	5.0	1200 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1200 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1200 U	UG/KG
VINYL CHLORIDE	5.0	1200 U	UG/KG
O-XYLENE	5.0	1200 U	UG/KG
M+P-XYLENE	5.0	130 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	108	%
TOLUENE-D8	(75 - 128 %)	106	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	109	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-E-2

Date Sampled : 12/12/07 10:40 **Order #:** 1057968 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 56.0

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 152.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	5400 ~~360 J~~ U	UG/KG
BENZENE	5.0	1400 U	UG/KG
BROMOCHLOROMETHANE	5.0	1400 U	UG/KG
BROMODICHLOROMETHANE	5.0	1400 U	UG/KG
BROMOFORM	5.0	1400 U	UG/KG
BROMOMETHANE	5.0	1400 U	UG/KG
2-BUTANONE (MEK)	10	230 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1400 U	UG/KG
CARBON DISULFIDE	10	2700 U	UG/KG
CARBON TETRACHLORIDE	5.0	1400 U	UG/KG
CHLOROBENZENE	5.0	1700	UG/KG
CHLOROETHANE	10	2700 U	UG/KG
CHLOROFORM	5.0	1400 U	UG/KG
CHLOROMETHANE	5.0	1400 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1400 U	UG/KG
CYCLOHEXANE	5.0	1400 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1400 U	UG/KG
1,2-DIBROMOETHANE	5.0	1400 U	UG/KG
1,3-DICHLOROBENZENE	5.0	290 J	UG/KG
1,4-DICHLOROBENZENE	5.0	750 J	UG/KG
1,2-DICHLOROBENZENE	5.0	1400 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1400 U	UG/KG
1,1-DICHLOROETHANE	5.0	1400 U	UG/KG
1,2-DICHLOROETHANE	5.0	1400 U	UG/KG
1,1-DICHLOROETHENE	5.0	1400 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1400 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1400 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1400 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1400 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1400 U	UG/KG
1,4-DIOXANE	100	110 ~~27000~~ UJ	UG/KG
ETHYLBENZENE	5.0	1400 U	UG/KG
2-HEXANONE	10	2700 U	UG/KG
ISOPROPYLBENZENE	5.0	1400 U	UG/KG
METHYL ACETATE	10	390 J	UG/KG
METHYLCYCLOHEXANE	5.0	150 J	UG/KG
METHYLENE CHLORIDE	5.0	1400 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	2700 U	UG/KG
STYRENE	5.0	1400 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1400 U	UG/KG
TETRACHLOROETHENE	5.0	1400 U	UG/KG
TOLUENE	5.0	1400 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1400 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1400 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-E-2

Date Sampled : 12/12/07 10:40 **Order #:** 1057968 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 56.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 152.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1400 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1400 U	UG/KG
TRICHLOROETHENE	5.0	1400 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1400 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1400 U	UG/KG
VINYL CHLORIDE	5.0	1400 U	UG/KG
O-XYLENE	5.0	110 J	UG/KG
M+P-XYLENE	5.0	150 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	103	%
TOLUENE-D8	(75 - 128 %)	104	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-F-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057969 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 73.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 0.95			Dry Weight
ACETONE	20	35 U	UG/KG
BENZENE	5.0	6.5 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.5 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.5 U	UG/KG
BROMOFORM	5.0	6.5 U	UG/KG
BROMOMETHANE	5.0	6.5 U	UG/KG
2-BUTANONE (MEK)	10	5.3 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.5 U	UG/KG
CARBON DISULFIDE	10	1.2 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.5 U	UG/KG
CHLOROBENZENE	5.0	0.63 J	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.5 U	UG/KG
CHLOROMETHANE	5.0	6.5 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.5 U	UG/KG
CYCLOHEXANE	5.0	6.5 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.5 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.5 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.5 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.5 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.5 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.5 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.5 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.5 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.5 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.5 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.5 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.5 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.5 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.5 U	UG/KG
1,4-DIOXANE	100	520 ~~130~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.5 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	6.5 U	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.5 U	UG/KG
METHYLENE CHLORIDE	5.0	6.5 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.5 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.5 U	UG/KG
TETRACHLOROETHENE	5.0	6.5 U	UG/KG
TOLUENE	5.0	1.2 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.5 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.5 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-F-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057969 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 73.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 0.95			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.5 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.5 U	UG/KG
TRICHLOROETHENE	5.0	6.5 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.5 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.5 U	UG/KG
VINYL CHLORIDE	5.0	6.5 U	UG/KG
O-XYLENE	5.0	6.5 U	UG/KG
M+P-XYLENE	5.0	6.5 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	87	%
TOLUENE-D8	(75 - 128 %)	92	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-G-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057970 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 65.4

DATE ANALYZED : 12/17/07
ANALYTICAL DILUTION: 1.75

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	130 U	UG/KG
BENZENE	5.0	1.1 J	UG/KG
BROMOCHLOROMETHANE	5.0	13 U	UG/KG
BROMODICHLOROMETHANE	5.0	13 U	UG/KG
BROMOFORM	5.0	13 U	UG/KG
BROMOMETHANE	5.0	13 U	UG/KG
2-BUTANONE (MEK)	10	21 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	13 U	UG/KG
CARBON DISULFIDE	10	2.4 J	UG/KG
CARBON TETRACHLORIDE	5.0	13 U	UG/KG
CHLOROBENZENE	5.0	2.1 J	UG/KG
CHLOROETHANE	10	27 U	UG/KG
CHLOROFORM	5.0	13 U	UG/KG
CHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	13 U	UG/KG
CYCLOHEXANE	5.0	1.1 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMOETHANE	5.0	13 U	UG/KG
1,3-DICHLOROBENZENE	5.0	13 U	UG/KG
1,4-DICHLOROBENZENE	5.0	13 U	UG/KG
1,2-DICHLOROBENZENE	5.0	13 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHANE	5.0	13 U	UG/KG
1,2-DICHLOROETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHENE	5.0	13 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
1,2-DICHLOROPROPANE	5.0	13 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
1,4-DIOXANE	100	1100 ~~270~~ UJ	UG/KG
ETHYLBENZENE	5.0	13 U	UG/KG
2-HEXANONE	10	27 U	UG/KG
ISOPROPYLBENZENE	5.0	13 U	UG/KG
METHYL ACETATE	10	6.4 J	UG/KG
METHYLCYCLOHEXANE	5.0	13 U	UG/KG
METHYLENE CHLORIDE	5.0	13 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	27 U	UG/KG
STYRENE	5.0	13 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	13 U	UG/KG
TETRACHLOROETHENE	5.0	13 U	UG/KG
TOLUENE	5.0	6.7 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	13 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	13 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-G-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057970 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 65.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.75			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/KG
TRICHLOROETHENE	5.0	13 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	13 U	UG/KG
VINYL CHLORIDE	5.0	13 U	UG/KG
O-XYLENE	5.0	13 U	UG/KG
M+P-XYLENE	5.0	13 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	76	%
TOLUENE-D8	(75 - 128 %)	101	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	100	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-H-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057971 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 71.4

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.43

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	110 U	UG/KG
BENZENE	5.0	10 U	UG/KG
BROMOCHLOROMETHANE	5.0	10 U	UG/KG
BROMODICHLOROMETHANE	5.0	10 U	UG/KG
BROMOFORM	5.0	10 U	UG/KG
BROMOMETHANE	5.0	10 U	UG/KG
2-BUTANONE (MEK)	10	17 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	10 U	UG/KG
CARBON DISULFIDE	10	0.74 J	UG/KG
CARBON TETRACHLORIDE	5.0	10 U	UG/KG
CHLOROBENZENE	5.0	10 ~~0.90 JB~~ U	UG/KG
CHLOROETHANE	10	20 U	UG/KG
CHLOROFORM	5.0	10 U	UG/KG
CHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	10 U	UG/KG
CYCLOHEXANE	5.0	10 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMOETHANE	5.0	10 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10 U	UG/KG
1,4-DICHLOROBENZENE	5.0	10 U	UG/KG
1,2-DICHLOROBENZENE	5.0	10 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHANE	5.0	10 U	UG/KG
1,2-DICHLOROETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHENE	5.0	10 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
1,2-DICHLOROPROPANE	5.0	10 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
1,4-DIOXANE	100	800 ~~200~~ UJ	UG/KG
ETHYLBENZENE	5.0	10 U	UG/KG
2-HEXANONE	10	20 U	UG/KG
ISOPROPYLBENZENE	5.0	10 U	UG/KG
METHYL ACETATE	10	9.0 J	UG/KG
METHYLCYCLOHEXANE	5.0	10 U	UG/KG
METHYLENE CHLORIDE	5.0	10 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/KG
STYRENE	5.0	10 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/KG
TETRACHLOROETHENE	5.0	10 U	UG/KG
TOLUENE	5.0	0.78 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	10 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	10 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-H-1

Date Sampled : 12/12/07 10:40 **Order #:** 1057971 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302 **Percent Solid:** 71.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.43			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/KG
TRICHLOROETHENE	5.0	10 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	10 U	UG/KG
VINYL CHLORIDE	5.0	10 U	UG/KG
O-XYLENE	5.0	10 U	UG/KG
M+P-XYLENE	5.0	10 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	76	%
TOLUENE-D8	(75 - 128 %)	99	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB3-SC-3

Date Sampled : 12/12/07 10:30 **Order #:** 1058166 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741302 **Analytical Run** 155663

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.7 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 UJ	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 UJ	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 UJ	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 UJ	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 UJ	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB3-SC-3

Date Sampled : 12/12/07 10:30 **Order #:** 1058166 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741302 **Analytical Run** 155663

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	109	%
TOLUENE-D8	(88 - 124 %)	109	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	111	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB4-SC-3

Date Sampled : 12/12/07 11:50 **Order #:** 1058167 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741302 **Analytical Run** 155663

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	0.83 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 UJ	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 UJ	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 UJ	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 UJ	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 UJ	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB4-SC-3

Date Sampled : 12/12/07 11:50 **Order #:** 1058167 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741302 **Analytical Run** 155663

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	111	%
TOLUENE-D8	(88 - 124 %)	108	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	109	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 1

Date Sampled : 12/12/07 09:45 **Order #:** 1058178 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741302 **Analytical Run** 155663

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	0.79 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 UJ	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 UJ	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 UJ	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 UJ	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 UJ	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 1

Date Sampled : 12/12/07 09:45 **Order #:** 1058178 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741302 **Analytical Run** 155663

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	114	%
TOLUENE-D8	(88 - 124 %)	106	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 6

Date Sampled : 12/12/07 09:45 **Order #:** 1058183 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741302 **Analytical Run** 155663

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.1 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 UJ	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 UJ	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 UJ	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 UJ	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 UJ	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 6

Date Sampled : 12/12/07 09:45 **Order #:** 1058183 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741302 **Analytical Run** 155663

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	109	%
TOLUENE-D8	(88 - 124 %)	107	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	102	%

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Memorandum

Date: February 29, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation
Inorganic Analyses
Subsurficial Sediment Sampling, December 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2741302

Distribution: L. Herberich/Westford

00760-171-525 File
BR025inolms.doc

SUMMARY

Limited validation was performed on the data for 18 sediment samples and two aqueous equipment blanks analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 7470A, 7471, and 7740 and/or total organic carbon (TOC) according to the Lloyd Kahn method. The samples were collected at the BASF Site in Rensselaer, NY on December 12, 2007 and submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741302.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD123N-SC-C-1	04SD123N-SC-D-1
04SD123N-SC-E-1	04SD123N-SC-F-1
04SD123N-SC-G-1	04SD123N-SC-G-2 (Field duplicate of 04SD123N-SC-G-1)
04SD129N-SC-C-1	04SD129N-SC-D-1

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Sample IDs	
04SD129N-SC-E-1	04SD129N-SC-E-2 (Field duplicate of 04SD129N-SC-E-1)
04SD129N-SC-F-1	04SD129N-SC-G-1
04SD129N-SC-H-1	04SD125C-SC-C-1
04SD125C-SC-D-1	04SD125C-SC-D-2 (Field duplicate of 04SD125C-SC-D-1)
04SD125C-SC-E-1	04SD125C-SC-F-1
04SD-EB3-SC-3 (equipment blank)	04SD-EB4-SC-3 (equipment blank)

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were digested and/or analyzed within the method and QAPP specified holding times.

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Calibrations

TAL Metals

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the laboratory's reporting limit (RL) with the exceptions of barium which was spiked at 10x the RL and antimony which was spiked at 6x the RL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes.

TOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

TAL Metals

Target analytes were not detected in the laboratory method blanks, in the initial and continuing calibration blanks (ICBs/CCBs), or in the equipment blanks (04SD-EB3-SC-3 and 04SD-EB4-SC-3) associated with all samples in this sample set.

TOC

An equipment blank was not submitted with the samples in this sample set. No validation action was taken on this basis.

TOC was not detected in the laboratory method blank or in the ICB/CCBs associated with all samples in this sample set.

ICP Interference Check Sample Results

TAL Metals

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

MS Results

TAL Metals

A MS analysis was performed on sample 04SD123N-SC-C-1 for all analytes in association with the sediment samples in this data set. The %Rs of the spiked target analytes were all within the QC acceptance criteria for sample results that were <4x the amount spiked.

The ICP post-digestion spike (PDS) was performed on sample 04SD123N-SC-C-1 for all analytes except selenium and mercury. The %Rs of the post-digestion spike were within the QC acceptance criteria for sample results that were <4x the amount spiked.

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The following samples did not meet PDS recovery criteria of 85-115% for the graphite furnace atomic absorption analysis of selenium. It should be noted that the laboratory flagged the nondetect results for selenium in samples 04SD-EB3-SC-3 and 04SD-EB4-SC-3 with a "W" due to a low spike recovery when the sample absorbance was <50%. The "W" flag was crossed-off during validation and replaced with a "UJ" as indicated in the table below.

Sample ID	PDS %R	Action (Nondetects)
04SD-EB3-SC-3	72	UJ
04SD-EB4-SC-3	82	UJ

TOC

A MS analysis was performed on sample 04SD123N-SC-C-1 from this sample set. The %R of TOC was within the QC acceptance criteria.

Laboratory Duplicate Results

TAL Metals

A laboratory duplicate analysis was performed on sample 04SD123N-SC-B-1. The relative percent differences (RPDs) met the QC acceptance criteria for all analytes with the following exception. The RPD of calcium (86.2%) exceeded the acceptance criteria in the laboratory duplicate analysis. Positive results that were greater than the reporting limit (RL) were qualified as estimated (J) in all sediment samples.

TOC

A laboratory duplicate analysis was performed on sample 04SD123N-SC-B-1. The RPD met the QC acceptance criteria for TOC.

Field Duplicate Results

TAL Metals

Samples 04SD123N-SC-G-1/04SD123N-SC-G-2, 04SD129N-SC-E-1/04SD129N-SC-E-2, and 04SD125C-SC-D-1/04SD125C-SC-D-2 were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD123N-SC-G-1/04SD123N-SC-G-2. All RPDs met the QC acceptance criteria.

Analyte	04SD123N-SC-G-1 (mg/Kg)	04SD123N-SC-G-2 (mg/Kg)	RPD
Aluminum	10500	12200	15
Arsenic	8.5	7.2	17
Barium	76.2	94.3	21
Beryllium	0.61 U	0.67	NC
Calcium	35900	37300	4
Chromium	16.1	17.9	11

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Analyte	04SD123N-SC-G-1 (mg/Kg)	04SD123N-SC-G-2 (mg/Kg)	RPD
Cobalt	13.4	13.3	1
Copper	36.2	33.0	9
Iron	26400	27500	4
Lead	13.3	13.0	2
Magnesium	13100	12700	3
Manganese	732	707	3
Nickel	28.6	29.0	1
Potassium	1590	1900	18
Sodium	228	258	12
Vanadium	19.8	21.8	10
Zinc	71.9	66.7	8
Criteria: RPD ≤35% if both results are >5x SQL.			

NC-Not calculable due to a nondetect result in the original or duplicate sample

The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD129N-SC-E-1/04SD129N-SC-E-2.

Analyte	04SD129N-SC-E-1 (mg/Kg)	04SD129N-SC-E-2 (mg/Kg)	RPD
Aluminum	17700	17700	0
Antimony	2.0	1.7 U	NC
Arsenic	14.9	14.3	4
Barium	188	174	8
Beryllium	0.86 U	0.88	NC
Cadmium	5.0	4.1	20
Calcium	9970	12100	19
Chromium	285	230	21
Cobalt	12.7	14.0	10
Copper	153	133	14
Iron	28200	30300	7
Lead	219	174	23
Magnesium	6880	8170	17
Manganese	475	610	25
Mercury	1.4	0.91	42
Nickel	34.7	36.7	6
Potassium	1840	2080	12
Silver	2.5	2.2	13
Sodium	221	240	8
Vanadium	30.9	31.9	3
Zinc	525	457	14
Criteria: RPD ≤35% if both results are >5x SQL.			

NC-Not calculable due to a nondetect result in the original or duplicate sample

Results for samples 04SD129N-SC-E-1 and 04SD129N-SC-E-2 were qualified as follows.

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- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD125C-SC-D-1/04SD125C-SC-D-2.

Analyte	04SD125C-SC-D-1 (mg/Kg)	04SD125C-SC-D-2 (mg/Kg)	RPD
Aluminum	11900	12300	3
Arsenic	8.7	10.4	18
Barium	119	138	15
Cadmium	1.4	2.0	35
Calcium	14400	15000	4
Chromium	41.5	61.8	39
Cobalt	12.0	12.6	5
Copper	71	110	43
Iron	27600	26100	6
Lead	123	197	46
Magnesium	8010	8740	9
Manganese	513	558	8
Mercury	1.1	1.5	31
Nickel	25.8	27.0	5
Potassium	1860	1670	11
Silver	1.6 U	1.7	NC
Sodium	187	170	10
Vanadium	20.7	21.5	4
Zinc	194	395	68
Criteria: RPD ≤35% if both results are >5x SQL.			

NC-Not calculable due to a nondetect result in the original or duplicate sample

Results for samples 04SD125C-SC-D-1 and 04SD125C-SC-D-2 were qualified as follows.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

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TOC

Samples 04SD123N-SC-G-1/04SD123N-SC-G-2, 04SD129N-SC-E-1/04SD129N-SC-E-2, and 04SD125C-SC-D-1/04SD125C-SC-D-2 were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPD of TOC in samples 04SD123N-SC-G-1/04SD123N-SC-G-2. The RPD of TOC exceeded the acceptance criteria. The positive results for TOC in samples 04SD123N-SC-G-1 and 04SD123N-SC-G-2 were qualified as estimated (J).

Compound	04SD123N-SC-G-1 (mg/Kg)	04SD123N-SC-G-2 (mg/Kg)	RPD
TOC	2870	4590	46
Criteria: RPD ≤35% if both results are >5x RL.			

The following table summarizes the RPD of TOC in samples 04SD129N-SC-E-1/04SD129N-SC-E-2, which was within the acceptance criteria.

Compound	04SD129N-SC-E-1 (mg/Kg)	04SD129N-SC-E-2 (mg/Kg)	RPD
TOC	45200	41800	8
Criteria: RPD ≤35% if both results are >5x RL.			

The following table summarizes the RPD of TOC in samples 04SD125C-SC-D-1/04SD125C-SC-D-2. The RPD of TOC exceeded the acceptance criteria. The positive results for TOC in samples 04SD125C-SC-D-1 and 04SD125C-SC-D-2 were qualified as estimated (J).

Compound	04SD125C-SC-D-1 (mg/Kg)	04SD125C-SC-D-2 (mg/Kg)	RPD
TOC	65400	30800	72
Criteria: RPD ≤35% if both results are >5x RL.			

LCS Results

TAL Metals

The LCSs associated with the sediment samples met the vendor's QC acceptance limits.

The LCSs associated with the aqueous equipment blank samples met the 80-120% recovery criteria.

TOC

The LCS associated with the sediment samples met the laboratory QC acceptance limits.

ICP Serial Dilution Results

TAL Metals

Serial dilution analyses were performed on sediment sample 04SD123N-SC-C-1 for all ICP metals; and on aqueous equipment blank sample 04SD-EB4-SC-3 for all ICP metals in association with all

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samples in this data set. All analytes met the percent difference (%D) QC acceptance criteria in the serial dilution of samples 04SD123N-SC-C1 and 04SD-EB4-SC-3.

Sample Quantitation/Detection Limit Results

The percent (%) solids content for all samples was greater than 50%.

TAL Metals

All metals results were reported to the sample quantitation limit (SQL). Due to software limitations, metal results greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantitation limits were achieved for all metals except sodium.

The following table summarizes the SQL that exceeded the project-specific quantitation limit listed in the QAPP. No validation action was taken other than to note this discrepancy.

Analyte	Laboratory SQL (mg/Kg)	Project QL (mg/Kg)
Sodium	100	1.0

The following table summarizes the samples that were analyzed at dilutions due to the elevated concentration of zinc in the respective samples. Sample results were adjusted accordingly.

Sample ID	Dilution
04SD123N-SC-C-1	10x
04SD129N-SC-E-1	10x
04SD129N-SC-E-2	10x
04SD125C-SC-C-1	10x
04SD125C-SC-D-2	10x

TOC

Due to software limitation, the TOC SQL reported for all surface sediment samples was 300 mg/Kg even though the initial weights varied on a sample-by-sample basis. No actions were taken other than to note this discrepancy.

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD123N-SC-C-1

itract: R2741302

Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

rix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057956

el (low/med): LOW Date Received: 12/13/07

olids: 54.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13100			P
7440-36-0	Antimony	3.0			P
7440-38-2	Arsenic	8.8			P
7440-39-3	Barium	220			P
7440-41-7	Beryllium	0.91	U		P
7440-43-9	Cadmium	12.3			P
7440-70-2	Calcium	18300	J		P
7440-47-3	Chromium	270			P
7440-48-4	Cobalt	10.4			P
7440-50-8	Copper	160			P
7439-89-6	Iron	24900			P
7439-92-1	Lead	270			P
7439-95-4	Magnesium	6090			P
7439-96-5	Manganese	473			P
7439-97-6	Mercury	1.8			CV
7440-02-0	Nickel	28.8			P
7440-09-7	Potassium	1590			P
7782-49-2	Selenium	0.91	U		F
7440-22-4	Silver	2.7			P
7440-23-5	Sodium	182	U		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	28.7			P
7440-66-6	Zinc	468			P

or Before: BROWN Clarity Before: Texture: FINE

or After: YELLOW Clarity After: CLEAR Artifacts:

ments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD123N-SC-D-1

ntract: R2741302

b Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057957

vel (low/med): LOW Date Received: 12/13/07

Solids: 64.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8430			P
7440-36-0	Antimony	1.5	U		P
7440-38-2	Arsenic	7.0			P
7440-39-3	Barium	63.3			P
7440-41-7	Beryllium	0.77	U		P
7440-43-9	Cadmium	0.98			P
7440-70-2	Calcium	4030	J	✓	P
7440-47-3	Chromium	62.7			P
7440-48-4	Cobalt	8.5			P
7440-50-8	Copper	56.6			P
7439-89-6	Iron	18600			P
7439-92-1	Lead	152			P
7439-95-4	Magnesium	4430			P
7439-96-5	Manganese	302			P
7439-97-6	Mercury	1.7			CV
7440-02-0	Nickel	18.4			P
7440-09-7	Potassium	1030			P
7782-49-2	Selenium	0.76	U		F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	154	U		P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	14.8			P
7440-66-6	Zinc	196			P

lor Before: BROWN Clarity Before: Texture: FINE

lor After: YELLOW Clarity After: CLEAR Artifacts:

mments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD123N-SC-E-1

ntract: R2741302

b Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057958

vel (low/med): LOW Date Received: 12/13/07

Solids: 75.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8470			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	5.1			P
7440-39-3	Barium	66.9			P
7440-41-7	Beryllium	0.63	U		P
7440-43-9	Cadmium	0.63	U		P
7440-70-2	Calcium	10700	J		P
7440-47-3	Chromium	23.6			P
7440-48-4	Cobalt	9.3			P
7440-50-8	Copper	42.0			P
7439-89-6	Iron	18600			P
7439-92-1	Lead	58.4			P
7439-95-4	Magnesium	6620			P
7439-96-5	Manganese	355			P
7439-97-6	Mercury	0.22			CV
7440-02-0	Nickel	18.8			P
7440-09-7	Potassium	1190			P
7782-49-2	Selenium	0.63	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	127	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	14.7			P
7440-66-6	Zinc	124			P

olor Before: BROWN Clarity Before: Texture: FINE

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD123N-SC-F-1

ntract: R2741302

b Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057959

vel (low/med): LOW Date Received: 12/13/07

Solids: 77.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14100			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	7.4			P
7440-39-3	Barium	137			P
7440-41-7	Beryllium	0.85			P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	28700	J	✓	P
7440-47-3	Chromium	19.7			P
7440-48-4	Cobalt	14.3			P
7440-50-8	Copper	34.6			P
7439-89-6	Iron	29300			P
7439-92-1	Lead	14.2			P
7439-95-4	Magnesium	12400			P
7439-96-5	Manganese	665			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	31.3			P
7440-09-7	Potassium	2340			P
7782-49-2	Selenium	0.64	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	238			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	24.3			P
7440-66-6	Zinc	77.3			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD123N-SC-G-1

Contract: R2741302

Lab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-G

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057960

Level (low/med): LOW Date Received: 12/13/07

% Solids: 79.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10500			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	8.5			P
7440-39-3	Barium	76.2			P
7440-41-7	Beryllium	0.61	U		P
7440-43-9	Cadmium	0.61	U		P
7440-70-2	Calcium	35900	J		P
7440-47-3	Chromium	16.1			P
7440-48-4	Cobalt	13.4			P
7440-50-8	Copper	36.2			P
7439-89-6	Iron	26400			P
7439-92-1	Lead	13.3			P
7439-95-4	Magnesium	13100			P
7439-96-5	Manganese	732			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	28.6			P
7440-09-7	Potassium	1590			P
7782-49-2	Selenium	0.63	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	228			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	19.8			P
7440-66-6	Zinc	71.9			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD123N-SC-G-2

ontract: R2741302

ab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-(

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057961

evel (low/med): LOW Date Received: 12/13/07

Solids: 79.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12200			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	7.2			P
7440-39-3	Barium	94.3			P
7440-41-7	Beryllium	0.67			P
7440-43-9	Cadmium	0.60	U		P
7440-70-2	Calcium	37300	J		P
7440-47-3	Chromium	17.9			P
7440-48-4	Cobalt	13.3			P
7440-50-8	Copper	33.0			P
7439-89-6	Iron	27500			P
7439-92-1	Lead	13.0			P
7439-95-4	Magnesium	12700			P
7439-96-5	Manganese	707			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	29.0			P
7440-09-7	Potassium	1900			P
7782-49-2	Selenium	0.61	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	258			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	21.8			P
7440-66-6	Zinc	66.7			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD125C-SC-C-1

ntract: R2741302

b Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058080

vel (low/med): LOW Date Received: 12/13/07

Solids: 52.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14700			P
7440-36-0	Antimony	4.8			P
7440-38-2	Arsenic	10.0			P
7440-39-3	Barium	295			P
7440-41-7	Beryllium	0.93	U		P
7440-43-9	Cadmium	24.2			P
7440-70-2	Calcium	8420	J		P
7440-47-3	Chromium	379			P
7440-48-4	Cobalt	11.8			P
7440-50-8	Copper	186			P
7439-89-6	Iron	26300			P
7439-92-1	Lead	341			P
7439-95-4	Magnesium	6810			P
7439-96-5	Manganese	541			P
7439-97-6	Mercury	1.7			CV
7440-02-0	Nickel	34.3			P
7440-09-7	Potassium	1660			P
7782-49-2	Selenium	0.94	U		F
7440-22-4	Silver	3.4			P
7440-23-5	Sodium	186	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	37.8			P
7440-66-6	Zinc	550			P

olor Before: BROWN Clarity Before: Texture: FINE

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD125C-SC-D-1

Contract: R2741302

Lab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058081

Level (low/med): LOW Date Received: 12/13/07

% Solids: 63.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11900			P
7440-36-0	Antimony	1.6	U		P
7440-38-2	Arsenic	8.7			P
7440-39-3	Barium	119			P
7440-41-7	Beryllium	0.78	U		P
7440-43-9	Cadmium	1.4			P
7440-70-2	Calcium	14400	J		P
7440-47-3	Chromium	41.5		J	P
7440-48-4	Cobalt	12.0			P
7440-50-8	Copper	71.0		J	P
7439-89-6	Iron	27600			P
7439-92-1	Lead	123		J	P
7439-95-4	Magnesium	8010			P
7439-96-5	Manganese	513			P
7439-97-6	Mercury	1.1			CV
7440-02-0	Nickel	25.8			P
7440-09-7	Potassium	1860			P
7782-49-2	Selenium	0.75	U		F
7440-22-4	Silver	1.6	U		P
7440-23-5	Sodium	187			P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	20.7			P
7440-66-6	Zinc	194		J	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD125C-SC-D-2

Contract: R2741302

Lab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058082

Level (low/med): LOW Date Received: 12/13/07

% Solids: 61.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12300			P
7440-36-0	Antimony	1.6	U		P
7440-38-2	Arsenic	10.4			P
7440-39-3	Barium	138			P
7440-41-7	Beryllium	0.82	U		P
7440-43-9	Cadmium	2.0			P
7440-70-2	Calcium	15000	J	J	P
7440-47-3	Chromium	61.8		J	P
7440-48-4	Cobalt	12.6			P
7440-50-8	Copper	110		J	P
7439-89-6	Iron	26100			P
7439-92-1	Lead	197		J	P
7439-95-4	Magnesium	8740			P
7439-96-5	Manganese	558			P
7439-97-6	Mercury	1.5			CV
7440-02-0	Nickel	27.0			P
7440-09-7	Potassium	1670			P
7782-49-2	Selenium	0.78	U		F
7440-22-4	Silver	1.7			P
7440-23-5	Sodium	170			P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	21.5			P
7440-66-6	Zinc	395		J	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD125C-SC-E-1

ontract: R2741302

ab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058083

evel (low/med): LOW Date Received: 12/13/07

Solids: 79.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10000			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	6.5			P
7440-39-3	Barium	121			P
7440-41-7	Beryllium	0.62	U		P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	33100	J	//	P
7440-47-3	Chromium	15.5			P
7440-48-4	Cobalt	11.2			P
7440-50-8	Copper	33.1			P
7439-89-6	Iron	24400			P
7439-92-1	Lead	11.9			P
7439-95-4	Magnesium	12000			P
7439-96-5	Manganese	618			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	25.1			P
7440-09-7	Potassium	1700			P
7782-49-2	Selenium	0.61	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	203			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	19.5			P
7440-66-6	Zinc	68.5			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD125C-SC-F-1

ontract: R2741302

ab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-(

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058084

evel (low/med): LOW Date Received: 12/13/07

Solids: 77.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11200			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	8.2			P
7440-39-3	Barium	102			P
7440-41-7	Beryllium	0.61	U		P
7440-43-9	Cadmium	0.61	U		P
7440-70-2	Calcium	39400	J		P
7440-47-3	Chromium	16.6			P
7440-48-4	Cobalt	13.9			P
7440-50-8	Copper	36.2			P
7439-89-6	Iron	26700			P
7439-92-1	Lead	13.8			P
7439-95-4	Magnesium	12900			P
7439-96-5	Manganese	736			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	29.3			P
7440-09-7	Potassium	1720			P
7782-49-2	Selenium	0.64	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	249			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	20.3			P
7440-66-6	Zinc	61.3			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD129N-SC-C-1

ntract: R2741302

b Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057965

vel (low/med): LOW Date Received: 12/13/07

Solids: 81.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6210			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.9			P
7440-39-3	Barium	36.4			P
7440-41-7	Beryllium	0.59	U		P
7440-43-9	Cadmium	0.59	U		P
7440-70-2	Calcium	8580	J	✓	P
7440-47-3	Chromium	47.1			P
7440-48-4	Cobalt	6.1			P
7440-50-8	Copper	8.7			P
7439-89-6	Iron	15500			P
7439-92-1	Lead	105			P
7439-95-4	Magnesium	3480			P
7439-96-5	Manganese	318			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	13.0			P
7440-09-7	Potassium	805			P
7782-49-2	Selenium	0.60	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	125			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	9.1			P
7440-66-6	Zinc	68.9			P

lor Before: BROWN Clarity Before: Texture: COARSE

lor After: YELLOW Clarity After: CLEAR Artifacts:

mments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD129N-SC-D-1

Contract: R2741302

Lab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057966

Level (low/med): LOW Date Received: 12/13/07

% Solids: 75.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7770			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	3.7			P
7440-39-3	Barium	64.7			P
7440-41-7	Beryllium	0.65	U		P
7440-43-9	Cadmium	1.8			P
7440-70-2	Calcium	3870	J		P
7440-47-3	Chromium	53.7			P
7440-48-4	Cobalt	7.4			P
7440-50-8	Copper	30.6			P
7439-89-6	Iron	16900			P
7439-92-1	Lead	58.3			P
7439-95-4	Magnesium	4170			P
7439-96-5	Manganese	324			P
7439-97-6	Mercury	0.06			CV
7440-02-0	Nickel	17.1			P
7440-09-7	Potassium	983			P
7782-49-2	Selenium	0.65	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	130	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	12.7			P
7440-66-6	Zinc	131			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD129N-SC-E-1

Contract: R2741302

Lab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057967

Level (low/med): LOW Date Received: 12/13/07

% Solids: 58.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17700			P
7440-36-0	Antimony	2.0			P
7440-38-2	Arsenic	14.9			P
7440-39-3	Barium	188			P
7440-41-7	Beryllium	0.86	U		P
7440-43-9	Cadmium	5.0			P
7440-70-2	Calcium	9970	J		P
7440-47-3	Chromium	285			P
7440-48-4	Cobalt	12.7			P
7440-50-8	Copper	153			P
7439-89-6	Iron	28200			P
7439-92-1	Lead	219			P
7439-95-4	Magnesium	6880			P
7439-96-5	Manganese	475			P
7439-97-6	Mercury	1.4		J	CV
7440-02-0	Nickel	34.7			P
7440-09-7	Potassium	1840			P
7782-49-2	Selenium	0.86	U		F
7440-22-4	Silver	2.5			P
7440-23-5	Sodium	221			P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	30.9			P
7440-66-6	Zinc	525			P

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD129N-SC-E-2

ontract: R2741302

lab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057968

evel (low/med): LOW Date Received: 12/13/07

Solids: 56.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	17700			P
7440-36-0	Antimony	1.7	U		P
7440-38-2	Arsenic	14.3			P
7440-39-3	Barium	174			P
7440-41-7	Beryllium	0.88			P
7440-43-9	Cadmium	4.1			P
7440-70-2	Calcium	12100	J		P
7440-47-3	Chromium	230			P
7440-48-4	Cobalt	14.0			P
7440-50-8	Copper	133			P
7439-89-6	Iron	30300			P
7439-92-1	Lead	174			P
7439-95-4	Magnesium	8170			P
7439-96-5	Manganese	610			P
7439-97-6	Mercury	0.91		J	CV
7440-02-0	Nickel	36.7			P
7440-09-7	Potassium	2080			P
7782-49-2	Selenium	0.85	U		F
7440-22-4	Silver	2.2			P
7440-23-5	Sodium	240			P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	31.9			P
7440-66-6	Zinc	457			P

lor Before: BROWN Clarity Before: Texture: MEDIUM

lor After: YELLOW Clarity After: CLEAR Artifacts:

mments:

Columbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD129N-SC-F-1

ontract: R2741302

ab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-(

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057969

evel (low/med): LOW Date Received: 12/13/07

Solids: 73.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9750			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	8.3			P
7440-39-3	Barium	84.7			P
7440-41-7	Beryllium	0.65	U		P
7440-43-9	Cadmium	0.93			P
7440-70-2	Calcium	5590	J		P
7440-47-3	Chromium	101			P
7440-48-4	Cobalt	9.1			P
7440-50-8	Copper	68.0			P
7439-89-6	Iron	19600			P
7439-92-1	Lead	119			P
7439-95-4	Magnesium	5020			P
7439-96-5	Manganese	327			P
7439-97-6	Mercury	0.35			CV
7440-02-0	Nickel	21.4			P
7440-09-7	Potassium	1180			P
7782-49-2	Selenium	0.65	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	173			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	16.3			P
7440-66-6	Zinc	216			P

olor Before: BROWN Clarity Before: Texture: FINE

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD129N-SC-G-1

Contract: R2741302

Lab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057970

Level (low/med): LOW Date Received: 12/13/07

% Solids: 65.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9580			P
7440-36-0	Antimony	1.5	U		P
7440-38-2	Arsenic	11.5			P
7440-39-3	Barium	143			P
7440-41-7	Beryllium	0.74	U		P
7440-43-9	Cadmium	1.4			P
7440-70-2	Calcium	8580	J		P
7440-47-3	Chromium	56.2			P
7440-48-4	Cobalt	8.9			P
7440-50-8	Copper	90.3			P
7439-89-6	Iron	20700			P
7439-92-1	Lead	189			P
7439-95-4	Magnesium	4950			P
7439-96-5	Manganese	390			P
7439-97-6	Mercury	0.80			CV
7440-02-0	Nickel	19.8			P
7440-09-7	Potassium	1280			P
7782-49-2	Selenium	0.76	U		F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	278			P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	17.3			P
7440-66-6	Zinc	231			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD129N-SC-H-1

ntract: R2741302

b Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057971

vel (low/med): LOW Date Received: 12/13/07

Solids: 71.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6530			P
7440-36-0	Antimony	1.4	U		P
7440-38-2	Arsenic	4.2			P
7440-39-3	Barium	54.6			P
7440-41-7	Beryllium	0.69	U		P
7440-43-9	Cadmium	0.69	U		P
7440-70-2	Calcium	7390	J	✓	P
7440-47-3	Chromium	12.3			P
7440-48-4	Cobalt	7.3			P
7440-50-8	Copper	16.0			P
7439-89-6	Iron	13200			P
7439-92-1	Lead	16.7			P
7439-95-4	Magnesium	5210			P
7439-96-5	Manganese	227			P
7439-97-6	Mercury	0.05			CV
7440-02-0	Nickel	14.7			P
7440-09-7	Potassium	841			P
7782-49-2	Selenium	0.67	U		F
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	148			P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	13.9			P
7440-66-6	Zinc	55.7			P

lor Before: BROWN Clarity Before: Texture: FINE

lor After: YELLOW Clarity After: CLEAR Artifacts:

mments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD-EB3-SC-3

ntract: R2741302

b Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-(

trix (soil/water): WATER Lab Sample ID: 1058166

vel (low/med): LOW Date Received: 12/13/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

olor Before: COLORLESS Clarity Before: CLEAR Texture:

olor After: COLORLESS Clarity After: CLEAR Artifacts:

omments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD-EB4-SC-3

Contract: R2741302
Lab Code: Case No.: SAS No.: SDG NO.: 04SD123N-SC-C
Matrix (soil/water): WATER Lab Sample ID: 1058167
Level (low/med): LOW Date Received: 12/13/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U	W	F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-C-1

Date Sampled : 12/12/07 09:54 Order #: 1057956 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	54.9	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	24800	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-D-1

Date Sampled : 12/12/07 09:54 Order #: 1057957 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	64.9	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	37600	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-E-1

Date Sampled : 12/12/07 09:54 Order #: 1057958 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	75.0	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	13500	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-F-1

Date Sampled : 12/12/07 09:54 Order #: 1057959 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	77.8	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2350	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-1

Date Sampled : 12/12/07 09:54 Order #: 1057960 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	79.4	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2870 J	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD123N-SC-G-2

Date Sampled : 12/12/07 09:54 Order #: 1057961 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	79.5	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	4590 J	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-C-1

Date Sampled : 12/12/07 10:40 Order #: 1057965 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	81.9	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	1720	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-D-1

Date Sampled : 12/12/07 10:40 Order #: 1057966 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	75.7	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2070	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-E-1

Date Sampled : 12/12/07 10:40 Order #: 1057967 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	58.2	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	45200	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-E-2

Date Sampled : 12/12/07 10:40 Order #: 1057968 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	56.0	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	41800	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-F-1

Date Sampled : 12/12/07 10:40 Order #: 1057969 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	73.6	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	19200	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-G-1

Date Sampled : 12/12/07 10:40 Order #: 1057970 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	65.4	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	46800	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD129N-SC-H-1

Date Sampled : 12/12/07 10:40 Order #: 1057971 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	71.4	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	10600	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD125C-SC-C-1

Date Sampled : 12/12/07 08:45 Order #: 1058080 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	52.8	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	41900	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD125C-SC-D-1

Date Sampled : 12/12/07 08:45 **Order #:** 1058081 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741302

ANALYTE	METHOD	PQL	RESULT		DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	63.8		%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	65400	J	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD125C-SC-D-2

Date Sampled : 12/12/07 08:45 Order #: 1058082 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	61.3	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	30800 J	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD125C-SC-E-1

Date Sampled : 12/12/07 08:45 Order #: 1058083 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	79.0	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2270	MG/KG	12/19/07	09:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/15/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD125C-SC-F-1

Date Sampled : 12/12/07 08:45 Order #: 1058084 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741302

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	77.5	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2880	MG/KG	12/19/07	09:00	1.0

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Memorandum

Date: February 15, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation, VOC Analysis
Subsurficial Sediment Sampling, December 2007
BASF Rensselaer Site, NY
CAS Submission # R2741301

Distribution: L. Herberich/Westford

00760-171-525 File

BR030voclms.doc

SUMMARY

Limited validation was performed on the data for eight sediment samples and two trip blanks analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The sediment samples were collected at the BASF site in Rensselaer, NY, on December 12, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741301.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data appear valid as reported and may be used for decision making purposes. Selected results in several sediment samples were rejected due to very low internal standard area recoveries or very low MS/MSD recoveries. Selected other results were qualified as undetected (U) due to blank contamination or were qualified due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD116N-SC-G-1	04SD116N-SC-H-1
04SD122N-SC-C-1	04SD122N-SC-D-1
04SD120F-SC-C-1	04SD120F-SC-D-1
04SD120F-SC-E-1	04SD120F-SC-E-2 (Field duplicate of 04SD120F-SC-E-1)

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Sample IDs	
Trip Blank 4	Trip Blank 7

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard recoveries
- Sample quantitation/reporting limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were analyzed within the method-specified holding time.

GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

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Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations (IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 10/03/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 04SD116N-SC-G-1, 04SD116N-SC-H-1, 04SD122N-SC-C-1, 04SD122N-SC-D-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, 04SD120F-SC-E-1, 04SD120F-SC-E-2RE			
IC 12/12/07 (MSVOA10)	1,4-Dioxane	0.002	J/UJ*
Associated samples: Trip Blank 4 and Trip Blank 7			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			
RE-Re-analysis			

Calibration (Instrument ID)	Compound	RRF	%D	Actions (Detects/Nondetects)
CC 12/15/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated samples: 04SD116N-SC-H-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, and 04SD120F-SC-E-1				
CC 12/17/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated sample: 04SD116N-SC-G-1				
CC 12/18/07 (MSVOA10)	1,4-Dioxane	0.002	ok	J/UJ*
Associated samples: Trip Blank 4 and Trip Blank 7				
CC 12/19/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated sample: 04SD120F-SC-E-2RE				
CC 12/2007 (MSVOA7)	1,4-Dioxane	0.005	ok	J/UJ*
	2-Butanone	ok	25.6	J/UJ
	4-Methyl-2-pentanone	ok	20.7	J/UJ
	2-Hexanone	ok	21.6	J/UJ
	1,2-Dibromo-3-chloropropane	ok	27.0	J/UJ
	1,1,2,2-Tetrachloroethane	ok	27.4	J/UJ
Associated samples: 04SD122N-SC-C-1 and 04SD122N-SC-D-1				
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.				
RE- Re-analysis				

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Laboratory Blanks/Equipment Blanks/Trip Blanks

Equipment blanks were not submitted with this sample set. No validation action was taken on this basis.

Several target compounds were detected in the laboratory method blanks and in the trip blanks associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected and the associated samples. Note that the positive results for methylene chloride in Trip Blank 4 and Trip Blank 7 were negated due to the method blank actions.

Blank type (lab ID)	Compound	Concentration (units)
Method (WAT BLK)	Methylene chloride	0.27 J µg/L
Associated samples: Trip Blank 4 and Trip Blank 7		
Method (SOIL BLK2)	Methylene chloride	0.36 J µg/Kg
Associated sample: 04SD116N-SC-G-1		
Method (SOIL BLK3)	Chlorobenzene	0.43 J µg/Kg
Associated sample: 04SD120F-SC-E-2RE		
Trip Blank 4	Acetone	0.87 J µg/L
Associated samples: 04SD116N-SC-G-1 and 04SD116N-SC-H-1.		
Trip Blank 7	Acetone	0.58 J ug/L
Associated samples: 04SD122N-SC-C-1, 04SD122N-SC-D-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, 04SD120F-SC-E-1, and 04SD120F-SC-E-2		
RE – Reanalysis		

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	≤ RL	Report sample RL value with a U
		> RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			
RL (Reporting Limit) is equivalent to the lowest calibration standard			

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For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC detected	Detects	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			
RL (Reporting Limit) is equivalent to the lowest calibration standard			
TIC = Tentatively Identified Compound			

Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses with the following exceptions.

Sample	%R DBFM	%R Tol-d8	%R BFB	Actions (Detects/Nondetects)
04SD116N-SC-H-1	229	136	46	Estimate J/UJ
04SD120F-SC-C-1	266	146	ok	Estimate J/Accept
04SD120F-SC-D-1	266	157	ok	Estimate J/Accept
04SD120F-SC-E-1	212	144	ok	Estimate J/Accept
04SD120F-SC-E-2RE	182	138	ok	Estimate J/Accept
Note: Some nondetect results for sample 04SD120F-SC-E-2RE were rejected (R) due to very low internal standard (IS) recoveries. All nondetect results for samples 04SD116N-SC-H-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, and 04SD120F-SC-E-1 were rejected (R) due to very low IS recoveries. (See discussion below under **Internal Standards**)				
DBFM – Dibromofluoromethane Tol-d8 – Toluene-d8 BFB- Bromofluorobenzene RE – Reanalysis				

The initial analysis of sample 04SD120F-SC-E-2 had all four internal standard recoveries below 25%. The sample was re-analyzed and the recovery of two of four internal standards fell below 25%. The reanalysis was reported by the validator since it exhibited higher internal standard recoveries.

The initial analyses of samples 04SD116N-SC-H-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, and 04SD120F-SC-E-1 had all four internal standard recoveries below 25%. These samples were reanalyzed confirming the very low internal standard recoveries in the initial analysis. The initial analyses of samples 04SD116N-SC-H-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, and 04SD120F-SC-E-1 were reported by the validator since the results between the two analyses were comparable.

The laboratory noted in the case narrative that the VOC vials for samples 04SD116N-SC-H-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, 04SD120F-SC-E-1, and 04SD120F-SC-E-2RE could have contained small particulate matter between the septum and the sealing lip of the vials. This particulate matter may have caused the purge gas to therefore leak from the vial during analysis of the samples

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Compound	LCS %R	QC Limits %R	Actions (Detects/Nondetects)
Dichlorodifluoromethane	136	70-130	Estimate J/Accept result
Associated sample: 04SD120F-SC-E-2RE			
RE – Reanalysis			

Field Duplicate Results

Samples 04SD120F-SC-E-1/04SD120F-SC-E-2 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected compounds in field duplicate samples 04SD120F-SC-E-1 and 04SD120F-SC-E-2. It should be noted that the reanalysis of the field duplicate sample was reported by the validator due to the low internal standard area recoveries. Additionally, the RPDs for all nondetect results were rejected in both the sample and field duplicate sample due to very low internal standard area recoveries as noted below. The RPDs for carbon disulfide and toluene met the acceptance criteria.

Compound	04SD120F-SC-E-1 (µg/Kg)	04SD120F-SC-E-2RE (µg/Kg)	RPD
Carbon disulfide	2.2 J	2.2 J	0
Toluene	1.8 J	1.2 J	40
Criteria: RPD ≤50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			
RE – Reanalysis			

Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses with the following exceptions.

Sample	Internal Standard Area %R			
	PFB	DFB	CBZ	DCB
04SD116N-SC-H-1	15	23	11	4
04SD116N-SC-G-1	ok	ok	ok	45
04SD120F-SC-C-1	13	16	8	4
04SD120F-SC-D-1	17	20	9	3
04SD120F-SC-E-1	21	21	11	4
04SD120F-SC-E-2RE	26	25	13	4
04SD122N-SC-C-1*	ok	ok	ok	41
04SD122N-SC-D-1*	ok	ok	ok	38
PFB – Pentafluorobenzene DFB – 1,4-Difluorobenzene CBZ – d5-Chlorobenzene DCB – d4-Dichlorobenzene RE – Reanalysis				
* Note that the validator chose to report results from from the medium level soil analysis for these samples, therefore, internal standard qualifications were not applied to the results reported				

Sample results were qualified as follows:

- If the internal standard area was ≥25% but <50%, positive and nondetect results for compounds quantitated with the noncompliant internal standard were qualified as estimated (J, UJ).
- If the internal standard area was <25%, positive results for compounds quantitated with the noncompliant internal standard were qualified as estimated (J) and nondetect results were rejected (R).

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thereby causing the poor surrogate recoveries and the low bias in the internal standard area recoveries.

MS/MSD Results

The laboratory performed MS/MSD analyses on sediment sample 04SD116N-SC-G-1. The %Rs and the relative percent differences (RPDs) of all spiked compounds were within the QC acceptance criteria for the MS/MSD analysis with the following exceptions.

Compound	MS/MSD %R (RPD)	QC Limits %R (RPD)	Actions (Detects/Nondetects)
Acetone	ok/240 (71)	50-150 (30)	Estimate J/UJ
Bromoform	42/ok (43)	70-130 (30)	Estimate J/UJ
2-Butanone	ok/154 (86)	50-150 (30)	Estimate J/UJ
Methyl tert-butyl ether	ok/133 (ok)	70-130 (30)	Estimate J/Accept
Chlorobenzene	58/58 (ok)	70-130 (30)	Estimate J/UJ
1,2-Dibromo-3-chloropropane	34/40 (ok)	50-150 (30)	Estimate J/UJ
Cyclohexane	44/46 (ok)	70-130 (30)	Estimate J/UJ
Dibromochloromethane	63/ok (40)	70-130 (30)	Estimate J/UJ
1,2-Dibromoethane	38/60 (53)	70-130 (30)	Estimate J/UJ
1,3-Dichlorobenzene	46/52 (ok)	70-130 (30)	Estimate J/UJ
1,4-Dichlorobenzene	42/48 (ok)	70-130 (30)	Estimate J/UJ
1,2-Dichlorobenzene	46/54 (ok)	70-130 (30)	Estimate J/UJ
Dichlorodifluoromethane	137/ok (32)	70-130 (30)	Estimate J/UJ
1,1-Dichloroethane	ok/131 (ok)	70-130 (30)	Estimate J/Accept
1,2-Dichloroethane	67/ok (36)	70-130 (30)	Estimate J/UJ
cis-1,3-Dichloropropene	55/63 (ok)	70-130 (30)	Estimate J/UJ
trans-1,3-Dichloropropene	42/58 (40)	70-130 (30)	Estimate J/UJ
1,4-Dioxane	ok/ok (34)	50-150 (30)	Estimate J/UJ
Ethylbenzene	ok/65 (ok)	70-130 (30)	Estimate J/UJ
2-Hexanone	23/37 (54)	70-130 (30)	Estimate J/UJ
Isopropylbenzene	ok/60 (ok)	70-130 (30)	Estimate J/UJ
Methyl acetate	48/ok (63)	50-150 (30)	Estimate J/UJ
Methylcyclohexane	36/40 (ok)	50-150 (30)	Estimate J/UJ
4-Methyl-2-pentanone	46/ok (79)	70-130 (30)	Estimate J/UJ
Styrene	46/38 (ok)	70-130 (30)	Estimate J/UJ
1,1,2,2-Tetrachloroethane	59/169 (104)	70-130 (30)	Estimate J/UJ
1,2,4-Trichlorobenzene	11/9 (ok)	70-130 (30)	Estimate J/ Reject R
1,2,3-Trichlorobenzene	12/9 (ok)	70-130 (30)	Estimate J/Reject R
1,1,1-Trichloroethane	ok/138 (ok)	70-130 (30)	Estimate J/Accept
1,1,2-Trichloroethane	61/ok (53)	70-130 (30)	Estimate J/UJ
Trichlorofluoromethane	ok/138 (16)	70-130 (30)	Estimate J/Accept
1,1,2-Trichloro-1,2,2-trifluoroethane	ok/146 (ok)	70-130 (30)	Estimate J/Accept
o-Xylene	67/56 (ok)	70-130 (30)	Estimate J/UJ
m+p-Xylene	68/54 (ok)	70-130 (30)	Estimate J/UJ
Associated sample: 04SD116N-SC-G-1			

LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses with the following exception.

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- Sample results that were previously qualified as undetected (U) on the basis of blank contamination were not rejected but were qualified as estimated (UJ) due to the low internal standard recoveries.

The initial analysis of sample 04SD120F-SC-E-2 had all four internal standard recoveries below 25%. The sample was re-analyzed and the recovery of two of four internal standards fell below 25%. The reanalysis was reported by the validator since it exhibited higher internal standard recoveries.

The initial analyses of samples 04SD116N-SC-H-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, and 04SD120F-SC-E-1 had all four internal standard recoveries below 25%. These samples were reanalyzed confirming the very low internal standard recoveries in the initial analysis. The initial analyses of samples 04SD116N-SC-H-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, and 04SD120F-SC-E-1 were reported by the validator since the results between the two analyses were comparable.

Samples 04SD122N-SC-C-1 and 04SD122N-SC-D-1 were reanalyzed as medium level soil samples by the laboratory. The internal standard area recoveries in the medium level analyses of these samples were within the acceptance criteria. The validator chose to report the medium level soil results due to the improved internal standard recovery and more conservative (higher concentrations) detected in the samples.

The low internal standard area recovery for DCB in sample 04SD116N-SC-G-1 was confirmed by the MS/MSD analyses performed on this sample.

The laboratory noted in the case narrative that the VOC vials for samples 04SD116N-SC-H-1, 04SD120F-SC-C-1, 04SD120F-SC-D-1, 04SD120F-SC-E-1, and 04SD120F-SC-E-2RE could have contained small particulate matter between the septum and the sealing lip of the vials. This particulate matter may have caused the purge gas to therefore leak from the vial during analysis of the samples thereby causing the poor surrogate recoveries and the low bias in the internal standard area recoveries.

Sample Quantitation/Reporting Limits

The percent (%) solids content for all samples was greater than 50%.

All VOCs, except trichloroethene and 1,4-dioxane, have RLs which are less than or equal to the project required detection limits when analyzed without dilution. In all cases where dilutions were performed or where sediment samples were analyzed as medium level soil samples, one or more VOCs exceeded the project required detection limits.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-G-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057929 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 74.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 0.74			Dry Weight
ACETONE	20	20 ~~7.0 J~~ UJ	UG/KG
BENZENE	5.0	5.0 U	UG/KG
BROMOCHLOROMETHANE	5.0	5.0 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.0 U	UG/KG
BROMOFORM	5.0	5.0 ~~U~~UJ	UG/KG
BROMOMETHANE	5.0	5.0 U	UG/KG
2-BUTANONE (MEK)	10	10 UJ	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.0 U	UG/KG
CARBON DISULFIDE	10	10 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.0 U	UG/KG
CHLOROBENZENE	5.0	2.1 J	UG/KG
CHLOROETHANE	10	10 U	UG/KG
CHLOROFORM	5.0	5.0 U	UG/KG
CHLOROMETHANE	5.0	5.0 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.0 UJ	UG/KG
CYCLOHEXANE	5.0	5.0 UJ	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.0 UJ	UG/KG
1,2-DIBROMOETHANE	5.0	5.0 UJ	UG/KG
1,3-DICHLOROBENZENE	5.0	5.0 UJ	UG/KG
1,4-DICHLOROBENZENE	5.0	5.0 UJ	UG/KG
1,2-DICHLOROBENZENE	5.0	5.0 UJ	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.0 UJ	UG/KG
1,1-DICHLOROETHANE	5.0	5.0 U ~~J~~ LB	UG/KG
1,2-DICHLOROETHANE	5.0	5.0 UJ	UG/KG
1,1-DICHLOROETHENE	5.0	5.0 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.0 UJ	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 UJ	UG/KG
1,4-DIOXANE	100	400 ~~99~~ UJ	UG/KG
ETHYLBENZENE	5.0	5.0 UJ	UG/KG
2-HEXANONE	10	10 UJ	UG/KG
ISOPROPYLBENZENE	5.0	5.0 U	UG/KG
METHYL ACETATE	10	10 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.0 U	UG/KG
METHYLENE CHLORIDE	5.0	5.0 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	10 UJ	UG/KG
STYRENE	5.0	5.0 UJ	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 UJ	UG/KG
TETRACHLOROETHENE	5.0	5.0 U	UG/KG
TOLUENE	5.0	5.0 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	~~5.0 U~~ R	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	~~5.0 U~~ R	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-G-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057929 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 74.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 0.74			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.0 UJ	UG/KG
TRICHLOROETHENE	5.0	5.0 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.0 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.0 U	UG/KG
VINYL CHLORIDE	5.0	5.0 U	UG/KG
O-XYLENE	5.0	5.0 UJ	UG/KG
M+P-XYLENE	5.0	5.0 UJ	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	56	%
TOLUENE-D8	(75 - 128 %)	109	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	95	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-H-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057930 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 74.2

DATE ANALYZED : 12/15/07
ANALYTICAL DILUTION: 0.82

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	70 UJ	UG/KG
BENZENE	5.0	9.2 J	UG/KG
BROMOCHLOROMETHANE	5.0	~~5.5 U~~ R	UG/KG
BROMODICHLOROMETHANE	5.0	5.5 U	UG/KG
BROMOFORM	5.0	5.5 U	UG/KG
BROMOMETHANE	5.0	5.5 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	~~5.5 U~~	UG/KG
CARBON DISULFIDE	10	3.4 J	UG/KG
CARBON TETRACHLORIDE	5.0	~~5.5 U~~ R	UG/KG
CHLOROBENZENE	5.0	49 J	UG/KG
CHLOROETHANE	10	~~11 U~~ R	UG/KG
CHLOROFORM	5.0	5.5 U	UG/KG
CHLOROMETHANE	5.0	5.5 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.5 U	UG/KG
CYCLOHEXANE	5.0	5.5 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.5 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.5 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.5 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.5 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.5 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.5 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.5 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.5 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	~~5.5 U~~	UG/KG
1,4-DIOXANE	100	~~440 110 U~~	UG/KG
ETHYLBENZENE	5.0	~~5.5 U~~	UG/KG
2-HEXANONE	10	11 U	UG/KG
ISOPROPYLBENZENE	5.0	5.5 U	UG/KG
METHYL ACETATE	10	11 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.5 U	UG/KG
METHYLENE CHLORIDE	5.0	5.5 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.5 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.5 U	UG/KG
TETRACHLOROETHENE	5.0	~~5.5 U~~	UG/KG
TOLUENE	5.0	2.2 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	~~5.5 U~~ R	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	~~5.5 U~~ R	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-H-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057930 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 74.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 0.82			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	~~5.5 U~~ R	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.5 U	UG/KG
TRICHLOROETHENE	5.0	5.5 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.5 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.5 U	UG/KG
VINYL CHLORIDE	5.0	5.5 U	UG/KG
O-XYLENE	5.0	5.5 U	UG/KG
M+P-XYLENE	5.0	5.5 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	46 *	%
TOLUENE-D8	(75 - 128 %)	136 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	229 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-H-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057930 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 74.2

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 0.99

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	100	UG/KG
BENZENE	5.0	5.4 J	UG/KG
BROMOCHLOROMETHANE	5.0	6.7 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.7 U	UG/KG
BROMOFORM	5.0	6.7 U	UG/KG
BROMOMETHANE	5.0	6.7 U	UG/KG
2-BUTANONE (MEK)	10	13 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.7 U	UG/KG
CARBON DISULFIDE	10	8.0 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.7 U	UG/KG
CHLOROBENZENE	5.0	23	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.7 U	UG/KG
CHLOROMETHANE	5.0	6.7 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.7 U	UG/KG
CYCLOHEXANE	5.0	6.7 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.7 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.7 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.7 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.7 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.7 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.7 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.7 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.7 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.7 U	UG/KG
1,4-DIOXANE	100	130 U	UG/KG
ETHYLBENZENE	5.0	6.7 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	6.7 U	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.7 U	UG/KG
METHYLENE CHLORIDE	5.0	6.7 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.7 U	UG/KG
TETRACHLOROETHENE	5.0	6.7 U	UG/KG
TOLUENE	5.0	6.7 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.7 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.7 U	UG/KG

Draft Report

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-H-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057930 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 74.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.99			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.7 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.7 U	UG/KG
TRICHLOROETHENE	5.0	6.7 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.7 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.7 U	UG/KG
VINYL CHLORIDE	5.0	6.7 U	UG/KG
O-XYLENE	5.0	6.7 U	UG/KG
M+P-XYLENE	5.0	6.7 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	26 *	%
TOLUENE-D8	(75 - 128 %)	175 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	209 *	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-C-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057945 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 52.0

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 109.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	4200 ~~380 J~~ U	UG/KG
BENZENE	5.0	85 J	UG/KG
BROMOCHLOROMETHANE	5.0	1000 U	UG/KG
BROMODICHLOROMETHANE	5.0	1000 U	UG/KG
BROMOFORM	5.0	1000 U	UG/KG
BROMOMETHANE	5.0	1000 U	UG/KG
2-BUTANONE (MEK)	10	140 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1000 U	UG/KG
CARBON DISULFIDE	10	2100 U	UG/KG
CARBON TETRACHLORIDE	5.0	1000 U	UG/KG
CHLOROBENZENE	5.0	1600 ~~J~~	UG/KG
CHLOROETHANE	10	2100 U	UG/KG
CHLOROFORM	5.0	1000 U	UG/KG
CHLOROMETHANE	5.0	1000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1000 UJ	UG/KG
CYCLOHEXANE	5.0	1000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1000 U	UG/KG
1,2-DIBROMOETHANE	5.0	1000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	110 J	UG/KG
1,4-DICHLOROBENZENE	5.0	110 J	UG/KG
1,2-DICHLOROBENZENE	5.0	77 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1000 U	UG/KG
1,1-DICHLOROETHANE	5.0	1000 U	UG/KG
1,2-DICHLOROETHANE	5.0	1000 U	UG/KG
1,1-DICHLOROETHENE	5.0	1000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/KG
1,4-DIOXANE	100	84 ~~2~~1000 UJ	UG/KG
ETHYLBENZENE	5.0	1000 UJ	UG/KG
2-HEXANONE	10	2100 U	UG/KG
ISOPROPYLBENZENE	5.0	1000 U	UG/KG
METHYL ACETATE	10	170 J	UG/KG
METHYLCYCLOHEXANE	5.0	1000 U	UG/KG
METHYLENE CHLORIDE	5.0	1000 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	2100 UJ	UG/KG
STYRENE	5.0	1000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1000 UJ	UG/KG
TETRACHLOROETHENE	5.0	1000 U	UG/KG
TOLUENE	5.0	77 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1000 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1000 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

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ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 109.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1000 U	UG/KG
TRICHLOROETHENE	5.0	1000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1000 U	UG/KG
VINYL CHLORIDE	5.0	1000 U	UG/KG
O-XYLENE	5.0	170 J	UG/KG
M+P-XYLENE	5.0	150 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	111	%
TOLUENE-D8	(75 - 128 %)	107	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	109	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
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Do not report.

ENSR International
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Client Sample ID : 04SD122N-SC-C-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057945 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 52.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.34			Dry Weight
ACETONE	20	250	UG/KG
BENZENE	5.0	4.0 J	UG/KG
BROMOCHLOROMETHANE	5.0	13 U	UG/KG
BROMODICHLOROMETHANE	5.0	13 U	UG/KG
BROMOFORM	5.0	13 U	UG/KG
BROMOMETHANE	5.0	13 U	UG/KG
2-BUTANONE (MEK)	10	60	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	13 U	UG/KG
CARBON DISULFIDE	10	10 J	UG/KG
CARBON TETRACHLORIDE	5.0	13 U	UG/KG
CHLOROBENZENE	5.0	1600 ~~1000 E~~	UG/KG
CHLOROETHANE	10	26 U	UG/KG
CHLOROFORM	5.0	13 U	UG/KG
CHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	13 UJ	UG/KG
CYCLOHEXANE	5.0	4.8 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMOETHANE	5.0	13 U	UG/KG
1,3-DICHLOROBENZENE	5.0	75 J	UG/KG
1,4-DICHLOROBENZENE	5.0	62	UG/KG
1,2-DICHLOROBENZENE	5.0	38	UG/KG
DICHLORODIFLUOROMETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHANE	5.0	13 U	UG/KG
1,2-DICHLOROETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHENE	5.0	13 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
1,2-DICHLOROPROPANE	5.0	13 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
1,4-DIOXANE	100	1000 ~~260~~ UJ	UG/KG
ETHYLBENZENE	5.0	3.7 J	UG/KG
2-HEXANONE	10	26 U	UG/KG
ISOPROPYLBENZENE	5.0	5.6 J	UG/KG
METHYL ACETATE	10	26 U	UG/KG
METHYLCYCLOHEXANE	5.0	9.2 J	UG/KG
METHYLENE CHLORIDE	5.0	13 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	26 U	UG/KG
STYRENE	5.0	13 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	13 UJ	UG/KG
TETRACHLOROETHENE	5.0	13 U	UG/KG
TOLUENE	5.0	5.4 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	13 UJ	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	13 UJ	UG/KG

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Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 52.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.34			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/KG
TRICHLOROETHENE	5.0	13 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	13 U	UG/KG
VINYL CHLORIDE	5.0	13 U	UG/KG
O-XYLENE	5.0	69	UG/KG
M+P-XYLENE	5.0	27	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	50	%
TOLUENE-D8	(75 - 128 %)	104	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	94	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-D-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057946 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 51.6

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 111.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	4300 ~~310 J~~ U	UG/KG
BENZENE	5.0	64 J	UG/KG
BROMOCHLOROMETHANE	5.0	1100 U	UG/KG
BROMODICHLOROMETHANE	5.0	1100 U	UG/KG
BROMOFORM	5.0	1100 U	UG/KG
BROMOMETHANE	5.0	1100 UJ	UG/KG
2-BUTANONE (MEK)	10	140 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	1100 U	UG/KG
CARBON DISULFIDE	10	2200 U	UG/KG
CARBON TETRACHLORIDE	5.0	1100 U	UG/KG
CHLOROBENZENE	5.0	2500 ~~U~~	UG/KG
CHLOROETHANE	10	2200 U	UG/KG
CHLOROFORM	5.0	1100 U	UG/KG
CHLOROMETHANE	5.0	1100 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	1100 UJ	UG/KG
CYCLOHEXANE	5.0	1100 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	1100 U	UG/KG
1,2-DIBROMOETHANE	5.0	1100 U	UG/KG
1,3-DICHLOROBENZENE	5.0	780 J	UG/KG
1,4-DICHLOROBENZENE	5.0	470 J	UG/KG
1,2-DICHLOROBENZENE	5.0	70 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	1100 U	UG/KG
1,1-DICHLOROETHANE	5.0	1100 U	UG/KG
1,2-DICHLOROETHANE	5.0	1100 U	UG/KG
1,1-DICHLOROETHENE	5.0	1100 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	1100 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	1100 U	UG/KG
1,2-DICHLOROPROPANE	5.0	1100 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	1100 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	1100 U	UG/KG
1,4-DIOXANE	100	86 22000 UJ	UG/KG
ETHYLBENZENE	5.0	1100 U	UG/KG
2-HEXANONE	10	2200 UJ	UG/KG
ISOPROPYLBENZENE	5.0	1100 U	UG/KG
METHYL ACETATE	10	180 J	UG/KG
METHYLCYCLOHEXANE	5.0	1100 U	UG/KG
METHYLENE CHLORIDE	5.0	1100 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	2200 UJ	UG/KG
STYRENE	5.0	1100 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	1100 UJ	UG/KG
TETRACHLOROETHENE	5.0	1100 U	UG/KG
TOLUENE	5.0	150 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	1100 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1100 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

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Client Sample ID : 04SD122N-SC-D-1

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ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 111.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	1100 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	1100 U	UG/KG
TRICHLOROETHENE	5.0	1100 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	1100 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	1100 U	UG/KG
VINYL CHLORIDE	5.0	1100 U	UG/KG
O-XYLENE	5.0	91 J	UG/KG
M+P-XYLENE	5.0	390 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	109	%
TOLUENE-D8	(75 - 128 %)	108	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

Do not report

ENSR International
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Client Sample ID : 04SD122N-SC-D-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057946 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 51.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.29			Dry Weight
ACETONE	20	290	UG/KG
BENZENE	5.0	47	UG/KG
BROMOCHLOROMETHANE	5.0	13 U	UG/KG
BROMODICHLOROMETHANE	5.0	13 U	UG/KG
BROMOFORM	5.0	13 U	UG/KG
BROMOMETHANE	5.0	13 U	UG/KG
2-BUTANONE (MEK)	10	64	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	13 U	UG/KG
CARBON DISULFIDE	10	17 J	UG/KG
CARBON TETRACHLORIDE	5.0	13 U	UG/KG
CHLOROBENZENE	5.0	2500 ~~1600 E~~	UG/KG
CHLOROETHANE	10	25 U	UG/KG
CHLOROFORM	5.0	13 U	UG/KG
CHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	13 UJ	UG/KG
CYCLOHEXANE	5.0	4.7 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	13 U	UG/KG
1,2-DIBROMOETHANE	5.0	13 U	UG/KG
1,3-DICHLOROBENZENE	5.0	410 J	UG/KG
1,4-DICHLOROBENZENE	5.0	230 ↓	UG/KG
1,2-DICHLOROBENZENE	5.0	50 ↓	UG/KG
DICHLORODIFLUOROMETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHANE	5.0	13 U	UG/KG
1,2-DICHLOROETHANE	5.0	13 U	UG/KG
1,1-DICHLOROETHENE	5.0	13 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	13 U	UG/KG
1,2-DICHLOROPROPANE	5.0	13 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	13 U	UG/KG
1,4-DIOXANE	100	1000 ~~250~~ UJ	UG/KG
ETHYLBENZENE	5.0	10 J	UG/KG
2-HEXANONE	10	25 U	UG/KG
ISOPROPYLBENZENE	5.0	5.0 J	UG/KG
METHYL ACETATE	10	25 U	UG/KG
METHYLCYCLOHEXANE	5.0	17	UG/KG
METHYLENE CHLORIDE	5.0	13 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	25 U	UG/KG
STYRENE	5.0	13 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	13 UJ	UG/KG
TETRACHLOROETHENE	5.0	13 U	UG/KG
TOLUENE	5.0	10 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	13 UJ	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	13 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

Do not report

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-D-1

Date Sampled : 12/12/07 12:26 **Order #:** 1057946 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 51.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.29			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	13 U	UG/KG
TRICHLOROETHENE	5.0	13 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	13 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	13 U	UG/KG
VINYL CHLORIDE	5.0	13 U	UG/KG
O-XYLENE	5.0	79	UG/KG
M+P-XYLENE	5.0	310	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	62	%
TOLUENE-D8	(75 - 128 %)	103	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	94	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-C-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058042 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 78.0

DATE ANALYZED : 12/15/07
ANALYTICAL DILUTION: 0.82

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	54 UJ	UG/KG
BENZENE	5.0	~~5.3 U~~ R	UG/KG
BROMOCHLOROMETHANE	5.0	5.3 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.3 U	UG/KG
BROMOFORM	5.0	5.3 U	UG/KG
BROMOMETHANE	5.0	5.3 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	~~5.3 U~~	UG/KG
CARBON DISULFIDE	10	2.4 J	UG/KG
CARBON TETRACHLORIDE	5.0	~~5.3 U~~ R	UG/KG
CHLOROBENZENE	5.0	10 J	UG/KG
CHLOROETHANE	10	~~11 U~~ R	UG/KG
CHLOROFORM	5.0	5.3 U	UG/KG
CHLOROMETHANE	5.0	5.3 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.3 U	UG/KG
CYCLOHEXANE	5.0	5.3 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.3 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.3 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.3 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.3 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.3 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.3 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.3 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.3 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.3 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.3 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.3 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.3 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.3 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	~~5.3 U~~	UG/KG
1,4-DIOXANE	100	~~420 410 UJ~~	UG/KG
ETHYLBENZENE	5.0	5.3 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
ISOPROPYLBENZENE	5.0	5.3 U	UG/KG
METHYL ACETATE	10	11 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.3 U	UG/KG
METHYLENE CHLORIDE	5.0	5.3 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.3 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.3 U	UG/KG
TETRACHLOROETHENE	5.0	5.3 U	UG/KG
TOLUENE	5.0	5.3 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.3 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.3 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-C-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058042 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 78.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 0.82			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.3 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.3 U	UG/KG
TRICHLOROETHENE	5.0	5.3 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.3 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.3 U	UG/KG
VINYL CHLORIDE	5.0	5.3 U	UG/KG
O-XYLENE	5.0	5.3 U	UG/KG
M+P-XYLENE	5.0	5.3 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS	RESULT	
4-BROMOFLUOROBENZENE	(50 - 135 %)	62	%
TOLUENE-D8	(75 - 128 %)	146 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	266 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-C-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058042 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 78.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.93			Dry Weight
ACETONE	20	96	UG/KG
BENZENE	5.0	6.0 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.0 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.0 U	UG/KG
BROMOFORM	5.0	6.0 U	UG/KG
BROMOMETHANE	5.0	6.0 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.0 U	UG/KG
CARBON DISULFIDE	10	2.4 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.0 U	UG/KG
CHLOROBENZENE	5.0	6.0 U	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	6.0 U	UG/KG
CHLOROMETHANE	5.0	6.0 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.0 U	UG/KG
CYCLOHEXANE	5.0	6.0 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.0 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.0 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.0 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.0 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.0 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.0 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.0 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.0 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.0 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.0 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.0 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.0 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.0 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.0 U	UG/KG
1,4-DIOXANE	100	120 U	UG/KG
ETHYLBENZENE	5.0	6.0 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	6.0 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.0 U	UG/KG
METHYLENE CHLORIDE	5.0	6.0 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	6.0 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.0 U	UG/KG
TETRACHLOROETHENE	5.0	6.0 U	UG/KG
TOLUENE	5.0	1.9 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.0 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.0 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-C-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058042 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 78.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.93			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.0 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.0 U	UG/KG
TRICHLOROETHENE	5.0	6.0 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.0 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.0 U	UG/KG
VINYL CHLORIDE	5.0	6.0 U	UG/KG
O-XYLENE	5.0	6.0 U	UG/KG
M+P-XYLENE	5.0	6.0 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	40 *	%
TOLUENE-D8	(75 - 128 %)	162 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	239 *	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-D-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058044 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 69.9

DATE ANALYZED : 12/15/07
ANALYTICAL DILUTION: 1.06

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	66 UJ	UG/KG
BENZENE	5.0	~~7.6 U~~ R	UG/KG
BROMOCHLOROMETHANE	5.0	7.6 U	UG/KG
BROMODICHLOROMETHANE	5.0	7.6 U	UG/KG
BROMOFORM	5.0	7.6 U	UG/KG
BROMOMETHANE	5.0	7.6 U	UG/KG
2-BUTANONE (MEK)	10	15 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	~~7.6 U~~	UG/KG
CARBON DISULFIDE	10	2.9 J	UG/KG
CARBON TETRACHLORIDE	5.0	~~7.6 U~~ R	UG/KG
CHLOROBENZENE	5.0	7.6 U	UG/KG
CHLOROETHANE	10	15 U	UG/KG
CHLOROFORM	5.0	7.6 U	UG/KG
CHLOROMETHANE	5.0	7.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7.6 U	UG/KG
CYCLOHEXANE	5.0	7.6 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	7.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	7.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	7.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7.6 U	UG/KG
1,1-DICHLOROETHANE	5.0	7.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	7.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	7.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	7.6 U	UG/KG
1,4-DIOXANE	100	~~150 U (UJ~~ 610	UG/KG
ETHYLBENZENE	5.0	7.6 U	UG/KG
2-HEXANONE	10	15 U	UG/KG
ISOPROPYLBENZENE	5.0	7.6 U	UG/KG
METHYL ACETATE	10	15 U	UG/KG
METHYLCYCLOHEXANE	5.0	7.6 U	UG/KG
METHYLENE CHLORIDE	5.0	7.6 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	15 U	UG/KG
STYRENE	5.0	7.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7.6 U	UG/KG
TETRACHLOROETHENE	5.0	7.6 U	UG/KG
TOLUENE	5.0	7.6 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	7.6 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	7.6 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-D-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058044 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 69.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.06			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7.6 U	UG/KG
TRICHLOROETHENE	5.0	7.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7.6 U	UG/KG
VINYL CHLORIDE	5.0	7.6 U	UG/KG
O-XYLENE	5.0	7.6 U	UG/KG
M+P-XYLENE	5.0	7.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	53	%
TOLUENE-D8	(75 - 128 %)	157 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	266 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-D-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058044 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 69.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.83			Dry Weight
ACETONE	20	100	UG/KG
BENZENE	5.0	5.9 U	UG/KG
BROMOCHLOROMETHANE	5.0	5.9 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.9 U	UG/KG
BROMOFORM	5.0	5.9 U	UG/KG
BROMOMETHANE	5.0	5.9 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.9 U	UG/KG
CARBON DISULFIDE	10	2.0 J	UG/KG
CARBON TETRACHLORIDE	5.0	5.9 U	UG/KG
CHLOROBENZENE	5.0	2.3 J	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	5.9 U	UG/KG
CHLOROMETHANE	5.0	5.9 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.9 U	UG/KG
CYCLOHEXANE	5.0	5.9 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.9 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.9 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.9 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.9 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.9 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.9 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.9 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.9 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.9 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.9 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.9 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.9 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.9 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.9 U	UG/KG
1,4-DIOXANE	100	120 U	UG/KG
ETHYLBENZENE	5.0	5.9 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	5.9 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.9 U	UG/KG
METHYLENE CHLORIDE	5.0	5.9 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.9 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.9 U	UG/KG
TETRACHLOROETHENE	5.0	5.9 U	UG/KG
TOLUENE	5.0	1.6 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.9 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.9 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-D-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058044 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 69.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.83			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.9 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.9 U	UG/KG
TRICHLOROETHENE	5.0	5.9 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.9 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.9 U	UG/KG
VINYL CHLORIDE	5.0	5.9 U	UG/KG
O-XYLENE	5.0	5.9 U	UG/KG
M+P-XYLENE	5.0	5.9 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	40 *	%
TOLUENE-D8	(75 - 128 %)	173 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	229 *	%

Dm 4 Repeat

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058045 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 77.4

DATE ANALYZED : 12/15/07
ANALYTICAL DILUTION: 1.20

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	83 UJ	UG/KG
BENZENE	5.0	~~7.8 U~~ R	UG/KG
BROMOCHLOROMETHANE	5.0	7.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	7.8 U	UG/KG
BROMOFORM	5.0	7.8 U	UG/KG
BROMOMETHANE	5.0	7.8 U	UG/KG
2-BUTANONE (MEK)	10	16 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	~~7.8 U~~	UG/KG
CARBON DISULFIDE	10	2.2 J	UG/KG
CARBON TETRACHLORIDE	5.0	~~7.8 U~~ R	UG/KG
CHLOROBENZENE	5.0	3.1 J	UG/KG
CHLOROETHANE	10	~~16 U~~ R	UG/KG
CHLOROFORM	5.0	7.8 U	UG/KG
CHLOROMETHANE	5.0	7.8 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7.8 U	UG/KG
CYCLOHEXANE	5.0	7.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	7.8 U	UG/KG
1,2-DIBROMOETHANE	5.0	7.8 U	UG/KG
1,3-DICHLOROBENZENE	5.0	7.8 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7.8 U	UG/KG
1,2-DICHLOROBENZENE	5.0	7.8 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	7.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	7.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	7.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	~~7.8 U~~	UG/KG
1,4-DIOXANE	100	~~620 160 U~~ UJ	UG/KG
ETHYLBENZENE	5.0	~~7.8 U~~	UG/KG
2-HEXANONE	10	16 U	UG/KG
ISOPROPYLBENZENE	5.0	7.8 U	UG/KG
METHYL ACETATE	10	16 U	UG/KG
METHYLCYCLOHEXANE	5.0	7.8 U	UG/KG
METHYLENE CHLORIDE	5.0	7.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	16 U	UG/KG
STYRENE	5.0	7.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7.8 U	UG/KG
TETRACHLOROETHENE	5.0	~~7.8 U~~	UG/KG
TOLUENE	5.0	1.8 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	~~7.8 U~~ R	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	~~7.8 U~~ R	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058045 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 77.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.20			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7.8 U	UG/KG
TRICHLOROETHENE	5.0	7.8 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7.8 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7.8 U	UG/KG
VINYL CHLORIDE	5.0	7.8 U	UG/KG
O-XYLENE	5.0	7.8 U	UG/KG
M+P-XYLENE	5.0	7.8 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	56	%
TOLUENE-D8	(75 - 128 %)	144 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	212 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058045 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 77.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.97			Dry Weight
ACETONE	20	130	UG/KG
BENZENE	5.0	6.3 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.3 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.3 U	UG/KG
BROMOFORM	5.0	6.3 U	UG/KG
BROMOMETHANE	5.0	6.3 U	UG/KG
2-BUTANONE (MEK)	10	13 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.3 U	UG/KG
CARBON DISULFIDE	10	4.5 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.3 U	UG/KG
CHLOROBENZENE	5.0	6.3 U	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.3 U	UG/KG
CHLOROMETHANE	5.0	6.3 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.3 U	UG/KG
CYCLOHEXANE	5.0	6.3 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.3 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.3 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.3 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.3 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.3 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.3 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.3 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.3 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.3 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.3 U	UG/KG
1,4-DIOXANE	100	130 U	UG/KG
ETHYLBENZENE	5.0	6.3 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	6.3 U	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.3 U	UG/KG
METHYLENE CHLORIDE	5.0	6.3 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.3 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.3 U	UG/KG
TETRACHLOROETHENE	5.0	6.3 U	UG/KG
TOLUENE	5.0	3.5 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.3 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.3 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-1

Date Sampled : 12/12/07 11:54 **Order #:** 1058045 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 77.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.97			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.3 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.3 U	UG/KG
TRICHLOROETHENE	5.0	6.3 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.3 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.3 U	UG/KG
VINYL CHLORIDE	5.0	6.3 U	UG/KG
O-XYLENE	5.0	6.3 U	UG/KG
M+P-XYLENE	5.0	6.3 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	38 *	%
TOLUENE-D8	(75 - 128 %)	174 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	226 *	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-2

Date Sampled : 12/12/07 11:54 **Order #:** 1058046 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 75.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.38			Dry Weight
ACETONE	20	91 UJ	UG/KG
BENZENE	5.0	9.1 UJ ~~9.1 U~~ R	UG/KG
BROMOCHLOROMETHANE	5.0	9.1 UJ	UG/KG
BROMODICHLOROMETHANE	5.0	9.1 UJ ~~9.1 U~~ R	UG/KG
BROMOFORM	5.0	~~9.1 U~~ R	UG/KG
BROMOMETHANE	5.0	9.1 UJ	UG/KG
2-BUTANONE (MEK)	10	18 UJ	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	9.1 UJ	UG/KG
CARBON DISULFIDE	10	2.2 J	UG/KG
CARBON TETRACHLORIDE	5.0	9.1 UJ ~~9.1 U~~ R	UG/KG
CHLOROBENZENE	5.0	~~9.1 U~~ R	UG/KG
CHLOROETHANE	10	18 UJ	UG/KG
CHLOROFORM	5.0	9.1 UJ	UG/KG
CHLOROMETHANE	5.0	9.1 UJ	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	~~9.1 U~~ R	UG/KG
CYCLOHEXANE	5.0	9.1 UJ	UG/KG
DIBROMOCHLOROMETHANE	5.0	~~9.1 U~~ R	UG/KG
1,2-DIBROMOETHANE	5.0	9.1 U	UG/KG
1,3-DICHLOROBENZENE	5.0	9.1 U	UG/KG
1,4-DICHLOROBENZENE	5.0	9.1 U	UG/KG
1,2-DICHLOROBENZENE	5.0	~~9.1 U~~	UG/KG
DICHLORODIFLUOROMETHANE	5.0	9.1 UJ	UG/KG
1,1-DICHLOROETHANE	5.0	9.1 UJ	UG/KG
1,2-DICHLOROETHANE	5.0	9.1 UJ ~~9.1 U~~ R	UG/KG
1,1-DICHLOROETHENE	5.0	9.1 UJ	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	9.1 UJ	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	9.1 UJ	UG/KG
1,2-DICHLOROPROPANE	5.0	9.1 UJ ~~9.1 U~~ UJ	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	9.1 UJ ~~9.1 U~~	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	~~9.1 U~~ R	UG/KG
1,4-DIOXANE	100	730 ~~180 U~~ UJ	UG/KG
ETHYLBENZENE	5.0	~~9.1 U~~ R	UG/KG
2-HEXANONE	10	18 U	UG/KG
ISOPROPYLBENZENE	5.0	~~9.1 U~~	UG/KG
METHYL ACETATE	10	18 UJ	UG/KG
METHYLCYCLOHEXANE	5.0	9.1 UJ ~~9.1 U~~ R	UG/KG
METHYLENE CHLORIDE	5.0	9.1 UJ	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	~~18 U~~ R	UG/KG
STYRENE	5.0	9.1 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	9.1 U	UG/KG
TETRACHLOROETHENE	5.0	~~9.1 U~~	UG/KG
TOLUENE	5.0	1.2 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	~~9.1 U~~ R	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	~~9.1 U~~ R	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-2

Date Sampled : 12/12/07 11:54 **Order #:** 1058046 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 75.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.38			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	9.1 UJ	UG/KG
1,1,2-TRICHLOROETHANE	5.0	~~9.1 U~~ R	UG/KG
TRICHLOROETHENE	5.0	9.1 UJ ~~9.1 U~~ R	UG/KG
TRICHLOROFLUOROMETHANE	5.0	9.1 UJ	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	9.1 UJ	UG/KG
VINYL CHLORIDE	5.0	9.1 UJ	UG/KG
O-XYLENE	5.0	~~9.1 U~~ R	UG/KG
M+P-XYLENE	5.0	~~9.1 U~~ R	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	52	%
TOLUENE-D8	(75 - 128 %)	138 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	182 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-2

Date Sampled : 12/12/07 11:54 **Order #:** 1058046 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 75.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.05			Dry Weight
ACETONE	20	84	UG/KG
BENZENE	5.0	6.9 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.9 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.9 U	UG/KG
BROMOFORM	5.0	6.9 U	UG/KG
BROMOMETHANE	5.0	6.9 U	UG/KG
2-BUTANONE (MEK)	10	14 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.9 U	UG/KG
CARBON DISULFIDE	10	2.2 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.9 U	UG/KG
CHLOROBENZENE	5.0	6.9 U	UG/KG
CHLOROETHANE	10	14 U	UG/KG
CHLOROFORM	5.0	6.9 U	UG/KG
CHLOROMETHANE	5.0	6.9 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.9 U	UG/KG
CYCLOHEXANE	5.0	6.9 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.9 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.9 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.9 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.9 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.9 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.9 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.9 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.9 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.9 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.9 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.9 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.9 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.9 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.9 U	UG/KG
1,4-DIOXANE	100	140 U	UG/KG
ETHYLBENZENE	5.0	6.9 U	UG/KG
2-HEXANONE	10	14 U	UG/KG
ISOPROPYLBENZENE	5.0	6.9 U	UG/KG
METHYL ACETATE	10	14 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.9 U	UG/KG
METHYLENE CHLORIDE	5.0	6.9 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	14 U	UG/KG
STYRENE	5.0	6.9 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.9 U	UG/KG
TETRACHLOROETHENE	5.0	6.9 U	UG/KG
TOLUENE	5.0	6.9 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.9 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.9 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-2

Date Sampled : 12/12/07 11:54 **Order #:** 1058046 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301 **Percent Solid:** 75.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/15/07			
ANALYTICAL DILUTION: 1.05			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.9 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.9 U	UG/KG
TRICHLOROETHENE	5.0	6.9 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.9 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.9 U	UG/KG
VINYL CHLORIDE	5.0	6.9 U	UG/KG
O-XYLENE	5.0	6.9 U	UG/KG
M+P-XYLENE	5.0	6.9 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	46 *	%
TOLUENE-D8	(75 - 128 %)	138 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	226 *	%

Don't Report

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 4

Date Sampled : 12/12/07 **Order #:** 1058182 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741301 **Analytical Run** 155656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
ACETONE	10	0.87 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100 U~~ U3	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 0.28 ~~JB~~ U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 4

Date Sampled : 12/12/07 **Order #:** 1058182 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741301 **Analytical Run** 155656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	119	%
TOLUENE-D8	(88 - 124 %)	117	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 7

Date Sampled : 12/12/07 09:45 **Order #:** 1058184 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741301 **Analytical Run** 155656

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	0.58 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100 U~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 ~~0.29 JB~~ U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 7

Date Sampled : 12/12/07 09:45 **Order #:** 1058184 **Sample Matrix:** WATER
Date Received: 12/13/07 **Submission #:** R2741301 **Analytical Run** 155656

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	119	%
TOLUENE-D8	(88 - 124 %)	118	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	109	%

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Memorandum

Date: February 29, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation
Inorganic Analyses
Subsurficial Sediment Sampling, December 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2741301

Distribution: L. Herberich/Westford

00760-171-525 File
BR030inolms.doc

SUMMARY

Limited validation was performed on the data for 14 sediment samples analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 7471, and 7740 and/or total organic carbon (TOC) according to the Lloyd Kahn method. The samples were collected at the BASF Site in Rensselaer, NY on December 12, 2007 and submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741301.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD116N-SC-G-1	04SD116N-SC-H-1
04SD122N-SC-C-1	04SD122N-SC-D-1
04SD120F-SC-C-1	04SD120F-SC-D-1
04SD120F-SC-E-1	04SD120F-SC-E-2 (Field duplicate of 04SD120F-SC-E-1)

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Sample IDs	
04SD069C-SC-C-1	04SD069C-SC-D-1
04SD069C-SC-E-1	04SD069C-SC-F-1
04SD069C-SC-G-1	04SD069C-SC-G-2 (Field duplicate of 04SD069C-SC-G-1)

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were digested and/or analyzed within the method and QAPP specified holding times.

Calibrations

TAL Metals

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

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Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the laboratory's reporting limit (RL) with the exceptions of barium which was spiked at 10x the RL and antimony which was spiked at 6x the RL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes.

TOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

An equipment blank was not submitted with the samples in this sample set. No validation action was taken on this basis.

TAL Metals

Target analytes were not detected in the laboratory method blanks or in the initial and continuing calibration blanks (ICBs/CCBs) associated with all samples in this sample set.

TOC

TOC was not detected in the laboratory method blanks or in the ICB/CCBs associated with all samples in this sample set.

ICP Interference Check Sample Results

TAL Metals

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

MS Results

TAL Metals

An MS analysis was performed on sample 04SD116N-SC-G-1 for all analytes in association with the sediment samples in this data set. With the following exceptions, the %Rs of the spiked target analytes were all within the QC acceptance criteria for sample results that were <4x the amount spiked.

Analyte	MS %R	QC Acceptance Range	Actions (Detects/Nondetects)
Antimony	58	75-125%	Estimate J/UJ
Potassium	68	75-125%	Estimate J/UJ
Associated Samples: All sediment samples in this sample set.			

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The ICP post-digestion spike (PDS) was performed on sample 04SD116N-SC-G-1 for all analytes except selenium and mercury. The %Rs of the post-digestion spike were within the QC acceptance criteria for sample results that were <4x the amount spiked.

TOC

An MS analysis was performed on sample 04SD116N-SC-G-1 from this sample set. The %R of TOC was within the QC acceptance criteria.

Laboratory Duplicate Results

TAL Metals

A laboratory duplicate analysis was performed on sample 04SD116N-SC-G-1. With the following exception, the relative percent differences (RPDs) met the QC acceptance criteria for all analytes.

Analyte	RPD	Action
Mercury	43	Estimate (J) positive results > RL
Associated Samples: All sediment samples in this sample set.		

TOC

A laboratory duplicate analysis was performed on sample 04SD116N-SC-G-1 from this sample set. The RPD of TOC was within the QC acceptance criteria.

Field Duplicate Results

TAL Metals

Samples 04SD069C-SC-G-1/04SD069C-SC-G-2 and 04SD120F-SC-E-1/04SD120F-SC-E-2 were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD069C-SC-G-1 and 04SD069C-SC-G-2. The RPDs were all within the acceptance criteria.

Analyte	04SD069C-SC-G-1 (mg/Kg)	04SD069C-SC-G-2 (mg/Kg)	RPD
Aluminum	11200	13600	19
Arsenic	7.5	8.5	13
Barium	80.9	98.6	20
Beryllium	0.64	0.77	18
Calcium	38900	37700	3
Chromium	16.3	19.3	17
Cobalt	12.3	14.2	14
Copper	32.9	35.8	8
Iron	27700	30800	11
Lead	12.8	15.0	16
Magnesium	12200	12600	3
Manganese	658	731	11

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Analyte	04SD069C-SC-G-1 (mg/Kg)	04SD069C-SC-G-2 (mg/Kg)	RPD
Nickel	27.0	31.5	15
Potassium	2010	2300	13
Sodium	314	324	3
Vanadium	22.4	24.8	10
Zinc	61.5	67.4	9
Criteria: RPD ≤35% if both results are >5x SQL.			

The following table summarizes the RPDs of the detected analytes in field duplicate samples 04SD120F-SC-E-1 and 04SD120F-SC-E-2. The RPDs were all within the acceptance criteria.

Analyte	04SD120F-SC-E-1 (mg/Kg)	04SD120F-SC-E-2 (mg/Kg)	RPD
Aluminum	12500	14400	14
Arsenic	7.9	9.9	22
Barium	90.9	118	26
Beryllium	0.70	0.83	17
Calcium	42200	37500	12
Chromium	18.5	20.5	10
Cobalt	14.2	14.9	5
Copper	35.0	36.3	4
Iron	30300	32200	6
Lead	14.5	15.4	6
Magnesium	12400	12600	2
Manganese	733	712	3
Nickel	31.1	33.4	7
Potassium	2100	2490	17
Sodium	301	298	1
Vanadium	25.0	26.9	7
Zinc	60.6	69.0	13
Criteria: RPD ≤35% if both results are >5x SQL.			

TOC

Samples 04SD069C-SC-G-1/04SD069C-SC-G-2 and 04SD120F-SC-E-1/04SD120F-SC-E-2 were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPD of TOC in field duplicate samples 04SD069C-SC-G-1 and 04SD069C-SC-G-2. The RPD of TOC was within the acceptance criteria.

Compound	04SD069C-SC-G-1 (mg/Kg)	04SD069C-SC-G-2 (mg/Kg)	RPD
TOC	3060	2780	10
Criteria: RPD ≤35% if both results are >5x RL.			

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The following table summarizes the RPD of TOC in field duplicate samples 04SD120F-SC-E-1 and 04SD120F-SC-E-2. The RPD of TOC was within the acceptance criteria.

Compound	04SD120F-SC-E-1 (mg/Kg)	04SD120F-SC-E-2 (mg/Kg)	RPD
TOC	3220	3650	13
Criteria: RPD ≤35% if both results are >5x RL.			

LCS Results

TAL Metals

The LCSs associated with the sediment samples met the vendor's QC acceptance limits.

TOC

The LCS associated with the sediment samples met the laboratory QC acceptance limits.

ICP Serial Dilution Results

TAL Metals

A serial dilution analysis was performed on sediment sample 04SD116N-SC-G-1 for all ICP metals in association with all samples in this data set. With the following exception, all analytes met the percent difference (%D) QC acceptance criteria. The %D of iron (12%) exceeded the QC acceptance criteria in the serial dilution analysis of sample 04SD116N-SC-G-1. The positive results for iron in all sediment samples were therefore qualified as estimated (J).

Sample Quantitation/Detection Limit Results

The percent (%) solids content for all samples was greater than 50%.

TAL Metals

All metals results were reported to the sample quantitation limit (SQL). Due to software limitations, metal results greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantitation limits were achieved for all metals except sodium.

The following table summarizes the SQL that exceeded the project-specific quantitation limit listed in the QAPP. No validation action was taken other than to note this discrepancy.

Analyte	Laboratory SQL (mg/Kg)	Project QL (mg/Kg)
Sodium	100	1.0

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The following table summarizes the sample that was analyzed at a dilution due to the elevated concentration of iron in the sample. Sample results were adjusted accordingly.

Sample ID	Dilution
04SD069C-SC-D-1	10x

TOC

Due to software limitation, the TOC SQL reported for all surface sediment samples was 300 mg/Kg even though the initial weights varied on a sample-by-sample basis. No actions were taken other than to note this discrepancy.

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD069C-SC-C-1

ntract: R2741301

b Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058057

vel (low/med): LOW Date Received: 12/13/07

Solids: 67.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10600			P
7440-36-0	Antimony	1.5	U J	N	P
7440-38-2	Arsenic	9.0			P
7440-39-3	Barium	105			P
7440-41-7	Beryllium	0.73	U		P
7440-43-9	Cadmium	2.0			P
7440-70-2	Calcium	4630			P
7440-47-3	Chromium	88.8			P
7440-48-4	Cobalt	9.2			P
7440-50-8	Copper	92.2			P
7439-89-6	Iron	22700	J	N	P
7439-92-1	Lead	190			P
7439-95-4	Magnesium	5040			P
7439-96-5	Manganese	324			P
7439-97-6	Mercury	1.6		J	CV
7440-02-0	Nickel	21.8			P
7440-09-7	Potassium	1360	J	N	P
7782-49-2	Selenium	0.74	U		F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	145	U		P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	18.8			P
7440-66-6	Zinc	295			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD069C-SC-D-1

ontract: R2741301

ab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058058

evel (low/med): LOW Date Received: 12/13/07

Solids: 64.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12100			P
7440-36-0	Antimony	1.5	U J	N	P
7440-38-2	Arsenic	6.8			P
7440-39-3	Barium	75.8			P
7440-41-7	Beryllium	0.76	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	36700			P
7440-47-3	Chromium	21.9			P
7440-48-4	Cobalt	12.4			P
7440-50-8	Copper	37.2			P
7439-89-6	Iron	49600	J	E	P
7439-92-1	Lead	31.7			P
7439-95-4	Magnesium	10700			P
7439-96-5	Manganese	1150			P
7439-97-6	Mercury	1.4		J	CV
7440-02-0	Nickel	27.6			P
7440-09-7	Potassium	2040	J	N	P
7782-49-2	Selenium	0.76	U		F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	283			P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	23.2			P
7440-66-6	Zinc	80.8			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD069C-SC-E-1

Contract: R2741301

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058060

Level (low/med): LOW Date Received: 12/13/07

% Solids: 31.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10300			P
7440-36-0	Antimony	3.1	U J	N	P
7440-38-2	Arsenic	10.0			P
7440-39-3	Barium	142			P
7440-41-7	Beryllium	1.6	U		P
7440-43-9	Cadmium	1.6	U		P
7440-70-2	Calcium	23000			P
7440-47-3	Chromium	50.8			P
7440-48-4	Cobalt	15.5	U		P
7440-50-8	Copper	118			P
7439-89-6	Iron	24800	J	E	P
7439-92-1	Lead	226			P
7439-95-4	Magnesium	8600			P
7439-96-5	Manganese	539			P
7439-97-6	Mercury	0.86		J	CV
7440-02-0	Nickel	23.8			P
7440-09-7	Potassium	2240	J	N	P
7782-49-2	Selenium	1.6	U		F
7440-22-4	Silver	3.1	U		P
7440-23-5	Sodium	529			P
7440-28-0	Thallium	3.1	U		P
7440-62-2	Vanadium	21.7			P
7440-66-6	Zinc	236			P

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: 04SD069C-SC-F-1

ntract: R2741301

b Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-G

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058062

vel (low/med): LOW Date Received: 12/13/07

Solids: 78.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9190			P
7440-36-0	Antimony	1.3	U J	N	P
7440-38-2	Arsenic	4.3			P
7440-39-3	Barium	67.7			P
7440-41-7	Beryllium	0.64	U		P
7440-43-9	Cadmium	0.64	U		P
7440-70-2	Calcium	17200			P
7440-47-3	Chromium	15.9			P
7440-48-4	Cobalt	9.1			P
7440-50-8	Copper	23.9			P
7439-89-6	Iron	22700	J	N	P
7439-92-1	Lead	25.4			P
7439-95-4	Magnesium	7320			P
7439-96-5	Manganese	452			P
7439-97-6	Mercury	0.09		J	CV
7440-02-0	Nickel	19.9			P
7440-09-7	Potassium	1540	J	N	P
7782-49-2	Selenium	0.64	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	175			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	16.6			P
7440-66-6	Zinc	68.5			P

lor Before: BLACK Clarity Before: Texture: MEDIUM

lor After: YELLOW Clarity After: CLEAR Artifacts:

mments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD069C-SC-G-1

ntract: R2741301

b Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-G

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058063

vel (low/med): LOW Date Received: 12/13/07

Solids: 79.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11200			P
7440-36-0	Antimony	1.2	U	N	P
7440-38-2	Arsenic	7.5			P
7440-39-3	Barium	80.9			P
7440-41-7	Beryllium	0.64			P
7440-43-9	Cadmium	0.62	U		P
7440-70-2	Calcium	38900			P
7440-47-3	Chromium	16.3			P
7440-48-4	Cobalt	12.3			P
7440-50-8	Copper	32.9			P
7439-89-6	Iron	27700	J	E	P
7439-92-1	Lead	12.8			P
7439-95-4	Magnesium	12200			P
7439-96-5	Manganese	658			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	27.0			P
7440-09-7	Potassium	2010	J	N	P
7782-49-2	Selenium	0.62	U		F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	314			P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	22.4			P
7440-66-6	Zinc	61.5			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD069C-SC-G-2

Contract: R2741301

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-G

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058064

Level (low/med): LOW Date Received: 12/13/07

Solids: 78.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13600			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	8.5			P
7440-39-3	Barium	98.6			P
7440-41-7	Beryllium	0.77			P
7440-43-9	Cadmium	0.63	U		P
7440-70-2	Calcium	37700			P
7440-47-3	Chromium	19.3			P
7440-48-4	Cobalt	14.2			P
7440-50-8	Copper	35.8			P
7439-89-6	Iron	30800	J		P
7439-92-1	Lead	15.0			P
7439-95-4	Magnesium	12600			P
7439-96-5	Manganese	731			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	31.5			P
7440-09-7	Potassium	2300	J		P
7782-49-2	Selenium	0.62	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	324			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	24.8			P
7440-66-6	Zinc	67.4			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD116N-SC-G-1

tract: R2741301

Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-G

rix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057929

el (low/med): LOW Date Received: 12/13/07

olids: 74.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16000			P
7440-36-0	Antimony	1.3	U J	N	P
7440-38-2	Arsenic	11.1			P
7440-39-3	Barium	109			P
7440-41-7	Beryllium	0.95			P
7440-43-9	Cadmium	0.67	U		P
7440-70-2	Calcium	30900			P
7440-47-3	Chromium	23.8			P
7440-48-4	Cobalt	15.9			P
7440-50-8	Copper	40.1			P
7439-89-6	Iron	35500	J	E	P
7439-92-1	Lead	18.9			P
7439-95-4	Magnesium	12000			P
7439-96-5	Manganese	654			P
7439-97-6	Mercury	0.06		J	CV
7440-02-0	Nickel	36.6			P
7440-09-7	Potassium	2840	J	N	P
7782-49-2	Selenium	0.67	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	256			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	30.2			P
7440-66-6	Zinc	74.8			P

.or Before: GREY Clarity Before: Texture: MEDIUM

.or After: YELLOW Clarity After: CLEAR Artifacts:

ments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD116N-SC-H-1

ontract: R2741301

ab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-G

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057930

evel (low/med): LOW Date Received: 12/13/07

Solids: 74.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14500			P
7440-36-0	Antimony	1.3	U J	N	P
7440-38-2	Arsenic	8.9			P
7440-39-3	Barium	106			P
7440-41-7	Beryllium	0.83			P
7440-43-9	Cadmium	0.67	U		P
7440-70-2	Calcium	39400			P
7440-47-3	Chromium	21.2			P
7440-48-4	Cobalt	15.0			P
7440-50-8	Copper	40.0			P
7439-89-6	Iron	33000	J	E	P
7439-92-1	Lead	16.7			P
7439-95-4	Magnesium	12800			P
7439-96-5	Manganese	715			P
7439-97-6	Mercury	0.05		J	CV
7440-02-0	Nickel	34.3			P
7440-09-7	Potassium	2620	J	N	P
7782-49-2	Selenium	0.65	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	267			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	27.9			P
7440-66-6	Zinc	67.9			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD120F-SC-C-1

Contract: R2741301
Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C
Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058042
Level (low/med): LOW Date Received: 12/13/07
% Solids: 78.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13500			P
7440-36-0	Antimony	1.3	U	J N	P
7440-38-2	Arsenic	8.3			P
7440-39-3	Barium	99.6			P
7440-41-7	Beryllium	0.77			P
7440-43-9	Cadmium	0.63	U		P
7440-70-2	Calcium	37200			P
7440-47-3	Chromium	20.0			P
7440-48-4	Cobalt	14.9			P
7440-50-8	Copper	36.2			P
7439-89-6	Iron	31400	J	E	P
7439-92-1	Lead	15.9			P
7439-95-4	Magnesium	12100			P
7439-96-5	Manganese	705			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	33.1			P
7440-09-7	Potassium	2290	J	N	P
7782-49-2	Selenium	0.61	U		P
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	242			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	25.9			P
7440-66-6	Zinc	65.1			P

Color Before: GREY Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: CLEAR Artifacts:
Comments:

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD120F-SC-D-1

ontract: R2741301

ab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-G

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058044

evel (low/med): LOW Date Received: 12/13/07

Solids: 69.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15700			P
7440-36-0	Antimony	1.4	U J	N	P
7440-38-2	Arsenic	9.6			P
7440-39-3	Barium	129			P
7440-41-7	Beryllium	0.90			P
7440-43-9	Cadmium	0.68	U		P
7440-70-2	Calcium	42000			P
7440-47-3	Chromium	22.4			P
7440-48-4	Cobalt	15.7			P
7440-50-8	Copper	39.3			P
7439-89-6	Iron	34200	J	E	P
7439-92-1	Lead	16.3			P
7439-95-4	Magnesium	14000			P
7439-96-5	Manganese	757			P
7439-97-6	Mercury	0.05	U		CV
7440-02-0	Nickel	35.7			P
7440-09-7	Potassium	2640	J	N	P
7782-49-2	Selenium	0.69	U		F
7440-22-4	Silver	1.4	U		P
7440-23-5	Sodium	326			P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	29.7			P
7440-66-6	Zinc	74.8			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD120F-SC-E-1

ontract: R2741301

.b Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-(

trix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058045

vel (low/med): LOW Date Received: 12/13/07

Solids: 77.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12500			P
7440-36-0	Antimony	1.3	U J	N	P
7440-38-2	Arsenic	7.9			P
7440-39-3	Barium	90.9			P
7440-41-7	Beryllium	0.70			P
7440-43-9	Cadmium	0.63	U		P
7440-70-2	Calcium	42200			P
7440-47-3	Chromium	18.5			P
7440-48-4	Cobalt	14.2			P
7440-50-8	Copper	35.0			P
7439-89-6	Iron	30300	J	E	P
7439-92-1	Lead	14.5			P
7439-95-4	Magnesium	12400			P
7439-96-5	Manganese	733			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	31.1			P
7440-09-7	Potassium	2100	J	N	P
7782-49-2	Selenium	0.63	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	301			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	25.0			P
7440-66-6	Zinc	60.6			P

olor Before: GREY Clarity Before: Texture: MEDIUM

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD120F-SC-E-2

Contract: R2741301

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-G

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058046

Level (low/med): LOW Date Received: 12/13/07

% Solids: 75.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14400			P
7440-36-0	Antimony	1.3	U J	N	P
7440-38-2	Arsenic	9.9			P
7440-39-3	Barium	118			P
7440-41-7	Beryllium	0.83			P
7440-43-9	Cadmium	0.65	U		P
7440-70-2	Calcium	37500			P
7440-47-3	Chromium	20.5			P
7440-48-4	Cobalt	14.9			P
7440-50-8	Copper	36.3			P
7439-89-6	Iron	32200	J	E	P
7439-92-1	Lead	15.4			P
7439-95-4	Magnesium	12600			P
7439-96-5	Manganese	712			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	33.4			P
7440-09-7	Potassium	2490	J	N	P
7782-49-2	Selenium	0.65	U		F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	298			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	26.9			P
7440-66-6	Zinc	69.0			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD122N-SC-C-1

Contract: R2741301

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057945

Level (low/med): LOW Date Received: 12/13/07

Solids: 52.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15500			P
7440-36-0	Antimony	1.8	UJ	N	P
7440-38-2	Arsenic	8.3			P
7440-39-3	Barium	239			P
7440-41-7	Beryllium	0.92	U		P
7440-43-9	Cadmium	14.8			P
7440-70-2	Calcium	7530			P
7440-47-3	Chromium	414			P
7440-48-4	Cobalt	12.2			P
7440-50-8	Copper	207			P
7439-89-6	Iron	28500	J	E	P
7439-92-1	Lead	434			P
7439-95-4	Magnesium	6270			P
7439-96-5	Manganese	538			P
7439-97-6	Mercury	1.6		J	CV
7440-02-0	Nickel	34.7			P
7440-09-7	Potassium	1940	J	N	P
7782-49-2	Selenium	0.95	U		F
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	183	U		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	36.2			P
7440-66-6	Zinc	536			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD122N-SC-D-1

Contract: R2741301

Lab Code: Case No.: SAS No.: SDG NO.: 04SD116N-SC-G

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057946

Level (low/med): LOW Date Received: 12/13/07

% Solids: 51.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19200			P
7440-36-0	Antimony	3.3	J	N	P
7440-38-2	Arsenic	20.4			P
7440-39-3	Barium	239			P
7440-41-7	Beryllium	0.93	U		P
7440-43-9	Cadmium	25.7			P
7440-70-2	Calcium	10300			P
7440-47-3	Chromium	439			P
7440-48-4	Cobalt	13.4			P
7440-50-8	Copper	202			P
7439-89-6	Iron	34700	J	E	P
7439-92-1	Lead	525			P
7439-95-4	Magnesium	7960			P
7439-96-5	Manganese	719			P
7439-97-6	Mercury	3.8		J	CV
7440-02-0	Nickel	37.5			P
7440-09-7	Potassium	2280	J	N	P
7782-49-2	Selenium	0.93	U		F
7440-22-4	Silver	1.9	U		P
7440-23-5	Sodium	186	U		P
7440-28-0	Thallium	1.9	U		P
7440-62-2	Vanadium	55.5			P
7440-66-6	Zinc	595			P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-G-1

Date Sampled : 12/12/07 13:14 Order #: 1057929 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	74.6	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	4840	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD116N-SC-H-1

Date Sampled : 12/12/07 13:14 **Order #:** 1057930 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	74.2	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3730	MG/KG	12/14/07	11:00	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-C-1

Date Sampled : 12/12/07 12:26 Order #: 1057945 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	52.0	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	37400	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD122N-SC-D-1

Date Sampled : 12/12/07 12:26 Order #: 1057946 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	51.6	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	51400	MG/KG	12/17/07	08:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-C-1

Date Sampled : 12/12/07 11:54 Order #: 1058042 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	78.0	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	4280	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-D-1

Date Sampled : 12/12/07 11:54 Order #: 1058044 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	69.9	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3980	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-1

Date Sampled : 12/12/07 11:54 Order #: 1058045 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	77.4	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3220	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD120F-SC-E-2

Date Sampled : 12/12/07 11:54 Order #: 1058046 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	75.8	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3650	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD069C-SC-C-1

Date Sampled : 12/12/07 09:13 Order #: 1058057 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	67.5	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	20000	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD069C-SC-D-1

Date Sampled : 12/12/07 09:13 **Order #:** 1058058 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	64.9	%	12/14/07	09:15	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	63300	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD069C-SC-E-1

Date Sampled : 12/12/07 09:13 Order #: 1058060 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	31.6	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	207000	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD069C-SC-F-1

Date Sampled : 12/12/07 09:13 Order #: 1058062 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	78.3	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	5370	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD069C-SC-G-1

Date Sampled : 12/12/07 09:13 **Order #:** 1058063 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/13/07 **Submission #:** R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	79.5	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3060	MG/KG	12/18/07	08:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/16/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD069C-SC-G-2

Date Sampled : 12/12/07 09:13 Order #: 1058064 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/13/07 Submission #: R2741301

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	78.0	%	12/18/07	11:35	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2780	MG/KG	12/18/07	08:20	1.0

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Memorandum

Date: February 8, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation, VOC Analysis
Subsurficial Sediment Sampling, December 2007
BASF Rensselaer Site, NY
CAS Submission # R2741271

Distribution: L. Herberich/Westford

00760-171-525 File
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SUMMARY

Limited validation was performed on the data for 10 sediment samples, one equipment blank, and two trip blanks analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The sediment samples were collected at the BASF site in Rensselaer, NY, on December 11, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741271.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as undetected (U) due to laboratory blank contamination or were qualified due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD118F-SC-C-1	04SD118F-SC-D-1
04SD118F-SC-E-1	04SD118F-SC-F-1
04SD118F-SC-F-2 (Field duplicate of 04SD118F-SC-F-1)	04SD118F-SC-G-1
04SD119F-SC-C-1	04SD119F-SC-D-1
04SD119F-SC-E-1	04SD119F-SC-F-1
04SD-EB2-SC-B-3 (equipment blank)	Trip Blank 3

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Sample IDs	
Trip Blank 4	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard recoveries
- Sample quantitation/reporting limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancy was noted.

- Two VOC vials were received for both Trip Blank 3 and Trip Blank 4. Both trip blanks were received with one broken vial and a second vial that contained a large amount of headspace. All positive and nondetect results for Trip Blank 3 and Trip Blank 4 were qualified as estimated (J, UJ) due to the significant amount of headspace contained in the VOC vials used for the analyses of these samples.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were analyzed within the method-specified holding time.

GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

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Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations (IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 10/03/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 04SD118F-SC-C-1, 04SD118F-SC-D-1, 04SD118F-SC-E-1, 04SD119F-SC-C-1, 04SD119F-SC-D-1, and 04SD119F-SC-F-1			
IC 10/11/07 (MSVOA5)	1,4-Dioxane	0.002	J/UJ*
Associated samples: 04SD118F-SC-F-1, 04SD118F-SC-F-2, 04SD118F-SC-G-1, 04SD119F-SC-E-1, 04SD-EB2-SC-B-3, Trip Blank 3, and Trip Blank 4			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			

Calibration (Instrument ID)	Compound	RRF	%D	Actions (Detects/Nondetects)
CC 12/14/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated samples: 04SD118F-SC-C-1, 04SD118F-SC-D-1, 04SD118F-SC-E-1, 04SD119F-SC-C-1, and 04SD119F-SC-F-1				
CC 12/17/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
Associated sample: 04SD119F-SC-D-1				
CC 12/17/07 (MSVOA5)	1,4-Dioxane	0.003	34.2	J/UJ*
	Cyclohexane	ok	21.4	J/UJ
	Methylcyclohexane	ok	32.1	J/UJ
	1,2,3-Trichlorobenzene	ok	29.5	J/UJ
Associated sample: 04SD119F-SC-E-1				
CC 12/18/07 (MSVOA5)	1,4-Dioxane	0.003	ok	J/UJ*
	Methylcyclohexane	ok	25.4	J/UJ
	1,2,3-Trichlorobenzene	ok	24.7	J/UJ
Associated samples: Trip Blank 3, Trip Blank 4, and 04SD-EB2-SC-B-3				
CC 12/20/07 (MSVOA5)	1,4-Dioxane	0.003	27.8	J/UJ*
	Methylcyclohexane	ok	23.3	J/UJ
	1,2,3-Trichlorobenzene	ok	28.2	J/UJ
Associated samples: 04SD118F-SC-F-1, 04SD118F-SC-F-2, and 04SD118F-SC-G-1				
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.				

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Laboratory Blanks/Equipment Blanks/Trip Blanks

Several target compounds were detected in the laboratory method blanks, equipment blank, and trip blanks associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected and the associated samples.

Blank type (lab ID)	Compound	Concentration (units)
Method (MET BLK2)	Methylene chloride	0.36 J µg/Kg
Associated samples: 04SD118F-SC-C-1, 04SD118F-SC-D-1, 04SD118F-SC-E-1, 04SD119F-SC-C-1, 04SD119F-SC-D-1, and 04SD119F-SC-F-1		
Method (MED BLK5)	2-Butanone	120 J µg/Kg
Associated samples: 04SD118F-SC-F-1, 04SD118F-SC-F-2, 04SD118F-SC-G-1, and 04SD119F-SC-E-1.		
04SD-EB2-SC-B-3 (equipment)	Acetone	1.2 J µg/L
	Toluene	0.76 J µg/L
Associated samples: All sediment samples in this data set.		
Trip Blank 3	Trichlorofluoromethane	2.1 J µg/L
Associated samples: 04SD118F-SC-C-1, 04SD118F-SC-D-1, 04SD118F-SC-E-1, 04SD118F-SC-F-1, 04SD118F-SC-F-2, and 04SD118F-SC-G-1		

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	≤ RL	Report sample RL value with a U
		> RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			
RL (Reporting Limit) is equivalent to the lowest calibration standard			

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC	Detects	If the result is ≤2x blank result, report the sample result U.**

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	detected		If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			
RL (Reporting Limit) is equivalent to the lowest calibration standard			
TIC = Tentatively Identified Compound			

Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses.

MS/MSD Results

MS/MSD analyses were performed on sample 04SD119F-SC-E-1. All target compounds were spiked for the MS and MSD analyses. All %Rs and relative percent differences (RPDs) were within the QC acceptance criteria.

LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses with the following exception.

Compound	LCS %R	QC Limits %R	Actions (Detects/Nondetects)
1,2,3-Trichlorobenzene	133	70-130	Estimate (J)/Accept result
Associated samples: Trip Blank 3, Trip Blank 4, and 04SD-EB2-SC-B-3.			

Field Duplicate Results

Samples 04SD118F-SC-F-1/04SD118F-SC-F-2 were submitted as the field duplicate pair with this sample set.

The following table summarizes the RPDs of the detected compounds. The RPD for chlorobenzene met the acceptance criteria. The RPD for m+p-xylene was not calculable (NC). Precision for m+p-xylene was deemed acceptable since one result was <5x the RL and the other result was not detected. Although the RPD of benzene exceeded the acceptance criteria, both the sample and field duplicate results were qualified by the laboratory as estimated (J) due to quantitation below the RL. Further qualification of the data for benzene was not required.

Compound	04SD118F-SC-F-1 (µg/Kg)	04SD118F-SC-F-2 (µg/Kg)	RPD
Benzene	2800 J	1100 J	87
Chlorobenzene	140000	100000	33
m+p-Xylene	440 J	4700 U	NC
Criteria: RPD ≤50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			
NC-Not calculable due to a nondetected result in the original or duplicate sample.			

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Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses.

Sample Quantitation/Reporting Limits

The percent (%) solids content for all samples was greater than 50% with the following exception: 04SD119F-SC-E-1 (46.1%). The positive and nondetect VOC results in these samples were qualified as estimated (J, UJ).

Samples 04SD118F-SC-F-1, 04SD118F-SC-F-2, 04SD118F-SC-G-1, 04SD119F-SC-E-1 were analyzed as medium level soil analyses due to the high concentration of target compounds present in the samples. In addition to the medium level soil analyses, these samples were analyzed at the dilution factor listed in parentheses due to the high concentration of chlorobenzene present in the samples 04SD118F-SC-F-1 (5x), 04SD118F-SC-F-2 (5x), 04SD118F-SC-G-1 (50x), 04SD119F-SC-E-1 (24x). RLs were adjusted accordingly.

Sample 04SD119F-SC-F-1 was initially analyzed as a low level soil. The concentration of chlorobenzene exceeded the calibration range in the low level analysis of this sample. Sample 04SD119F-SC-F-1 was re-analyzed as a medium level soil. During data validation, the result for chlorobenzene from the medium level analysis was combined with the remaining results from the low level analysis in order to report all results within the calibration range while also reporting the lowest achievable RLs.

All VOCs, except trichloroethene and 1,4-dioxane, have RLs which are less than or equal to the project required detection limits when analyzed without dilution. In all cases where dilutions were performed or where sediment samples were analyzed as medium level soil samples, one or more VOCs exceeded the project required detection limits.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-C-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057984 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 80.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 0.97			Dry Weight
ACETONE	20	27 U	UG/KG
BENZENE	5.0	6.0 U	UG/KG
BROMOCHLOROMETHANE	5.0	6.0 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.0 U	UG/KG
BROMOFORM	5.0	6.0 U	UG/KG
BROMOMETHANE	5.0	6.0 U	UG/KG
2-BUTANONE (MEK)	10	4.2 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.0 U	UG/KG
CARBON DISULFIDE	10	0.49 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.0 U	UG/KG
CHLOROBENZENE	5.0	0.46 J	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	6.0 U	UG/KG
CHLOROMETHANE	5.0	6.0 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.0 U	UG/KG
CYCLOHEXANE	5.0	6.0 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.0 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.0 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.0 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.0 U	UG/KG
1,2-DICHLOROBENZENE	5.0	6.0 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.0 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.0 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.0 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.0 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.0 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.0 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.0 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.0 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.0 U	UG/KG
1,4-DIOXANE	100	480 ~~120~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.0 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	6.0 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.0 U	UG/KG
METHYLENE CHLORIDE	5.0	6.0 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	6.0 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.0 U	UG/KG
TETRACHLOROETHENE	5.0	6.0 U	UG/KG
TOLUENE	5.0	6.0 ~~0.45 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.0 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.0 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-C-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057984 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 80.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 0.97			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.0 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.0 U	UG/KG
TRICHLOROETHENE	5.0	6.0 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.0 ~~0.46 J~~ U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.0 U	UG/KG
VINYL CHLORIDE	5.0	6.0 U	UG/KG
O-XYLENE	5.0	6.0 U	UG/KG
M+P-XYLENE	5.0	6.0 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	85	%
TOLUENE-D8	(75 - 128 %)	92	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	95	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-D-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057985 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 79.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 0.92			Dry Weight
ACETONE	20	23 ~~J~~ U	UG/KG
BENZENE	5.0	0.40 J	UG/KG
BROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	2.6 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.8 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROBENZENE	5.0	5.8 U	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.8 U	UG/KG
CYCLOHEXANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.8 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.8 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.8 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.8 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
1,4-DIOXANE	100	460 ~~480~~ ~~120~~ UJ	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	5.8 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.8 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 ~~0.48 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.8 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.8 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-D-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057985 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 79.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 0.92			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.8 ~~0.78 J~~ U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	5.8 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	87	%
TOLUENE-D8	(75 - 128 %)	91	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	90	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-E-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057986 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 75.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 0.88			Dry Weight
ACETONE	20	34 U	UG/KG
BENZENE	5.0	0.40 J	UG/KG
BROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	2.4 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.8 U	UG/KG
CARBON DISULFIDE	10	0.36 J	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROBENZENE	5.0	1.1 J	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.8 U	UG/KG
CYCLOHEXANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.8 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.8 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.8 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.8 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
1,4-DIOXANE	100	470 ~~480~~ ~~120~~ UJ	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	5.8 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.8 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 ~~0.36 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.8 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.8 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-E-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057986 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 75.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 0.88			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.8 ~~1.1 U~~ U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	5.8 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	91	%
TOLUENE-D8	(75 - 128 %)	93	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-F-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057987 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 56.6

DATE ANALYZED : 12/20/07
ANALYTICAL DILUTION: 565.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	20000 U	UG/KG
BENZENE	5.0	2800 J	UG/KG
BROMOCHLOROMETHANE	5.0	5000 U	UG/KG
BROMODICHLOROMETHANE	5.0	5000 U	UG/KG
BROMOFORM	5.0	5000 U	UG/KG
BROMOMETHANE	5.0	5000 U	UG/KG
2-BUTANONE (MEK)	10	10000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5000 U	UG/KG
CARBON DISULFIDE	10	10000 U	UG/KG
CARBON TETRACHLORIDE	5.0	5000 U	UG/KG
CHLOROBENZENE	5.0	140000	UG/KG
CHLOROETHANE	10	10000 U	UG/KG
CHLOROFORM	5.0	5000 U	UG/KG
CHLOROMETHANE	5.0	5000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5000 U	UG/KG
CYCLOHEXANE	5.0	5000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5000 U	UG/KG
1,2-DIBROMOETHANE	5.0	5000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5000 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5000 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5000 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5000 U	UG/KG
1,1-DICHLOROETHANE	5.0	5000 U	UG/KG
1,2-DICHLOROETHANE	5.0	5000 U	UG/KG
1,1-DICHLOROETHENE	5.0	5000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5000 U	UG/KG
1,4-DIOXANE	100	400000 ~~100000~~ UJ	UG/KG
ETHYLBENZENE	5.0	5000 U	UG/KG
2-HEXANONE	10	10000 U	UG/KG
ISOPROPYLBENZENE	5.0	5000 U	UG/KG
METHYL ACETATE	10	10000 U	UG/KG
METHYLCYCLOHEXANE	5.0	5000 UJ	UG/KG
METHYLENE CHLORIDE	5.0	5000 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	10000 U	UG/KG
STYRENE	5.0	5000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5000 U	UG/KG
TETRACHLOROETHENE	5.0	5000 U	UG/KG
TOLUENE	5.0	5000 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5000 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5000 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-F-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057987 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 56.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 565.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5000 U	UG/KG
TRICHLOROETHENE	5.0	5000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5000 U	UG/KG
VINYL CHLORIDE	5.0	5000 U	UG/KG
O-XYLENE	5.0	5000 U	UG/KG
M+P-XYLENE	5.0	440 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	99	%
TOLUENE-D8	(75 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	99	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-F-2

Date Sampled : 12/11/07 12:57 **Order #:** 1057988 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 59.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 555.00			Dry Weight
ACETONE	20	19000 U	UG/KG
BENZENE	5.0	1100 J	UG/KG
BROMOCHLOROMETHANE	5.0	4700 U	UG/KG
BROMODICHLOROMETHANE	5.0	4700 U	UG/KG
BROMOFORM	5.0	4700 U	UG/KG
BROMOMETHANE	5.0	4700 U	UG/KG
2-BUTANONE (MEK)	10	9400 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	4700 U	UG/KG
CARBON DISULFIDE	10	9400 U	UG/KG
CARBON TETRACHLORIDE	5.0	4700 U	UG/KG
CHLOROBENZENE	5.0	100000	UG/KG
CHLOROETHANE	10	9400 U	UG/KG
CHLOROFORM	5.0	4700 U	UG/KG
CHLOROMETHANE	5.0	4700 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	4700 U	UG/KG
CYCLOHEXANE	5.0	4700 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	4700 U	UG/KG
1,2-DIBROMOETHANE	5.0	4700 U	UG/KG
1,3-DICHLOROBENZENE	5.0	4700 U	UG/KG
1,4-DICHLOROBENZENE	5.0	4700 U	UG/KG
1,2-DICHLOROBENZENE	5.0	4700 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	4700 U	UG/KG
1,1-DICHLOROETHANE	5.0	4700 U	UG/KG
1,2-DICHLOROETHANE	5.0	4700 U	UG/KG
1,1-DICHLOROETHENE	5.0	4700 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	4700 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	4700 U	UG/KG
1,2-DICHLOROPROPANE	5.0	4700 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	4700 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	4700 U	UG/KG
1,4-DIOXANE	100	315000 ~~94000~~ UJ	UG/KG
ETHYLBENZENE	5.0	4700 U	UG/KG
2-HEXANONE	10	9400 U	UG/KG
ISOPROPYLBENZENE	5.0	4700 U	UG/KG
METHYL ACETATE	10	9400 U	UG/KG
METHYLCYCLOHEXANE	5.0	4700 UJ	UG/KG
METHYLENE CHLORIDE	5.0	4700 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	9400 U	UG/KG
STYRENE	5.0	4700 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	4700 U	UG/KG
TETRACHLOROETHENE	5.0	4700 U	UG/KG
TOLUENE	5.0	4700 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	4700 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	4700 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-F-2

Date Sampled : 12/11/07 12:57 **Order #:** 1057988 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 59.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 555.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	4700 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	4700 U	UG/KG
TRICHLOROETHENE	5.0	4700 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	4700 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	4700 U	UG/KG
VINYL CHLORIDE	5.0	4700 U	UG/KG
O-XYLENE	5.0	4700 U	UG/KG
M+P-XYLENE	5.0	4700 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	96	%
TOLUENE-D8	(75 - 128 %)	97	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-G-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057989 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 60.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 6500.00			Dry Weight
ACETONE	20	220000 U	UG/KG
BENZENE	5.0	12000 J	UG/KG
BROMOCHLOROMETHANE	5.0	54000 U	UG/KG
BROMODICHLOROMETHANE	5.0	54000 U	UG/KG
BROMOFORM	5.0	54000 U	UG/KG
BROMOMETHANE	5.0	54000 U	UG/KG
2-BUTANONE (MEK)	10	110000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	54000 U	UG/KG
CARBON DISULFIDE	10	110000 U	UG/KG
CARBON TETRACHLORIDE	5.0	54000 U	UG/KG
CHLOROBENZENE	5.0	1700000	UG/KG
CHLOROETHANE	10	110000 U	UG/KG
CHLOROFORM	5.0	54000 U	UG/KG
CHLOROMETHANE	5.0	54000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	54000 U	UG/KG
CYCLOHEXANE	5.0	54000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	54000 U	UG/KG
1,2-DIBROMOETHANE	5.0	54000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	54000 U	UG/KG
1,4-DICHLOROBENZENE	5.0	7300 J	UG/KG
1,2-DICHLOROBENZENE	5.0	16000 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	54000 U	UG/KG
1,1-DICHLOROETHANE	5.0	54000 U	UG/KG
1,2-DICHLOROETHANE	5.0	54000 U	UG/KG
1,1-DICHLOROETHENE	5.0	54000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	54000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	54000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	54000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	54000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	54000 U	UG/KG
1,4-DIOXANE	100	43 ~~1~~00000 UJ	UG/KG
ETHYLBENZENE	5.0	54000 U	UG/KG
2-HEXANONE	10	110000 U	UG/KG
ISOPROPYLBENZENE	5.0	54000 U	UG/KG
METHYL ACETATE	10	110000 U	UG/KG
METHYLCYCLOHEXANE	5.0	54000 UJ	UG/KG
METHYLENE CHLORIDE	5.0	54000 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	110000 U	UG/KG
STYRENE	5.0	54000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	54000 U	UG/KG
TETRACHLOROETHENE	5.0	54000 U	UG/KG
TOLUENE	5.0	54 ~~1~~000 ~~J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	54000 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	54000 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-G-1

Date Sampled : 12/11/07 12:57 **Order #:** 1057989 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 60.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 6500.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	54000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	54000 U	UG/KG
TRICHLOROETHENE	5.0	54000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	54000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	54000 U	UG/KG
VINYL CHLORIDE	5.0	54000 U	UG/KG
O-XYLENE	5.0	54000 U	UG/KG
M+P-XYLENE	5.0	4500 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	98	%
TOLUENE-D8	(75 - 128 %)	97	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD119F-SC-C-1

Date Sampled : 12/11/07 13:40 **Order #:** 1057995 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 76.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 0.96			Dry Weight
ACETONE	20	20 ~~14 J~~ U	UG/KG
BENZENE	5.0	0.53 J	UG/KG
BROMOCHLOROMETHANE	5.0	6.2 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.2 U	UG/KG
BROMOFORM	5.0	6.2 U	UG/KG
BROMOMETHANE	5.0	6.2 U	UG/KG
2-BUTANONE (MEK)	10	2.6 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.2 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.2 U	UG/KG
CHLOROBENZENE	5.0	2.3 J	UG/KG
CHLOROETHANE	10	12 U	UG/KG
CHLOROFORM	5.0	6.2 U	UG/KG
CHLOROMETHANE	5.0	6.2 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.2 U	UG/KG
CYCLOHEXANE	5.0	6.2 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.2 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.2 U	UG/KG
1,3-DICHLOROBENZENE	5.0	6.2 U	UG/KG
1,4-DICHLOROBENZENE	5.0	6.2 U	UG/KG
1,2-DICHLOROBENZENE	5.0	0.43 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.2 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.2 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.2 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.2 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.2 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.2 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.2 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.2 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.2 U	UG/KG
1,4-DIOXANE	100	500 ~~120~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.2 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	6.2 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.2 U	UG/KG
METHYLENE CHLORIDE	5.0	6.2 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	6.2 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.2 U	UG/KG
TETRACHLOROETHENE	5.0	6.2 U	UG/KG
TOLUENE	5.0	6.2 ~~0.47 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.2 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.2 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD119F-SC-C-1

Date Sampled : 12/11/07 13:40 **Order #:** 1057995 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 76.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 0.96			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.2 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.2 U	UG/KG
TRICHLOROETHENE	5.0	6.2 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.2 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.2 U	UG/KG
VINYL CHLORIDE	5.0	6.2 U	UG/KG
O-XYLENE	5.0	6.2 U	UG/KG
M+P-XYLENE	5.0	6.2 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	86	%
TOLUENE-D8	(75 - 128 %)	91	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	90	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD119F-SC-D-1

Date Sampled : 12/11/07 13:40 **Order #:** 1057996 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 64.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.13			Dry Weight
ACETONE	20	66 U	UG/KG
BENZENE	5.0	2.2 J	UG/KG
BROMOCHLOROMETHANE	5.0	8.7 U	UG/KG
BROMODICHLOROMETHANE	5.0	8.7 U	UG/KG
BROMOFORM	5.0	8.7 U	UG/KG
BROMOMETHANE	5.0	8.7 U	UG/KG
2-BUTANONE (MEK)	10	15 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	8.7 U	UG/KG
CARBON DISULFIDE	10	1.1 J	UG/KG
CARBON TETRACHLORIDE	5.0	8.7 U	UG/KG
CHLOROBENZENE	5.0	3.5 J	UG/KG
CHLOROETHANE	10	17 U	UG/KG
CHLOROFORM	5.0	8.7 U	UG/KG
CHLOROMETHANE	5.0	8.7 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	8.7 U	UG/KG
CYCLOHEXANE	5.0	8.7 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	8.7 U	UG/KG
1,2-DIBROMOETHANE	5.0	8.7 U	UG/KG
1,3-DICHLOROBENZENE	5.0	8.7 U	UG/KG
1,4-DICHLOROBENZENE	5.0	8.7 U	UG/KG
1,2-DICHLOROBENZENE	5.0	8.7 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	8.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	8.7 U	UG/KG
1,2-DICHLOROETHANE	5.0	8.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	8.7 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	8.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	8.7 U	UG/KG
1,2-DICHLOROPROPANE	5.0	8.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	8.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	8.7 U	UG/KG
1,4-DIOXANE	100	700 ~~170~~ UJ	UG/KG
ETHYLBENZENE	5.0	8.7 U	UG/KG
2-HEXANONE	10	17 U	UG/KG
ISOPROPYLBENZENE	5.0	8.7 U	UG/KG
METHYL ACETATE	10	17 U	UG/KG
METHYLCYCLOHEXANE	5.0	8.7 U	UG/KG
METHYLENE CHLORIDE	5.0	8.7 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	17 U	UG/KG
STYRENE	5.0	8.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	8.7 U	UG/KG
TETRACHLOROETHENE	5.0	8.7 U	UG/KG
TOLUENE	5.0	87 ~~0.94 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	8.7 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	8.7 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

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Client Sample ID : 04SD119F-SC-D-1

Date Sampled : 12/11/07 13:40 **Order #:** 1057996 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 64.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 1.13			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	8.7 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	8.7 U	UG/KG
TRICHLOROETHENE	5.0	8.7 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	8.7 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	8.7 U	UG/KG
VINYL CHLORIDE	5.0	8.7 U	UG/KG
O-XYLENE	5.0	8.7 U	UG/KG
M+P-XYLENE	5.0	8.7 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	83	%
TOLUENE-D8	(75 - 128 %)	94	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	94	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD119F-SC-E-1

Date Sampled : 12/11/07 13:40 **Order #:** 1058003 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 46.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 2400.00			Dry Weight
ACETONE	20	100000 UJ	UG/KG
BENZENE	5.0	5600 J	UG/KG
BROMOCHLOROMETHANE	5.0	26000 UJ	UG/KG
BROMODICHLOROMETHANE	5.0	26000 U	UG/KG
BROMOFORM	5.0	26000 U	UG/KG
BROMOMETHANE	5.0	26000 U	UG/KG
2-BUTANONE (MEK)	10	52000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	26000 U	UG/KG
CARBON DISULFIDE	10	52000 U	UG/KG
CARBON TETRACHLORIDE	5.0	26000 U	UG/KG
CHLOROBENZENE	5.0	650000 J	UG/KG
CHLOROETHANE	10	52000 UJ	UG/KG
CHLOROFORM	5.0	26000 U	UG/KG
CHLOROMETHANE	5.0	26000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	26000 U	UG/KG
CYCLOHEXANE	5.0	26000 UJ	UG/KG
DIBROMOCHLOROMETHANE	5.0	26000 U	UG/KG
1,2-DIBROMOETHANE	5.0	26000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	26000 U	UG/KG
1,4-DICHLOROBENZENE	5.0	4300 J	UG/KG
1,2-DICHLOROBENZENE	5.0	26000 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	26000 U	UG/KG
1,1-DICHLOROETHANE	5.0	26000 U	UG/KG
1,2-DICHLOROETHANE	5.0	26000 U	UG/KG
1,1-DICHLOROETHENE	5.0	26000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	26000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	26000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	26000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	26000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	26000 U	UG/KG
1,4-DIOXANE	100	210 ~~52~~0000 UJ	UG/KG
ETHYLBENZENE	5.0	26000 U	UG/KG
2-HEXANONE	10	52000 U	UG/KG
ISOPROPYLBENZENE	5.0	26000 U	UG/KG
METHYL ACETATE	10	52000 U	UG/KG
METHYLCYCLOHEXANE	5.0	26000 UJ	UG/KG
METHYLENE CHLORIDE	5.0	26000 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	52000 U	UG/KG
STYRENE	5.0	26000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	26000 U	UG/KG
TETRACHLOROETHENE	5.0	26000 U	UG/KG
TOLUENE	5.0	26000 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	26000 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	26000 UJ	UG/KG

COLUMBIA ANALYTICAL SERVICES

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METHOD 8260B
Reported: 01/10/08

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Client Sample ID : 04SD119F-SC-E-1

Date Sampled : 12/11/07 13:40 **Order #:** 1058003 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 46.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/17/07			
ANALYTICAL DILUTION: 2400.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	26000 UJ	UG/KG
1,1,2-TRICHLOROETHANE	5.0	26000 U	UG/KG
TRICHLOROETHENE	5.0	26000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	26000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	26000 U	UG/KG
VINYL CHLORIDE	5.0	26000 U	UG/KG
O-XYLENE	5.0	26000 U	UG/KG
M+P-XYLENE	5.0	3300 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	99	%
TOLUENE-D8	(75 - 128 %)	100	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	103	%

COLUMBIA ANALYTICAL SERVICES

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ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD119F-SC-F-1

Date Sampled : 12/11/07 13:40 **Order #:** 1058006 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 76.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 1.03			Dry Weight
ACETONE	20	36 U	UG/KG
BENZENE	5.0	78	UG/KG
BROMOCHLOROMETHANE	5.0	6.7 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.7 U	UG/KG
BROMOFORM	5.0	6.7 U	UG/KG
BROMOMETHANE	5.0	6.7 U	UG/KG
2-BUTANONE (MEK)	10	3.4 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.7 U	UG/KG
CARBON DISULFIDE	10	3.9 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.7 U	UG/KG
CHLOROBENZENE	5.0	8300 ~~2000 E~~	UG/KG
CHLOROETHANE	10	13 U	UG/KG
CHLOROFORM	5.0	6.7 U	UG/KG
CHLOROMETHANE	5.0	6.7 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6.7 U	UG/KG
CYCLOHEXANE	5.0	0.49 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.7 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.7 U	UG/KG
1,3-DICHLOROBENZENE	5.0	4.8 J	UG/KG
1,4-DICHLOROBENZENE	5.0	22	UG/KG
1,2-DICHLOROBENZENE	5.0	2.9 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.7 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.7 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.7 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.7 U	UG/KG
1,4-DIOXANE	100	540 ~~130~~ UJ	UG/KG
ETHYLBENZENE	5.0	1.7 J	UG/KG
2-HEXANONE	10	13 U	UG/KG
ISOPROPYLBENZENE	5.0	0.44 J	UG/KG
METHYL ACETATE	10	13 U	UG/KG
METHYLCYCLOHEXANE	5.0	1.1 J	UG/KG
METHYLENE CHLORIDE	5.0	6.7 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.7 U	UG/KG
TETRACHLOROETHENE	5.0	6.7 U	UG/KG
TOLUENE	5.0	6.7 ~~0.98 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	6.7 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6.7 U	UG/KG

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Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 76.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/14/07			
ANALYTICAL DILUTION: 1.03			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.7 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.7 U	UG/KG
TRICHLOROETHENE	5.0	6.7 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.7 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.7 U	UG/KG
VINYL CHLORIDE	5.0	6.7 U	UG/KG
O-XYLENE	5.0	1.6 J	UG/KG
M+P-XYLENE	5.0	3.6 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	90	%
TOLUENE-D8	(75 - 128 %)	92	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	93	%

COLUMBIA ANALYTICAL SERVICES

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Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 76.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 100.00			Dry Weight
ACETONE	20	2600 U	UG/KG
BENZENE	5.0	650 U	UG/KG
BROMOCHLOROMETHANE	5.0	650 U	UG/KG
BROMODICHLOROMETHANE	5.0	650 U	UG/KG
BROMOFORM	5.0	650 U	UG/KG
BROMOMETHANE	5.0	650 U	UG/KG
2-BUTANONE (MEK)	10	1300 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	650 U	UG/KG
CARBON DISULFIDE	10	1300 U	UG/KG
CARBON TETRACHLORIDE	5.0	650 U	UG/KG
CHLOROBENZENE	5.0	8300 D	UG/KG
CHLOROETHANE	10	1300 U	UG/KG
CHLOROFORM	5.0	650 U	UG/KG
CHLOROMETHANE	5.0	650 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	650 U	UG/KG
CYCLOHEXANE	5.0	650 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	650 U	UG/KG
1,2-DIBROMOETHANE	5.0	650 U	UG/KG
1,3-DICHLOROBENZENE	5.0	650 U	UG/KG
1,4-DICHLOROBENZENE	5.0	210 J	UG/KG
1,2-DICHLOROBENZENE	5.0	85 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	650 U	UG/KG
1,1-DICHLOROETHANE	5.0	650 U	UG/KG
1,2-DICHLOROETHANE	5.0	650 U	UG/KG
1,1-DICHLOROETHENE	5.0	650 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	650 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	650 U	UG/KG
1,2-DICHLOROPROPANE	5.0	650 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	650 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	650 U	UG/KG
1,4-DIOXANE	100	13000 U	UG/KG
ETHYLBENZENE	5.0	650 U	UG/KG
2-HEXANONE	10	1300 U	UG/KG
ISOPROPYLBENZENE	5.0	650 U	UG/KG
METHYL ACETATE	10	1300 U	UG/KG
METHYLCYCLOHEXANE	5.0	650 U	UG/KG
METHYLENE CHLORIDE	5.0	650 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	1300 U	UG/KG
STYRENE	5.0	650 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	650 U	UG/KG
TETRACHLOROETHENE	5.0	650 U	UG/KG
TOLUENE	5.0	650 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	650 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	650 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

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Date Received: 12/12/07 **Submission #:** R2741271 **Percent Solid:** 76.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 100.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	650 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	650 U	UG/KG
TRICHLOROETHENE	5.0	650 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	650 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	650 U	UG/KG
VINYL CHLORIDE	5.0	650 U	UG/KG
O-XYLENE	5.0	650 U	UG/KG
M+P-XYLENE	5.0	650 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	96	%
TOLUENE-D8	(75 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB2-SC-B-3

Date Sampled : 12/11/07 15:25 **Order #:** 1058165 **Sample Matrix:** WATER
Date Received: 12/12/07 **Submission #:** R2741271 **Analytical Run** 155264

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.2 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 UJ	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	0.76 J	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 UJ	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB2-SC-B-3

Date Sampled : 12/11/07 15:25 **Order #:** 1058165 **Sample Matrix:** WATER
Date Received: 12/12/07 **Submission #:** R2741271 **Analytical Run** 155264

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	99	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 3

Date Sampled : 12/11/07 **Order #:** 1058180 **Sample Matrix:** WATER
Date Received: 12/12/07 **Submission #:** R2741271 **Analytical Run** 155264

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 U J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U J	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U J	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	0.36 J	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U J	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U J	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 3

Date Sampled : 12/11/07 **Order #:** 1058180 **Sample Matrix:** WATER
Date Received: 12/12/07 **Submission #:** R2741271 **Analytical Run** 155264

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	2.1 J	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	98	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	98	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 4

Date Sampled : 12/11/07 **Order #:** 1058181 **Sample Matrix:** WATER
Date Received: 12/12/07 **Submission #:** R2741271 **Analytical Run** 155264

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 U J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
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ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U J	UG/L
METHYLENE CHLORIDE	1.0	1.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U J	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 4

Date Sampled : 12/11/07 **Order #:** 1058181 **Sample Matrix:** WATER
Date Received: 12/12/07 **Submission #:** R2741271 **Analytical Run** 155264

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U J	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U J	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	99	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	97	%

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Memorandum

Date: February 29, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation
Inorganic Analyses
Subsurficial Sediment Sampling, December 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2741271

Distribution: L. Herberich/Westford

00760-171-525 File
BR024inolms.doc

SUMMARY

Limited validation was performed on the data for 10 sediment samples and one aqueous equipment blank analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 7470A, 7471, and 7740 and/or total organic carbon (TOC) according to the Lloyd Kahn method. The samples were collected at the BASF Site in Rensselaer, NY on December 11, 2007 and submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741271.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. The mercury results for two sediment samples were rejected (R) due to poor field duplicate precision. Selected data points were qualified as estimated (J, UJ) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD118F-SC-C-1	04SD118F-SC-D-1
04SD118F-SC-E-1	04SD118F-SC-F-1
04SD118F-SC-F-2 (Field duplicate of 04SD118F-SC-F-1)	04SD118F-SC-G-1

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Sample IDs	
04SD119F-SC-C-1	04SD119F-SC-D-1
04SD119F-SC-E-1	04SD119F-SC-F-1
04SD-EB2-SC-B-3 (equipment blank)	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- ICP serial dilution results
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were digested and/or analyzed within the method and QAPP specified holding times.

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Calibrations

TAL Metals

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards with the following exception.

Date Analyzed	Standard	Analyte	%R
12/28/07	CCV6	Nickel	113
Associated Sample: 04SD-EB2-SC-B-3			

Sample results were qualified as follows:

- If the %R was >110% but <125%, then the positive result was qualified as estimated (J) and nondetects were accepted unqualified.

Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the laboratory's reporting limit (RL) with the exceptions of barium which was spiked at 10x the RL and antimony which was spiked at 6x the RL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes.

TOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

TAL Metals

Target analytes were not detected in the laboratory method blanks, in the initial and continuing calibration blanks (ICBs/CCBs), or in the equipment blank (04SD-EB2-SC-B-3) associated with all samples in this sample set.

TOC

An equipment blank was not submitted with the samples in this sample set. No validation action was taken on this basis.

TOC was not detected in the laboratory method blank or in the ICB/CCBs associated with all samples in this sample set.

ICP Interference Check Sample Results

TAL Metals

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

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MS Results

TAL Metals

An MS analysis was performed on sample 04SD119F-SC-E-1 for all analytes in association with the sediment samples in this data set. With the following exceptions, the %Rs of the spiked target analytes were all within the QC acceptance criteria for sample results that were <4x the amount spiked.

Analyte	MS %R	QC Acceptance Range	Actions (Detects/Nondetects)
Cadmium	46	75-125%	Estimated J/UJ
Selenium	69	75-125%	
Associated Samples: All surface sediment samples in this sample set.			

The ICP post-digestion spike (PDS) was performed on sample 04SD119F-SC-E-1 for all analytes except selenium and mercury. The %Rs of the post-digestion spike were within the QC acceptance criteria for sample results that were <4x the amount spiked.

The following samples did not meet PDS recovery criteria of 85-115% for the graphite furnace atomic absorption analysis of selenium. It should be noted that the laboratory flagged the nondetect results for selenium in all samples except sample 04SD118F-SC-F-1 with a "W" due to a low spike recovery when the sample absorbance was <50%. The "W" flag was crossed-off during validation and replaced with a "UJ" as indicated in the table below. The laboratory was contacted regarding the missing "W" qualifier on the Form I for sample 04SD118F-SC-F-1. The laboratory resubmitted a corrected Form I for this sample.

Sample ID	PDS %R	Action (Nondetects)
04SD118F-SC-C-1	83	UJ
04SD118F-SC-E-1	64	UJ
04SD118F-SC-F-1	83	UJ
04SD118F-SC-F-2	73	UJ
04SD118F-SC-G-1	59	UJ
04SD119F-SC-C-1	81	UJ
04SD119F-SC-D-1	67	UJ
04SD119F-SC-E-1	83	UJ
04SD119F-SC-F-1	81	UJ

TOC

An MS analysis was performed on sample 04SD119F-SC-E-1 from this sample set. The %R of TOC was within the QC acceptance criteria.

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Laboratory Duplicate Results

TAL Metals

A laboratory duplicate analysis was performed on sample 04SD119F-SC-E-1. The relative percent differences (RPDs) met the QC acceptance criteria for all analytes.

TOC

A laboratory duplicate analysis was performed on sample 04SD119F-SC-E-1. The RPD met the QC acceptance criteria for TOC.

Field Duplicate Results

TAL Metals

Samples 04SD118F-SC-F-1/04SD118F-SC-F-2 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes.

Analyte	04SD118F-SC-F-1 (mg/Kg)	04SD118F-SC-F-2 (mg/Kg)	RPD
Aluminum	15200	14400	5
Arsenic	7.9	8.0	1
Barium	162	132	20
Cadmium	5.8	4.7	21
Calcium	9810	8450	15
Chromium	179	134	29
Cobalt	14.1	13.5	4
Copper	106	111	5
Iron	28600	28500	0.4
Lead	178	140	24
Magnesium	7300	6830	7
Manganese	578	638	10
Mercury	0.62	7.1	168
Nickel	39.3	33.9	15
Potassium	1990	1940	3
Sodium	282	246	14
Vanadium	30.7	27.9	10
Zinc	342	307	11
Criteria: RPD ≤35% if both results are >5x SQL.			

Results for samples 04SD118F-SC-F-1 and 04SD118F-SC-F-2 were qualified as follows.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.

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- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

TOC

Samples 04SD118F-SC-F-1/04SD118F-SC-F-2 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPD of TOC which was within the acceptance criteria.

Compound	04SD118F-SC-F-1 (mg/Kg)	04SD118F-SC-F-2 (mg/Kg)	RPD
TOC	31800	23400	30
Criteria: RPD ≤35% if both results are >5x RL.			

LCS Results

TAL Metals

The LCSs associated with the sediment samples met the vendor's QC acceptance limits.

The LCSs associated with the aqueous equipment blank sample met the 80-120% recovery criteria.

TOC

The LCS associated with the sediment samples met the laboratory QC acceptance limits.

ICP Serial Dilution Results

TAL Metals

Serial dilution analyses were performed on sediment sample 04SD119F-SC-E-1 for all ICP metals; and on aqueous equipment blank sample 04SD-EB2-SC-B-3 for all ICP metals in association with all samples in this data set. All analytes met the percent difference (%D) QC acceptance criteria in the serial dilution of samples 04SD119F-SC-E-1and 04SD-EB2-SC-B-3.

Sample Quantitation/Detection Limit Results

The percent (%) solids content for all samples was greater than 50% with the following exception: 04SD119F-SC-E-1 (46.1%). The positive and nondetect results for TAL metals in sample 04SD119F-SC-E-1 were qualified as estimated (J, UJ).

TAL Metals

All metals results were reported to the sample quantitation limit (SQL). Due to software limitations, metal results greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantitation limits were achieved for all metals except sodium.

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The following table summarizes the SQL that exceeded the project-specific quantitation limit listed in the QAPP. No validation action was taken other than to note this discrepancy.

Analyte	Laboratory SQL (mg/Kg)	Project QL (mg/Kg)
Sodium	100	1.0

The following table summarizes the samples that were analyzed at dilutions due to the elevated concentration of these analytes in the respective samples. Sample results were adjusted accordingly.

Sample ID	Analyte	Dilution
04SD118F-SC-G-1	Copper, Zinc	10x
04SD118F-SC-F-2	Mercury	5x
04SD119F-SC-E-1	Mercury	5x
	Zinc	10x

TOC

Due to software limitation, the TOC SQL reported for all sediment samples was 300 mg/Kg even though the initial weights varied on a sample-by-sample basis. No actions were taken other than to note this discrepancy.

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD118F-SC-C-1

Contract: R2741271

Lab Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057984

Level (low/med): LOW Date Received: 12/12/07

% Solids: 80.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6280			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	2.1			P
7440-39-3	Barium	31.5			P
7440-41-7	Beryllium	0.60	U		P
7440-43-9	Cadmium	0.60	U	N	P
7440-70-2	Calcium	7860			P
7440-47-3	Chromium	13.3			P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	44.4			P
7439-89-6	Iron	15200			P
7439-92-1	Lead	49.1			P
7439-95-4	Magnesium	4140			P
7439-96-5	Manganese	288			P
7439-97-6	Mercury	0.09			CV
7440-02-0	Nickel	13.0			P
7440-09-7	Potassium	985			P
7782-49-2	Selenium	0.61	U	N	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	121	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	10.0			P
7440-66-6	Zinc	92.1			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD118F-SC-D-1

ontract: R2741271

ab Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-C

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057985

evel (low/med): LOW Date Received: 12/12/07

Solids: 79.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5910			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	1.5			P
7440-39-3	Barium	26.8			P
7440-41-7	Beryllium	0.62	U		P
7440-43-9	Cadmium	0.62	U	N	P
7440-70-2	Calcium	2340			P
7440-47-3	Chromium	11.5			P
7440-48-4	Cobalt	6.2	U		P
7440-50-8	Copper	9.9			P
7439-89-6	Iron	14000			P
7439-92-1	Lead	12.5			P
7439-95-4	Magnesium	3370			P
7439-96-5	Manganese	230			P
7439-97-6	Mercury	0.04	U		CV
7440-02-0	Nickel	12.3			P
7440-09-7	Potassium	815			P
7782-49-2	Selenium	0.62	U	N	F
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	124	U		P
7440-28-0	Thallium	1.2	U		P
7440-62-2	Vanadium	8.8			P
7440-66-6	Zinc	60.4			P

olor Before: BLACK Clarity Before: Texture: FINE

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD118F-SC-E-1

Contract: R2741271

Lab Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057986

Level (low/med): LOW Date Received: 12/12/07

% Solids: 75.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7450			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	2.7			P
7440-39-3	Barium	57.1			P
7440-41-7	Beryllium	0.65	U		P
7440-43-9	Cadmium	0.65	U J	N	P
7440-70-2	Calcium	7880			P
7440-47-3	Chromium	20.7			P
7440-48-4	Cobalt	7.2			P
7440-50-8	Copper	26.0			P
7439-89-6	Iron	19800			P
7439-92-1	Lead	76.5			P
7439-95-4	Magnesium	4280			P
7439-96-5	Manganese	367			P
7439-97-6	Mercury	0.07			CV
7440-02-0	Nickel	17.0			P
7440-09-7	Potassium	1210			P
7782-49-2	Selenium	0.65	U J	NW	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	141			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	12.7			P
7440-66-6	Zinc	98.5			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD118F-SC-F-1

ıtract: R2741271

) Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-(

:rix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057987

'el (low/med): LOW Date Received: 12/12/07

'olids: 56.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15200			P
7440-36-0	Antimony	1.8	U		P
7440-38-2	Arsenic	7.9			P
7440-39-3	Barium	162			P
7440-41-7	Beryllium	0.88	U		P
7440-43-9	Cadmium	5.8	J	N	P
7440-70-2	Calcium	9810			P
7440-47-3	Chromium	179			P
7440-48-4	Cobalt	14.1			P
7440-50-8	Copper	106			P
7439-89-6	Iron	28600			P
7439-92-1	Lead	178			P
7439-95-4	Magnesium	7300			P
7439-96-5	Manganese	578			P
7439-97-6	Mercury	~~0.62~~	R		CV
7440-02-0	Nickel	39.3			P
7440-09-7	Potassium	1990			P
7782-49-2	Selenium	0.86	UJ	N	F
7440-22-4	Silver	1.8	U		P
7440-23-5	Sodium	282			P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	30.7			P
7440-66-6	Zinc	342			P

lor Before: BLACK Clarity Before: Texture: FINE

lor After: YELLOW Clarity After: CLEAR Artifacts:

mments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD118F-SC-F-2

ontract: R2741271

ab Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-C

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057988

evel (low/med): LOW Date Received: 12/12/07

Solids: 59.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	14400			P
7440-36-0	Antimony	1.7	U		P
7440-38-2	Arsenic	8.0			P
7440-39-3	Barium	132			P
7440-41-7	Beryllium	0.84	U		P
7440-43-9	Cadmium	4.7	J	N	P
7440-70-2	Calcium	8450			P
7440-47-3	Chromium	134			P
7440-48-4	Cobalt	13.5			P
7440-50-8	Copper	111			P
7439-89-6	Iron	28500			P
7439-92-1	Lead	140			P
7439-95-4	Magnesium	6830			P
7439-96-5	Manganese	638			P
7439-97-6	Mercury	~~7.1~~	R		CV
7440-02-0	Nickel	33.9			P
7440-09-7	Potassium	1940			P
7782-49-2	Selenium	0.82	UJ	W	F
7440-22-4	Silver	1.7	U		P
7440-23-5	Sodium	246			P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	27.9			P
7440-66-6	Zinc	307			P

olor Before: BLACK Clarity Before: Texture: FINE

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD118F-SC-G-1

Contract: R2741271

Lab Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-G

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057989

Level (low/med): LOW Date Received: 12/12/07

% Solids: 60.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	21000			P
7440-36-0	Antimony	5.6			P
7440-38-2	Arsenic	16.3			P
7440-39-3	Barium	234			P
7440-41-7	Beryllium	0.81	U		P
7440-43-9	Cadmium	10.0	J	N	P
7440-70-2	Calcium	4730			P
7440-47-3	Chromium	373			P
7440-48-4	Cobalt	8.1	U		P
7440-50-8	Copper	3040			P
7439-89-6	Iron	16400			P
7439-92-1	Lead	392			P
7439-95-4	Magnesium	3480			P
7439-96-5	Manganese	214			P
7439-97-6	Mercury	1.9			CV
7440-02-0	Nickel	29.3			P
7440-09-7	Potassium	1330			P
7782-49-2	Selenium	0.82	UJ	NW	F
7440-22-4	Silver	1.8			P
7440-23-5	Sodium	414			P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	32.0			P
7440-66-6	Zinc	397			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD119F-SC-C-1

Contract: R2741271

Lab Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-C

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057995

Level (low/med): LOW Date Received: 12/12/07

Solids: 76.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7470			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	2.8			P
7440-39-3	Barium	41.9			P
7440-41-7	Beryllium	0.63	U		P
7440-43-9	Cadmium	0.63	UJ	N	P
7440-70-2	Calcium	3260			P
7440-47-3	Chromium	14.7			P
7440-48-4	Cobalt	7.2			P
7440-50-8	Copper	17.5			P
7439-89-6	Iron	18700			P
7439-92-1	Lead	21.0			P
7439-95-4	Magnesium	4350			P
7439-96-5	Manganese	317			P
7439-97-6	Mercury	0.05			CV
7440-02-0	Nickel	16.4			P
7440-09-7	Potassium	1050			P
7782-49-2	Selenium	0.65	UJ	NW	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	125	U		P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	12.6			P
7440-66-6	Zinc	87.9			P

Color Before: BLACK Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: 04SD119F-SC-D-1

act: R2741271

ode: Case No.: SAS No.: SDG NO.: 04SD118F-SC-(

x (soil/water): SOIL/SEDIMENT Lab Sample ID: 1057996

(low/med): LOW Date Received: 12/12/07

ds: 64.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9120			P
7440-36-0	Antimony	1.5	U		P
7440-38-2	Arsenic	3.7			P
7440-39-3	Barium	94.6			P
7440-41-7	Beryllium	0.74	U		P
7440-43-9	Cadmium	0.74	UJ	N	P
7440-70-2	Calcium	11200			P
7440-47-3	Chromium	27.5			P
7440-48-4	Cobalt	9.0			P
7440-50-8	Copper	64.0			P
7439-89-6	Iron	24200			P
7439-92-1	Lead	61.8			P
7439-95-4	Magnesium	5170			P
7439-96-5	Manganese	620			P
7439-97-6	Mercury	0.08			CV
7440-02-0	Nickel	20.6			P
7440-09-7	Potassium	1520			P
7782-49-2	Selenium	0.75	UJ	NW	F
7440-22-4	Silver	1.5	U		P
7440-23-5	Sodium	174			P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	15.9			P
7440-66-6	Zinc	134			P

Before: BLACK Clarity Before: Texture: FINE

After: YELLOW Clarity After: CLEAR Artifacts:

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METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD119F-SC-E-1

ontract: R2741271

ab Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-C

atrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058003

evel (low/med): LOW Date Received: 12/12/07

Solids: 46.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	20400	J		P
7440-36-0	Antimony	11.1			P
7440-38-2	Arsenic	21.4			P
7440-39-3	Barium	311			P
7440-41-7	Beryllium	1.1	UJ		P
7440-43-9	Cadmium	37.5	J	N	P
7440-70-2	Calcium	7770	J		P
7440-47-3	Chromium	657			P
7440-48-4	Cobalt	12.6			P
7440-50-8	Copper	233			P
7439-89-6	Iron	31400			P
7439-92-1	Lead	663			P
7439-95-4	Magnesium	7120			P
7439-96-5	Manganese	648			P
7439-97-6	Mercury	6.2			CV
7440-02-0	Nickel	40.8			P
7440-09-7	Potassium	2510			P
7782-49-2	Selenium	1.1	UJ	NW	F
7440-22-4	Silver	2.5	J		P
7440-23-5	Sodium	454	J		P
7440-28-0	Thallium	2.2	UJ		P
7440-62-2	Vanadium	68.7	J		P
7440-66-6	Zinc	874	J		P

olor Before: BROWN Clarity Before: Texture: FINE

olor After: YELLOW Clarity After: CLEAR Artifacts:

omments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

04SD119F-SC-F-1

:ract: R2741271

Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-(

:ix (soil/water): SOIL/SEDIMENT Lab Sample ID: 1058006

:l (low/med): LOW Date Received: 12/12/07

:lids: 76.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6840			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	4.2			P
7440-39-3	Barium	59.4			P
7440-41-7	Beryllium	0.64	U		P
7440-43-9	Cadmium	0.64	U	J N	P
7440-70-2	Calcium	3460			P
7440-47-3	Chromium	29.8			P
7440-48-4	Cobalt	6.6			P
7440-50-8	Copper	36.9			P
7439-89-6	Iron	15800			P
7439-92-1	Lead	52.6			P
7439-95-4	Magnesium	3880			P
7439-96-5	Manganese	215			P
7439-97-6	Mercury	0.37			CV
7440-02-0	Nickel	14.7			P
7440-09-7	Potassium	1050			P
7782-49-2	Selenium	0.65	U	J NW	F
7440-22-4	Silver	1.3	U		P
7440-23-5	Sodium	205			P
7440-28-0	Thallium	1.3	U		P
7440-62-2	Vanadium	12.1			P
7440-66-6	Zinc	118			P

lor Before: BROWN Clarity Before: Texture: FINE

lor After: YELLOW Clarity After: CLEAR Artifacts:

nments:

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
04SD-EB2-SC-B-3

tract: R2741271

Code: Case No.: SAS No.: SDG NO.: 04SD118F-SC-(

rix (soil/water): WATER Lab Sample ID: 1058165

el (low/med): LOW Date Received: 12/12/07

Concentration Units (ug/L or mg/kg dry weight): µG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	10.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	20.0	U		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	1000	U		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	20.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	1000	U		P
7439-96-5	Manganese	10.0	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		F
7440-22-4	Silver	10.0	U		P
7440-23-5	Sodium	1000	U		P
7440-28-0	Thallium	10.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	20.0	U		P

lor Before: COLORLESS Clarity Before: CLEAR Texture:

lor After: COLORLESS Clarity After: CLEAR Artifacts:

mments:

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-C-1

Date Sampled : 12/11/07 12:57 Order #: 1057984 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	80.4	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	1660	MG/KG	12/13/07	09:10	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-D-1

Date Sampled : 12/11/07 12:57 Order #: 1057985 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	79.7	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	1300	MG/KG	12/13/07	09:10	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-E-1

Date Sampled : 12/11/07 12:57 Order #: 1057986 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	75.4	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	2830	MG/KG	12/13/07	09:10	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-F-1

Date Sampled : 12/11/07 12:57 Order #: 1057987 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	56.6	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	31800	MG/KG	12/13/07	09:10	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-F-2

Date Sampled : 12/11/07 12:57 Order #: 1057988 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	59.2	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	23400	MG/KG	12/13/07	09:10	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD118F-SC-G-1

Date Sampled : 12/11/07 12:57 Order #: 1057989 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	60.2	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	59200	MG/KG	12/13/07	09:10	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD119F-SC-C-1

Date Sampled : 12/11/07 13:40 Order #: 1057995 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	76.9	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	3010	MG/KG	12/13/07	09:10	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD119F-SC-D-1

Date Sampled : 12/11/07 13:40 Order #: 1057996 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	64.9	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	18500	MG/KG	12/13/07	09:10	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD119F-SC-E-1

Date Sampled : 12/11/07 13:40 Order #: 1058003 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	46.1	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	62400	MG/KG	12/13/07	09:10	1.0

LK
2/7/08

COLUMBIA ANALYTICAL SERVICES

Reported: 01/10/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD119F-SC-F-1

Date Sampled : 12/11/07 13:40 Order #: 1058006 Sample Matrix: SOIL/SEDIMENT
Date Received: 12/12/07 Submission #: R2741271

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	76.9	%	12/13/07	13:45	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	5500	MG/KG	12/13/07	09:10	1.0

ENSR
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Memorandum

Date: February 14, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation, VOC Analysis
Subsurficial Sediment Sampling, December 2007
BASF Rensselaer Site, NY
CAS Submission # R2741330

Distribution: L. Herberich/Westford

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SUMMARY

Limited validation was performed on the data for eight sediment samples, two equipment blanks, and one trip blank analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The sediment samples were collected at the BASF site in Rensselaer, NY, on December 13, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS processed the samples and reported the results under sample submission # R2741330.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data appear valid as reported and may be used for decision making purposes. Selected results in two sediment samples were rejected due to very low internal standard area recoveries. Selected other results were qualified as undetected (U) due to blank contamination or were qualified due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
04SD115N-SC-C-1	04SD115N-SC-D-1
04SD115N-SC-E-1	04SD115N-SC-F-1
04SD115N-SC-F-2 (Field duplicate of 04SD115N-SC-F-1)	04SD115N-SC-G-1
04SD115N-SC-H-1	04SD115N-SC-I-1
04SD-EB7-SC-B-3 (equipment blank)	04SD-EB8-SC-3 (equipment blank)

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Sample IDs	
Trip Blank 3	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard recoveries
- Sample quantitation/reporting limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancy was noted.

- Sample Trip Blank 1 was listed on the COC but was not analyzed or reported by the laboratory. No validation action was taken on this basis.

Holding Times/Sample Preservation

The cooler temperatures upon sample receipt were within the QC acceptance criteria of 4± 2°C. All other sample preservation criteria were met.

All samples were analyzed within the method-specified holding time.

GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations

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(IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 10/03/07 (MSVOA7)	1,4-Dioxane	0.007	J/UJ*
Associated samples: 04SD115N-SC-G-1, 04SD115N-SC-H-1RE, 04SD115N-SC-I-1			
IC 12/12/07 (MSVOA10)	1,4-Dioxane	0.002	J/UJ*
Associated samples: 04SD115N-SC-C-1, 04SD115N-SC-D-1, 04SD115N-SC-E-1, 04SD115N-SC-F-1, 04SD115N-SC-F-2, 04SD-EB7-SC-B-3, 04SD-EB8-SC-3 and Trip Blank 3			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			
RE-Re-analysis			

Calibration (Instrument ID)	Compound	RRF	%D	Actions (Detects/Nondetects)
CC 12/18/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
	Chloromethane	ok	22.9	J/UJ
Associated samples: 04SD115N-SC-H-1RE and 04SD115N-SC-I-1				
CC 12/21/07 (MSVOA7)	1,4-Dioxane	0.006	ok	J/UJ*
	Chloromethane	ok	23.5	J/UJ
Associated sample: 04SD115N-SC-G-1				
CC 12/19/07 (MSVOA10)	1,4-Dioxane	0.002	ok	J/UJ*
	1,2-Dibromo-3-chloropropane	ok	20.7	J/UJ
Associated samples: 04SD115N-SC-D-1, 04SD115N-SC-E-1, 04SD115N-SC-F-1, 04SD115N-SC-F-2, 04SD-EB7-SC-B-3, 04SD-EB8-SC-3, Trip Blank 3				
CC 12/20/07 (MSVOA10)	1,4-Dioxane	0.002	ok	J/UJ*
	1,2-Dibromo-3-chloropropane	ok	25.3	J/UJ
Associated sample: 04SD115N-SC-C-1				
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.				
RE- Re-analysis				

Laboratory Blanks/Equipment Blanks/Trip Blanks

Several target compounds were detected in the laboratory method blanks, the trip blank, and in the equipment blanks associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected and the associated samples. Note that the positive results for methylene chloride in Trip Blank 3, 04SD-EB7-SC-B-3, and 04SD-EB8-SC-3 were negated due to the method blank actions.

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Blank type (lab ID)	Compound	Concentration (units)
Method (WAT BLK1)	Methylene chloride	0.24 J µg/L
Associated samples: 04SD-EB7-SC-B-3, 04SD-EB8-SC-3, Trip Blank 8, and Trip Blank 3		
Method (SOIL BLK1)	Methylene chloride	0.36 J µg/Kg
Associated samples: 04SD115N-SC-H-1RE and 04SD115N-SC-I-1		
Method (MED BLK1)	Methylene chloride	41 J µg/Kg
	2-Butanone	100 J µg/Kg
Associated samples: 04SD115N-SC-D-1, 04SD115N-SC-E-1, 04SD115N-SC-F-1, and 04SD115N-SC-F-2		
Method (MED BLK2)	Methylene chloride	26 J µg/Kg
	2-Butanone	110 J µg/Kg
Associated sample: 04SD115N-SC-C-1		
Method (SOIL BLK3)	Methylene chloride	0.75 J µg/Kg
Associated sample: 04SD115N-SC-G-1		
EB7-SC-B-3 (equipment)	Toluene	0.81 J ug/L
Associated samples: All sediment samples in this dataset		
EB8-SC-B-3 (equipment)	Acetone	1.4 J ug/L
Associated samples: All sediment samples in this dataset		
RE – Reanalysis		

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	≤ RL	Report sample RL value with a U
		> RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			
RL (Reporting Limit) is equivalent to the lowest calibration standard			

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC detected	Detects	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**

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* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.
**Based on ENSR professional judgment
RL (Reporting Limit) is equivalent to the lowest calibration standard
TIC = Tentatively Identified Compound

Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses with the following exceptions.

Sample	%R DBFM	%R Tol-d8	%R BFB	Actions (Detects/Nondetects)
04SD115N-SC-H-1RE	ok	129	42	Estimate J/UJ
04SD115N-SC-I-1	227	178	37	Estimate J/UJ
Note: Several nondetect results for sample 04SD115N-SC-H-1RE were rejected (R) due to very low internal standard (IS) recoveries. All nondetect results for sample 04SD115N-SC-I-1 were rejected (R) due to very low IS recoveries. (See discussion below under **Internal Standards**)				
DBFM – Dibromofluoromethane Tol-d8 – Toluene-d8 BFB- Bromofluorobenzene				

The initial analysis of sample 04SD115N-SC-H-1 had all four internal standard recoveries below 25%. The sample was re-analyzed and the recovery of one of four internal standards fell below 25%. The reanalysis was reported by the validator since it exhibited higher internal standard recoveries.

The initial analysis of sample 04SD115N-SC-I-1 had all four internal standard recoveries below 25%. The sample was reanalyzed confirming the low internal standard recoveries in the initial analysis. The initial analysis was reported by the validator since the results between the two analyses were comparable.

The laboratory noted in the case narrative that the VOC vials for samples 04SD115N-SC-H-1 and 04SD115N-SC-I-1 could have contained small particulate matter between the septum and the sealing lip of the vials. This particulate matter may have caused the purge gas to therefore leak from the vial during analysis of the samples thereby causing the poor surrogate recoveries and the low bias in the internal standard area recoveries.

MS/MSD Results

MS/MSD analyses were not performed on a sediment sample from this sample set. No validation action was taken on this basis.

The laboratory performed MS/MSD analyses on equipment blank 04SD-EB7-SC-B-3. The %Rs and the relative percent differences (RPDs) of all spiked compounds were within the QC acceptance criteria for the MS/MSD analysis with the following exception.

Compound	MS/MSD %R (RPD)	QC Limits %R (RPD)	Actions (Detects/Nondetects)
1,4-Dioxane	47/ok (58)	50-150 (30)	Estimate J/UJ
Associated sample: 04SD-EB7-SC-B-3			

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LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses with the following exception.

Compound	LCS %R	QC Limits %R	Actions (Detects/Nondetects)
Dichlorodifluoromethane	134	70-130	Estimate J/Accept result
Associated sample: 04SD115N-SC-G-1			

Field Duplicate Results

Samples 04SD115N-SC-F-1/04SD115N-SC-F-2 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected compounds in field duplicate samples 04SD115N-SC-F-1 and 04SD115N-SC-F-2. The RPDs for 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, isopropylbenzene, and o-xylene exceeded the acceptance criteria. The results for 1,3-dichlorobenzene and isopropylbenzene were qualified as estimated (J) by the laboratory due to quantitation below the RL. Further qualification of the data for 1,3-dichlorobenzene and isopropylbenzene was not required. The positive results for 1,4-dichlorobenzene and o-xylene were qualified as estimated (J) in samples 04SD115N-SC-F-1 and 04SD115N-SC-F-2. The positive result for 1,2-dichlorobenzene >RL in sample 04SD115N-SC-F-1 was qualified as estimated (J). The positive result for 1,2-dichlorobenzene in field duplicate sample was qualified as estimated (J) by the laboratory due to quantitation below the RL. Further qualification of the data for 1,2-dichlorobenzene in field duplicate sample 04SD115N-SC-F-2 was not required. The RPD for methylcyclohexane was not calculable (NC) due to a nondetect result in the sample. Precision for methylcyclohexane was deemed acceptable since the detected result in the field duplicate sample was <5x the RL. Precision for 1,2,4-trichlorobenzene was deemed acceptable since the detected results were <5x the RL and the RPD criterion was doubled. The remaining RPDs met the acceptance criteria.

Compound	04SD115N-SC-F-1 (µg/Kg)	04SD115N-SC-F-2 (µg/Kg)	RPD
Benzene	5900	6600	11
Chlorobenzene	630000	600000	3
1,3-Dichlorobenzene	4400 J	1100 J	120
1,4-Dichlorobenzene	33000	9000	114
1,2-Dichlorobenzene	6600	880 J	153
Ethylbenzene	2900 J	3700 J	24
Isopropylbenzene	280 J	1600 J	140
Methyl acetate	310 J	310 J	0
Methylcyclohexane	5700 U	270 J	NC
1,2,4-Trichlorobenzene	770 J	290 J	91
m+p-Xylene	22000	33000	40
o-Xylene	6300	19000	100
Criteria: RPD <50% if both results are >5x RL; RPD criteria doubled if both results <5x RL.			
NC-Not calculable due to a nondetect result in the original or duplicate sample			

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Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses with the following exceptions.

Sample	Internal Standard Area %R			
	PFB	DFB	CBZ	DCB
04SD115N-SC-H-1RE	ok	ok	ok	11
04SD115N-SC-I-1	14	20	8	2

PFB – Pentafluorobenzene DFB – 1,4-Difluorobenzene CBZ – d5-Chlorobenzene
DCB – d4-Dichlorobenzene RE – Reanalysis

Sample results were qualified as follows:

- If the internal standard area was ≥25% but <50%, positive and nondetect results for compounds quantitated with the noncompliant internal standard were qualified as estimated (J, UJ).
- If the internal standard area was <25%, positive results for compounds quantitated with the noncompliant internal standard were qualified as estimated (J) and nondetect results were rejected (R).
- Sample results that were previously qualified as undetected (U) on the basis of blank contamination were not rejected but were qualified as estimated (UJ) due to the low internal standard recoveries.

The initial analysis of sample 04SD115N-SC-H-1 had all four internal standard recoveries below 25%. The sample was re-analyzed and the recovery of one of four internal standards fell below 25%. The reanalysis was reported by the validator since it exhibited higher internal standard recoveries.

The initial analysis of sample 04SD115N-SC-I-1 had all four internal standard recoveries below 25%. The sample was reanalyzed confirming the low internal standard recoveries in the initial analysis. The initial analysis was reported by the validator since the results between the two analyses were comparable.

The laboratory noted in the case narrative that the VOC vials for samples 04SD115N-SC-H-1 and 04SD115N-SC-I-1 could have contained small particulate matter between the septum and the sealing lip of the vials. This particulate matter may have caused the purge gas to therefore leak from the vial during analysis of the samples thereby causing the poor surrogate recoveries and the low bias in the internal standard area recoveries.

Sample Quantitation/Reporting Limits

The percent (%) solids content for all samples was greater than 50% with the following exception: 04SD115N-SC-D-1 (49.5%). The positive and nondetect VOC results in this sample were qualified as estimated (J, UJ).

Samples 04SD115N-SC-C-1, 04SD115N-SC-D-1, 04SD115N-SC-E-1, 04SD115N-SC-F-1, and 04SD115N-SC-F-2 were all analyzed as medium level soil analyses due to the high concentration of target compounds present in the samples. Additionally, these samples were analyzed at the dilution factor listed in parentheses due to the high concentration of target compounds present in the samples: 04SD115N-SC-C-1 (10x), 04SD115N-SC-D-1 (5x), 04SD115N-SC-E-1 (5x), 04SD115N-SC-F-1 (5x), and 04SD115N-SC-F-2 (5x). Chlorobenzene exceeded the calibration range in the 5x dilutions of

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samples 04SD115N-SC-C-1, 04SD115N-SC-D-1, 04SD115N-SC-E-1, 04SD115N-SC-F-1, and 04SD115N-SC-F-2. Sample 04SD115N-SC-C-1 was re-analyzed as a medium level soil with a dilution of 15x; samples 04SD115N-SC-D-1 and 04SD115N-SC-E-1 were reanalyzed as medium level soil samples with a dilution of 50x; and samples 04SD115N-SC-F-1 and 04SD115N-SC-F-2 were reanalyzed as medium level soil samples with a dilution of 20x. During data validation, the results for chlorobenzene from the medium level analyses with the higher dilutions were combined with the remaining results from the medium level analyses with the 5x dilutions in order to report all results within the calibration range while also reporting the lowest achievable RLs.

All VOCs, except trichloroethene and 1,4-dioxane, have RLs which are less than or equal to the project required detection limits when analyzed without dilution. In all cases where dilutions were performed or where sediment samples were analyzed as medium level soil samples, one or more VOCs exceeded the project required detection limits.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-C-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057915 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 52.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 1300.00			Dry Weight
ACETONE	20	49000 ~~2700 J~~ U	UG/KG
BENZENE	5.0	42000	UG/KG
BROMOCHLOROMETHANE	5.0	12000 U	UG/KG
BROMODICHLOROMETHANE	5.0	12000 U	UG/KG
BROMOFORM	5.0	12000 U	UG/KG
BROMOMETHANE	5.0	12000 U	UG/KG
2-BUTANONE (MEK)	10	25000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	12000 U	UG/KG
CARBON DISULFIDE	10	25000 U	UG/KG
CARBON TETRACHLORIDE	5.0	12000 U	UG/KG
CHLOROBENZENE	5.0	40 ~~490~~000 ~~E~~	UG/KG
CHLOROETHANE	10	25000 U	UG/KG
CHLOROFORM	5.0	12000 U	UG/KG
CHLOROMETHANE	5.0	12000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	12000 UJ	UG/KG
CYCLOHEXANE	5.0	12000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	12000 U	UG/KG
1,2-DIBROMOETHANE	5.0	12000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	4900 J	UG/KG
1,4-DICHLOROBENZENE	5.0	30000	UG/KG
1,2-DICHLOROBENZENE	5.0	760 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	12000 U	UG/KG
1,1-DICHLOROETHANE	5.0	12000 U	UG/KG
1,2-DICHLOROETHANE	5.0	12000 U	UG/KG
1,1-DICHLOROETHENE	5.0	12000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	12000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	12000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	12000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	12000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	12000 U	UG/KG
1,4-DIOXANE	100	98 ~~250~~000 UJ	UG/KG
ETHYLBENZENE	5.0	660 J	UG/KG
2-HEXANONE	10	25000 U	UG/KG
ISOPROPYLBENZENE	5.0	12000 U	UG/KG
METHYL ACETATE	10	1000 J	UG/KG
METHYLCYCLOHEXANE	5.0	12000 U	UG/KG
METHYLENE CHLORIDE	5.0	12000 ~~720 JB~~ U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	25000 U	UG/KG
STYRENE	5.0	12000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	12000 U	UG/KG
TETRACHLOROETHENE	5.0	12000 U	UG/KG
TOLUENE	5.0	12000 ~~510 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	12000 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	12000 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-C-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057915 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 52.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 1300.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	12000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	12000 U	UG/KG
TRICHLOROETHENE	5.0	12000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	12000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	12000 U	UG/KG
VINYL CHLORIDE	5.0	12000 U	UG/KG
O-XYLENE	5.0	720 J	UG/KG
M+P-XYLENE	5.0	2500 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	115	%
TOLUENE-D8	(75 - 128 %)	116	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-C-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057915 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 52.8

DATE ANALYZED : 12/21/07
ANALYTICAL DILUTION: 1920.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	1900 J	UG/KG
BENZENE	5.0	32000	UG/KG
BROMOCHLOROMETHANE	5.0	18000 U	UG/KG
BROMODICHLOROMETHANE	5.0	18000 U	UG/KG
BROMOFORM	5.0	18000 U	UG/KG
BROMOMETHANE	5.0	18000 U	UG/KG
2-BUTANONE (MEK)	10	36000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	18000 U	UG/KG
CARBON DISULFIDE	10	36000 U	UG/KG
CARBON TETRACHLORIDE	5.0	18000 U	UG/KG
CHLOROBENZENE	5.0	400000 D	UG/KG
CHLOROETHANE	10	36000 U	UG/KG
CHLOROFORM	5.0	18000 U	UG/KG
CHLOROMETHANE	5.0	18000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	18000 U	UG/KG
CYCLOHEXANE	5.0	18000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	18000 U	UG/KG
1,2-DIBROMOETHANE	5.0	18000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	4400 J	UG/KG
1,4-DICHLOROBENZENE	5.0	25000	UG/KG
1,2-DICHLOROBENZENE	5.0	18000 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	18000 U	UG/KG
1,1-DICHLOROETHANE	5.0	18000 U	UG/KG
1,2-DICHLOROETHANE	5.0	18000 U	UG/KG
1,1-DICHLOROETHENE	5.0	18000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	18000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	18000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	18000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	18000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	18000 U	UG/KG
1,4-DIOXANE	100	360000 U	UG/KG
ETHYLBENZENE	5.0	18000 U	UG/KG
2-HEXANONE	10	36000 U	UG/KG
ISOPROPYLBENZENE	5.0	18000 U	UG/KG
METHYL ACETATE	10	830 J	UG/KG
METHYLCYCLOHEXANE	5.0	18000 U	UG/KG
METHYLENE CHLORIDE	5.0	1400 JB	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	36000 U	UG/KG
STYRENE	5.0	18000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	18000 U	UG/KG
TETRACHLOROETHENE	5.0	18000 U	UG/KG
TOLUENE	5.0	18000 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	18000 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	18000 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-C-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057915 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 52.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/21/07			
ANALYTICAL DILUTION: 1920.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	18000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	18000 U	UG/KG
TRICHLOROETHENE	5.0	18000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	18000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	18000 U	UG/KG
VINYL CHLORIDE	5.0	18000 U	UG/KG
O-XYLENE	5.0	18000 U	UG/KG
M+P-XYLENE	5.0	2100 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	110	%
TOLUENE-D8	(75 - 128 %)	112	%
DIBROMOFLUOROMETHANE	(68 - 133 %)	106	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-D-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057916 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 49.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 650.00			Dry Weight
ACETONE	20	26000 ~~1400 JB~~ UJ	UG/KG
BENZENE	5.0	19000 J	UG/KG
BROMOCHLOROMETHANE	5.0	6600 UJ	UG/KG
BROMODICHLOROMETHANE	5.0	6600 U	UG/KG
BROMOFORM	5.0	6600 U	UG/KG
BROMOMETHANE	5.0	6600 U	UG/KG
2-BUTANONE (MEK)	10	13000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6600 U	UG/KG
CARBON DISULFIDE	10	13000 U	UG/KG
CARBON TETRACHLORIDE	5.0	6600 U	UG/KG
CHLOROBENZENE	5.0	130,000 ~~E~~ J	UG/KG
CHLOROETHANE	10	13000 UJ	UG/KG
CHLOROFORM	5.0	6600 U	UG/KG
CHLOROMETHANE	5.0	6600 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6600 UJ	UG/KG
CYCLOHEXANE	5.0	6600 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6600 U	UG/KG
1,2-DIBROMOETHANE	5.0	6600 U	UG/KG
1,3-DICHLOROBENZENE	5.0	24000 J	UG/KG
1,4-DICHLOROBENZENE	5.0	42000	UG/KG
1,2-DICHLOROBENZENE	5.0	34000	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6600 UJ	UG/KG
1,1-DICHLOROETHANE	5.0	6600 U	UG/KG
1,2-DICHLOROETHANE	5.0	6600 U	UG/KG
1,1-DICHLOROETHENE	5.0	6600 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6600 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6600 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6600 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6600 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6600 U	UG/KG
1,4-DIOXANE	100	53 ~~130~~000 UJ	UG/KG
ETHYLBENZENE	5.0	2000 J	UG/KG
2-HEXANONE	10	13000 UJ	UG/KG
ISOPROPYLBENZENE	5.0	6600 U	UG/KG
METHYL ACETATE	10	13000 U	UG/KG
METHYLCYCLOHEXANE	5.0	650 J	UG/KG
METHYLENE CHLORIDE	5.0	6600 ~~320 JB~~ UJ	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13000 UJ	UG/KG
STYRENE	5.0	6600 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6600 U	UG/KG
TETRACHLOROETHENE	5.0	6600 U	UG/KG
TOLUENE	5.0	6600 ~~5300 J~~ UJ	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	8500 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	1900 J	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-D-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057916 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 49.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 650.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6600 UJ	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6600 U	UG/KG
TRICHLOROETHENE	5.0	6600 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6600 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6600 U	UG/KG
VINYL CHLORIDE	5.0	6600 U	UG/KG
O-XYLENE	5.0	1400 J	UG/KG
M+P-XYLENE	5.0	6700 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	118	%
TOLUENE-D8	(75 - 128 %)	113	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-D-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057916 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 49.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/21/07			
ANALYTICAL DILUTION: 6500.00			Dry Weight
ACETONE	20	7500 J	UG/KG
BENZENE	5.0	16000 J	UG/KG
BROMOCHLOROMETHANE	5.0	66000 U	UG/KG
BROMODICHLOROMETHANE	5.0	66000 U	UG/KG
BROMOFORM	5.0	66000 U	UG/KG
BROMOMETHANE	5.0	66000 U	UG/KG
2-BUTANONE (MEK)	10	130000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	66000 U	UG/KG
CARBON DISULFIDE	10	130000 U	UG/KG
CARBON TETRACHLORIDE	5.0	66000 U	UG/KG
CHLOROBENZENE	5.0	1300000 D	UG/KG
CHLOROETHANE	10	130000 U	UG/KG
CHLOROFORM	5.0	66000 U	UG/KG
CHLOROMETHANE	5.0	66000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	66000 U	UG/KG
CYCLOHEXANE	5.0	66000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	66000 U	UG/KG
1,2-DIBROMOETHANE	5.0	66000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	20000 J	UG/KG
1,4-DICHLOROBENZENE	5.0	38000 J	UG/KG
1,2-DICHLOROBENZENE	5.0	30000 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	66000 U	UG/KG
1,1-DICHLOROETHANE	5.0	66000 U	UG/KG
1,2-DICHLOROETHANE	5.0	66000 U	UG/KG
1,1-DICHLOROETHENE	5.0	66000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	66000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	66000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	66000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	66000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	66000 U	UG/KG
1,4-DIOXANE	100	1300000 U	UG/KG
ETHYLBENZENE	5.0	66000 U	UG/KG
2-HEXANONE	10	130000 U	UG/KG
ISOPROPYLBENZENE	5.0	66000 U	UG/KG
METHYL ACETATE	10	130000 U	UG/KG
METHYLCYCLOHEXANE	5.0	66000 U	UG/KG
METHYLENE CHLORIDE	5.0	4600 JB	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	130000 U	UG/KG
STYRENE	5.0	66000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	66000 U	UG/KG
TETRACHLOROETHENE	5.0	66000 U	UG/KG
TOLUENE	5.0	4600 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	7700 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	66000 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-D-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057916 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 49.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/21/07			
ANALYTICAL DILUTION: 6500.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	66000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	66000 U	UG/KG
TRICHLOROETHENE	5.0	66000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	66000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	66000 U	UG/KG
VINYL CHLORIDE	5.0	66000 U	UG/KG
O-XYLENE	5.0	66000 U	UG/KG
M+P-XYLENE	5.0	5700 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	111	%
TOLUENE-D8	(75 - 128 %)	113	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-E-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057917 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 51.7

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 725.00

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	28000 U ~~1400 JB~~	UG/KG
BENZENE	5.0	13000	UG/KG
BROMOCHLOROMETHANE	5.0	7000 U	UG/KG
BROMODICHLOROMETHANE	5.0	7000 U	UG/KG
BROMOFORM	5.0	7000 U	UG/KG
BROMOMETHANE	5.0	7000 U	UG/KG
2-BUTANONE (MEK)	10	14000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	7000 U	UG/KG
CARBON DISULFIDE	10	14000 U	UG/KG
CARBON TETRACHLORIDE	5.0	7000 U	UG/KG
CHLOROBENZENE	5.0	150 ~~890~~000 ~~E~~	UG/KG
CHLOROETHANE	10	14000 U	UG/KG
CHLOROFORM	5.0	7000 U	UG/KG
CHLOROMETHANE	5.0	7000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	7000 UJ	UG/KG
CYCLOHEXANE	5.0	7000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	7000 U	UG/KG
1,2-DIBROMOETHANE	5.0	7000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	19000	UG/KG
1,4-DICHLOROBENZENE	5.0	110000	UG/KG
1,2-DICHLOROBENZENE	5.0	50000	UG/KG
DICHLORODIFLUOROMETHANE	5.0	7000 U	UG/KG
1,1-DICHLOROETHANE	5.0	7000 U	UG/KG
1,2-DICHLOROETHANE	5.0	7000 U	UG/KG
1,1-DICHLOROETHENE	5.0	7000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	7000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	7000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	7000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	7000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	7000 U	UG/KG
1,4-DIOXANE	100	56 ~~140~~000 UJ	UG/KG
ETHYLBENZENE	5.0	5400 J	UG/KG
2-HEXANONE	10	14000 U	UG/KG
ISOPROPYLBENZENE	5.0	290 J	UG/KG
METHYL ACETATE	10	270 J	UG/KG
METHYLCYCLOHEXANE	5.0	7000 U	UG/KG
METHYLENE CHLORIDE	5.0	7000 ~~390 JB~~ U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	14000 U	UG/KG
STYRENE	5.0	7000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	7000 U	UG/KG
TETRACHLOROETHENE	5.0	7000 U	UG/KG
TOLUENE	5.0	7000 ~~6600 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	41000	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	8500	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-E-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057917 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 51.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 725.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	7000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	7000 U	UG/KG
TRICHLOROETHENE	5.0	7000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	7000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	7000 U	UG/KG
VINYL CHLORIDE	5.0	7000 U	UG/KG
O-XYLENE	5.0	6600 J	UG/KG
M+P-XYLENE	5.0	23000	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	119	%
TOLUENE-D8	(75 - 128 %)	114	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-E-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057917 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 51.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/21/07			
ANALYTICAL DILUTION: 7250.00			Dry Weight
ACETONE	20	280000 U	UG/KG
BENZENE	5.0	12000 J	UG/KG
BROMOCHLOROMETHANE	5.0	70000 U	UG/KG
BROMODICHLOROMETHANE	5.0	70000 U	UG/KG
BROMOFORM	5.0	70000 U	UG/KG
BROMOMETHANE	5.0	70000 U	UG/KG
2-BUTANONE (MEK)	10	140000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	70000 U	UG/KG
CARBON DISULFIDE	10	140000 U	UG/KG
CARBON TETRACHLORIDE	5.0	70000 U	UG/KG
CHLOROBENZENE	5.0	1500000 D	UG/KG
CHLOROETHANE	10	140000 U	UG/KG
CHLOROFORM	5.0	70000 U	UG/KG
CHLOROMETHANE	5.0	70000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	70000 U	UG/KG
CYCLOHEXANE	5.0	70000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	70000 U	UG/KG
1,2-DIBROMOETHANE	5.0	70000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	16000 J	UG/KG
1,4-DICHLOROBENZENE	5.0	93000	UG/KG
1,2-DICHLOROBENZENE	5.0	43000 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	70000 U	UG/KG
1,1-DICHLOROETHANE	5.0	70000 U	UG/KG
1,2-DICHLOROETHANE	5.0	70000 U	UG/KG
1,1-DICHLOROETHENE	5.0	70000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	70000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	70000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	70000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	70000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	70000 U	UG/KG
1,4-DIOXANE	100	1400000 U	UG/KG
ETHYLBENZENE	5.0	4300 J	UG/KG
2-HEXANONE	10	140000 U	UG/KG
ISOPROPYLBENZENE	5.0	70000 U	UG/KG
METHYL ACETATE	10	140000 U	UG/KG
METHYLCYCLOHEXANE	5.0	70000 U	UG/KG
METHYLENE CHLORIDE	5.0	4800 JB	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	140000 U	UG/KG
STYRENE	5.0	70000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	70000 U	UG/KG
TETRACHLOROETHENE	5.0	70000 U	UG/KG
TOLUENE	5.0	5600 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	31000 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	7500 J	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-E-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057917 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 51.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/21/07			
ANALYTICAL DILUTION: 7250.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	70000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	70000 U	UG/KG
TRICHLOROETHENE	5.0	70000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	70000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	70000 U	UG/KG
VINYL CHLORIDE	5.0	70000 U	UG/KG
O-XYLENE	5.0	4800 J	UG/KG
M+P-XYLENE	5.0	16000 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	112	%
TOLUENE-D8	(75 - 128 %)	112	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057918 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 54.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 615.00			Dry Weight
ACETONE	20	23000 ~~750 JB~~ U	UG/KG
BENZENE	5.0	5900	UG/KG
BROMOCHLOROMETHANE	5.0	5700 U	UG/KG
BROMODICHLOROMETHANE	5.0	5700 U	UG/KG
BROMOFORM	5.0	5700 U	UG/KG
BROMOMETHANE	5.0	5700 U	UG/KG
2-BUTANONE (MEK)	10	11000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5700 U	UG/KG
CARBON DISULFIDE	10	11000 U	UG/KG
CARBON TETRACHLORIDE	5.0	5700 U	UG/KG
CHLOROBENZENE	5.0	63 ~~80000~~ ~~E~~	UG/KG
CHLOROETHANE	10	11000 U	UG/KG
CHLOROFORM	5.0	5700 U	UG/KG
CHLOROMETHANE	5.0	5700 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5700 UJ	UG/KG
CYCLOHEXANE	5.0	5700 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5700 U	UG/KG
1,2-DIBROMOETHANE	5.0	5700 U	UG/KG
1,3-DICHLOROBENZENE	5.0	4400 J	UG/KG
1,4-DICHLOROBENZENE	5.0	33000 J	UG/KG
1,2-DICHLOROBENZENE	5.0	6600 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5700 U	UG/KG
1,1-DICHLOROETHANE	5.0	5700 U	UG/KG
1,2-DICHLOROETHANE	5.0	5700 U	UG/KG
1,1-DICHLOROETHENE	5.0	5700 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5700 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5700 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5700 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5700 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5700 U	UG/KG
1,4-DIOXANE	100	45 ~~10000~~ UJ	UG/KG
ETHYLBENZENE	5.0	2900 J	UG/KG
2-HEXANONE	10	11000 U	UG/KG
ISOPROPYLBENZENE	5.0	280 J	UG/KG
METHYL ACETATE	10	310 J	UG/KG
METHYLCYCLOHEXANE	5.0	5700 U	UG/KG
METHYLENE CHLORIDE	5.0	5700 ~~290 JB~~ U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11000 U	UG/KG
STYRENE	5.0	5700 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5700 U	UG/KG
TETRACHLOROETHENE	5.0	5700 U	UG/KG
TOLUENE	5.0	5700 ~~1200 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	770 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5700 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057918 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 54.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 615.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5700 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5700 U	UG/KG
TRICHLOROETHENE	5.0	5700 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5700 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5700 U	UG/KG
VINYL CHLORIDE	5.0	5700 U	UG/KG
O-XYLENE	5.0	6300 J	UG/KG
M+P-XYLENE	5.0	22000 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	118	%
TOLUENE-D8	(75 - 128 %)	114	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057918 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 54.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 2460.00			Dry Weight
ACETONE	20	90000 U	UG/KG
BENZENE	5.0	5700 J	UG/KG
BROMOCHLOROMETHANE	5.0	23000 U	UG/KG
BROMODICHLOROMETHANE	5.0	23000 U	UG/KG
BROMOFORM	5.0	23000 U	UG/KG
BROMOMETHANE	5.0	23000 U	UG/KG
2-BUTANONE (MEK)	10	45000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	23000 U	UG/KG
CARBON DISULFIDE	10	45000 U	UG/KG
CARBON TETRACHLORIDE	5.0	23000 U	UG/KG
CHLOROBENZENE	5.0	630000 D	UG/KG
CHLOROETHANE	10	45000 U	UG/KG
CHLOROFORM	5.0	23000 U	UG/KG
CHLOROMETHANE	5.0	23000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	23000 U	UG/KG
CYCLOHEXANE	5.0	23000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	23000 U	UG/KG
1,2-DIBROMOETHANE	5.0	23000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	3900 J	UG/KG
1,4-DICHLOROBENZENE	5.0	33000	UG/KG
1,2-DICHLOROBENZENE	5.0	6300 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	23000 U	UG/KG
1,1-DICHLOROETHANE	5.0	23000 U	UG/KG
1,2-DICHLOROETHANE	5.0	23000 U	UG/KG
1,1-DICHLOROETHENE	5.0	23000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	23000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	23000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	23000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	23000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	23000 U	UG/KG
1,4-DIOXANE	100	450000 U	UG/KG
ETHYLBENZENE	5.0	2600 J	UG/KG
2-HEXANONE	10	45000 U	UG/KG
ISOPROPYLBENZENE	5.0	23000 U	UG/KG
METHYL ACETATE	10	45000 U	UG/KG
METHYLCYCLOHEXANE	5.0	23000 U	UG/KG
METHYLENE CHLORIDE	5.0	1300 JB	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	45000 U	UG/KG
STYRENE	5.0	23000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	23000 U	UG/KG
TETRACHLOROETHENE	5.0	23000 U	UG/KG
TOLUENE	5.0	1200 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	23000 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	23000 U	UG/KG

Dan to Report

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057918 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 54.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 2460.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	23000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	23000 U	UG/KG
TRICHLOROETHENE	5.0	23000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	23000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	23000 U	UG/KG
VINYL CHLORIDE	5.0	23000 U	UG/KG
O-XYLENE	5.0	5100 J	UG/KG
M+P-XYLENE	5.0	18000 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	115	%
TOLUENE-D8	(75 - 128 %)	116	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-2

Date Sampled : 12/13/07 09:01 **Order #:** 1057919 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 51.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 630.00			Dry Weight
ACETONE	20	25000 ~~800 JB~~ U	UG/KG
BENZENE	5.0	6600	UG/KG
BROMOCHLOROMETHANE	5.0	6100 U	UG/KG
BROMODICHLOROMETHANE	5.0	6100 U	UG/KG
BROMOFORM	5.0	6100 U	UG/KG
BROMOMETHANE	5.0	6100 U	UG/KG
2-BUTANONE (MEK)	10	12000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6100 U	UG/KG
CARBON DISULFIDE	10	12000 U	UG/KG
CARBON TETRACHLORIDE	5.0	6100 U	UG/KG
CHLOROBENZENE	5.0	60 ~~470000 E~~	UG/KG
CHLOROETHANE	10	12000 U	UG/KG
CHLOROFORM	5.0	6100 U	UG/KG
CHLOROMETHANE	5.0	6100 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	6100 UJ	UG/KG
CYCLOHEXANE	5.0	6100 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6100 U	UG/KG
1,2-DIBROMOETHANE	5.0	6100 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1100 J	UG/KG
1,4-DICHLOROBENZENE	5.0	9000 J	UG/KG
1,2-DICHLOROBENZENE	5.0	880 J	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6100 U	UG/KG
1,1-DICHLOROETHANE	5.0	6100 U	UG/KG
1,2-DICHLOROETHANE	5.0	6100 U	UG/KG
1,1-DICHLOROETHENE	5.0	6100 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6100 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6100 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6100 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6100 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6100 U	UG/KG
1,4-DIOXANE	100	49 ~~120000~~ UJ	UG/KG
ETHYLBENZENE	5.0	3700 J	UG/KG
2-HEXANONE	10	12000 U	UG/KG
ISOPROPYLBENZENE	5.0	1600 J	UG/KG
METHYL ACETATE	10	310 J	UG/KG
METHYLCYCLOHEXANE	5.0	270 J	UG/KG
METHYLENE CHLORIDE	5.0	6100 ~~350 JB~~ U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12000 U	UG/KG
STYRENE	5.0	6100 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6100 U	UG/KG
TETRACHLOROETHENE	5.0	6100 U	UG/KG
TOLUENE	5.0	6100 ~~250 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	290 J	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	6100 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-2

Date Sampled : 12/13/07 09:01 **Order #:** 1057919 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 51.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 630.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6100 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6100 U	UG/KG
TRICHLOROETHENE	5.0	6100 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6100 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6100 U	UG/KG
VINYL CHLORIDE	5.0	6100 U	UG/KG
O-XYLENE	5.0	19000 J	UG/KG
M+P-XYLENE	5.0	33000 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	118	%
TOLUENE-D8	(75 - 128 %)	113	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-2

Date Sampled : 12/13/07 09:01 **Order #:** 1057919 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 51.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 2520.00			Dry Weight
ACETONE	20	3300 J	UG/KG
BENZENE	5.0	7000 J	UG/KG
BROMOCHLOROMETHANE	5.0	25000 U	UG/KG
BROMODICHLOROMETHANE	5.0	25000 U	UG/KG
BROMOFORM	5.0	25000 U	UG/KG
BROMOMETHANE	5.0	25000 U	UG/KG
2-BUTANONE (MEK)	10	49000 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	25000 U	UG/KG
CARBON DISULFIDE	10	49000 U	UG/KG
CARBON TETRACHLORIDE	5.0	25000 U	UG/KG
CHLOROBENZENE	5.0	600000 D	UG/KG
CHLOROETHANE	10	49000 U	UG/KG
CHLOROFORM	5.0	25000 U	UG/KG
CHLOROMETHANE	5.0	25000 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	25000 U	UG/KG
CYCLOHEXANE	5.0	25000 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	25000 U	UG/KG
1,2-DIBROMOETHANE	5.0	25000 U	UG/KG
1,3-DICHLOROBENZENE	5.0	1200 J	UG/KG
1,4-DICHLOROBENZENE	5.0	9600 J	UG/KG
1,2-DICHLOROBENZENE	5.0	25000 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	25000 U	UG/KG
1,1-DICHLOROETHANE	5.0	25000 U	UG/KG
1,2-DICHLOROETHANE	5.0	25000 U	UG/KG
1,1-DICHLOROETHENE	5.0	25000 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	25000 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	25000 U	UG/KG
1,2-DICHLOROPROPANE	5.0	25000 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	25000 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	25000 U	UG/KG
1,4-DIOXANE	100	490000 U	UG/KG
ETHYLBENZENE	5.0	3500 J	UG/KG
2-HEXANONE	10	49000 U	UG/KG
ISOPROPYLBENZENE	5.0	1400 J	UG/KG
METHYL ACETATE	10	49000 U	UG/KG
METHYLCYCLOHEXANE	5.0	25000 U	UG/KG
METHYLENE CHLORIDE	5.0	1400 JB	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	49000 U	UG/KG
STYRENE	5.0	25000 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	25000 U	UG/KG
TETRACHLOROETHENE	5.0	25000 U	UG/KG
TOLUENE	5.0	25000 U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	25000 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	25000 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-F-2

Date Sampled : 12/13/07 09:01 **Order #:** 1057919 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 51.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/20/07			
ANALYTICAL DILUTION: 2520.00			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	25000 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	25000 U	UG/KG
TRICHLOROETHENE	5.0	25000 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	25000 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	25000 U	UG/KG
VINYL CHLORIDE	5.0	25000 U	UG/KG
O-XYLENE	5.0	16000 J	UG/KG
M+P-XYLENE	5.0	31000	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(60 - 135 %)	116	%
TOLUENE-D8	(75 - 128 %)	116	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-G-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057920 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 56.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/21/07			
ANALYTICAL DILUTION: 1.14			Dry Weight
ACETONE	20	270	UG/KG
BENZENE	5.0	1.3 J	UG/KG
BROMOCHLOROMETHANE	5.0	10 U	UG/KG
BROMODICHLOROMETHANE	5.0	10 U	UG/KG
BROMOFORM	5.0	10 U	UG/KG
BROMOMETHANE	5.0	10 U	UG/KG
2-BUTANONE (MEK)	10	69	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	10 U	UG/KG
CARBON DISULFIDE	10	4.1 J	UG/KG
CARBON TETRACHLORIDE	5.0	10 U	UG/KG
CHLOROBENZENE	5.0	18	UG/KG
CHLOROETHANE	10	20 U	UG/KG
CHLOROFORM	5.0	10 U	UG/KG
CHLOROMETHANE	5.0	10 UJ	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	10 U	UG/KG
CYCLOHEXANE	5.0	3.0 J	UG/KG
DIBROMOCHLOROMETHANE	5.0	10 U	UG/KG
1,2-DIBROMOETHANE	5.0	10 U	UG/KG
1,3-DICHLOROBENZENE	5.0	10 U	UG/KG
1,4-DICHLOROBENZENE	5.0	10 U	UG/KG
1,2-DICHLOROBENZENE	5.0	10 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHANE	5.0	10 U	UG/KG
1,2-DICHLOROETHANE	5.0	10 U	UG/KG
1,1-DICHLOROETHENE	5.0	10 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	10 U	UG/KG
1,2-DICHLOROPROPANE	5.0	10 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	10 U	UG/KG
1,4-DIOXANE	100	810 ~~200~~ UJ	UG/KG
ETHYLBENZENE	5.0	10 U	UG/KG
2-HEXANONE	10	20 U	UG/KG
ISOPROPYLBENZENE	5.0	10 U	UG/KG
METHYL ACETATE	10	3.4 J	UG/KG
METHYLCYCLOHEXANE	5.0	3.0 J	UG/KG
METHYLENE CHLORIDE	5.0	10 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	20 U	UG/KG
STYRENE	5.0	10 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	10 U	UG/KG
TETRACHLOROETHENE	5.0	10 U	UG/KG
TOLUENE	5.0	10 ~~2.0 J~~ U	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	10 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	10 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-G-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057920 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 56.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/21/07			
ANALYTICAL DILUTION: 1.14			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	10 U	UG/KG
TRICHLOROETHENE	5.0	10 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	10 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	10 U	UG/KG
VINYL CHLORIDE	5.0	10 U	UG/KG
O-XYLENE	5.0	10 U	UG/KG
M+P-XYLENE	5.0	2.3 J	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	103	%
TOLUENE-D8	(75 - 128 %)	99	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-H-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057921 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 77.8

DATE ANALYZED : 12/18/07
ANALYTICAL DILUTION: 0.95

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20	~~18 J~~ 24 UJ	UG/KG
BENZENE	5.0	6.1 UJ	UG/KG
BROMOCHLOROMETHANE	5.0	6.1 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.1 U	UG/KG
BROMOFORM	5.0	6.1 U	UG/KG
BROMOMETHANE	5.0	6.1 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	6.1 U	UG/KG
CARBON DISULFIDE	10	0.42 J	UG/KG
CARBON TETRACHLORIDE	5.0	6.1 UJ	UG/KG
CHLOROBENZENE	5.0	2.8 J	UG/KG
CHLOROETHANE	10	12 UJ	UG/KG
CHLOROFORM	5.0	6.1 UJ	UG/KG
CHLOROMETHANE	5.0	6.1 UJ	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	~~6.1 U~~ R	UG/KG
CYCLOHEXANE	5.0	6.1 UJ	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.1 U	UG/KG
1,2-DIBROMOETHANE	5.0	6.1 U	UG/KG
1,3-DICHLOROBENZENE	5.0	~~6.1 U~~ R	UG/KG
1,4-DICHLOROBENZENE	5.0	~~6.1 U~~ R	UG/KG
1,2-DICHLOROBENZENE	5.0	~~6.1 U~~ R	UG/KG
DICHLORODIFLUOROMETHANE	5.0	6.1 UJ	UG/KG
1,1-DICHLOROETHANE	5.0	6.1 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.1 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.1 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.1 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.1 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.1 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.1 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.1 U	UG/KG
1,4-DIOXANE	100	490 ~~120~~ UJ	UG/KG
ETHYLBENZENE	5.0	6.1 UJ	UG/KG
2-HEXANONE	10	12 U	UG/KG
ISOPROPYLBENZENE	5.0	6.1 U	UG/KG
METHYL ACETATE	10	12 U	UG/KG
METHYLCYCLOHEXANE	5.0	6.1 U	UG/KG
METHYLENE CHLORIDE	5.0	6.1 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	6.1 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	~~6.1 U~~ R	UG/KG
TETRACHLOROETHENE	5.0	6.1 UJ	UG/KG
TOLUENE	5.0	6.1 UJ	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	~~6.1 U~~ R	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	~~6.1 U~~ R	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-H-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057921 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 77.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 0.95			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	6.1 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.1 U	UG/KG
TRICHLOROETHENE	5.0	6.1 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	6.1 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	6.1 U	UG/KG
VINYL CHLORIDE	5.0	6.1 U	UG/KG
O-XYLENE	5.0	6.1 U	UG/KG
M+P-XYLENE	5.0	6.1 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	42 *	%
TOLUENE-D8	(75 - 128 %)	129 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-H-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057921 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 77.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 0.79			Dry Weight
ACETONE	20	72	UG/KG
BENZENE	5.0	5.1 U	UG/KG
BROMOCHLOROMETHANE	5.0	5.1 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.1 U	UG/KG
BROMOFORM	5.0	5.1 U	UG/KG
BROMOMETHANE	5.0	5.1 U	UG/KG
2-BUTANONE (MEK)	10	3.3 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.1 U	UG/KG
CARBON DISULFIDE	10	1.8 J	UG/KG
CARBON TETRACHLORIDE	5.0	5.1 U	UG/KG
CHLOROBENZENE	5.0	3.5 J	UG/KG
CHLOROETHANE	10	10 U	UG/KG
CHLOROFORM	5.0	5.1 U	UG/KG
CHLOROMETHANE	5.0	5.1 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.1 U	UG/KG
CYCLOHEXANE	5.0	5.1 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.1 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.1 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.1 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.1 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.1 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.1 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.1 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.1 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.1 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.1 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.1 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.1 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.1 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.1 U	UG/KG
1,4-DIOXANE	100	100 U	UG/KG
ETHYLBENZENE	5.0	5.1 U	UG/KG
2-HEXANONE	10	10 U	UG/KG
ISOPROPYLBENZENE	5.0	5.1 U	UG/KG
METHYL ACETATE	10	10 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.1 U	UG/KG
METHYLENE CHLORIDE	5.0	5.1 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/KG
STYRENE	5.0	5.1 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.1 U	UG/KG
TETRACHLOROETHENE	5.0	5.1 U	UG/KG
TOLUENE	5.0	1.5 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.1 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.1 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-H-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057921 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 77.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 0.79			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.1 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.1 U	UG/KG
TRICHLOROETHENE	5.0	5.1 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.1 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.1 U	UG/KG
VINYL CHLORIDE	5.0	5.1 U	UG/KG
O-XYLENE	5.0	5.1 U	UG/KG
M+P-XYLENE	5.0	5.1 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	35 *	%
TOLUENE-D8	(75 - 128 %)	192 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	230 *	%

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-I-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057922 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 75.9

DATE ANALYZED : 12/18/07
ANALYTICAL DILUTION: 0.85

ANALYTE	PQL	RESULT	UNITS
			Dry Weight
ACETONE	20 22	96 J	UG/KG
BENZENE	5.0	3.2 J	UG/KG
BROMOCHLOROMETHANE	5.0	~~5.6 U~~ R	UG/KG
BROMODICHLOROMETHANE	5.0	5.6 U	UG/KG
BROMOFORM	5.0	5.6 U	UG/KG
BROMOMETHANE	5.0	5.6 U	UG/KG
2-BUTANONE (MEK)	10	3.8 J	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	~~5.6 U~~ R	UG/KG
CARBON DISULFIDE	10	2.0 J	UG/KG
CARBON TETRACHLORIDE	5.0	~~5.6 U~~ R	UG/KG
CHLOROBENZENE	5.0	42 J	UG/KG
CHLOROETHANE	10	~~11 U~~ R	UG/KG
CHLOROFORM	5.0	5.6 U	UG/KG
CHLOROMETHANE	5.0	5.6 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.6 U	UG/KG
CYCLOHEXANE	5.0	5.6 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.6 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.6 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.6 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.6 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.6 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.6 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.6 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.6 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.6 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.6 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.6 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.6 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.6 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.6 U	UG/KG
1,4-DIOXANE	100	110 U	UG/KG
ETHYLBENZENE	5.0	5.6 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
ISOPROPYLBENZENE	5.0	5.6 U	UG/KG
METHYL ACETATE	10	11 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.6 U	UG/KG
METHYLENE CHLORIDE	5.0	5.6 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.6 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.6 U	UG/KG
TETRACHLOROETHENE	5.0	~~5.6 U~~	UG/KG
TOLUENE	5.0 5.6	~~2.4 J~~ UJ	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	~~5.6 U~~ R	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	~~5.6 U~~ R	UG/KG

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-I-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057922 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 75.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/18/07			
ANALYTICAL DILUTION: 0.85			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.6 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.6 U	UG/KG
TRICHLOROETHENE	5.0	5.6 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.6 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.6 U	UG/KG
VINYL CHLORIDE	5.0	5.6 U	UG/KG
O-XYLENE	5.0	5.6 U	UG/KG
M+P-XYLENE	5.0	5.6 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	37 *	%
TOLUENE-D8	(75 - 128 %)	178 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	227 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-I-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057922 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 75.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.87			Dry Weight
ACETONE	20	70	UG/KG
BENZENE	5.0	1.7 J	UG/KG
BROMOCHLOROMETHANE	5.0	5.7 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.7 U	UG/KG
BROMOFORM	5.0	5.7 U	UG/KG
BROMOMETHANE	5.0	5.7 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
METHYL-TERT-BUTYL ETHER	5.0	5.7 U	UG/KG
CARBON DISULFIDE	10	1.7 J	UG/KG
CARBON TETRACHLORIDE	5.0	5.7 U	UG/KG
CHLOROBENZENE	5.0	25	UG/KG
CHLOROETHANE	10	11 U	UG/KG
CHLOROFORM	5.0	5.7 U	UG/KG
CHLOROMETHANE	5.0	5.7 U	UG/KG
1,2-DIBROMO-3-CHLOROPROPANE	5.0	5.7 U	UG/KG
CYCLOHEXANE	5.0	5.7 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.7 U	UG/KG
1,2-DIBROMOETHANE	5.0	5.7 U	UG/KG
1,3-DICHLOROBENZENE	5.0	5.7 U	UG/KG
1,4-DICHLOROBENZENE	5.0	5.7 U	UG/KG
1,2-DICHLOROBENZENE	5.0	5.7 U	UG/KG
DICHLORODIFLUOROMETHANE	5.0	5.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.7 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.7 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.7 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.7 U	UG/KG
1,4-DIOXANE	100	110 U	UG/KG
ETHYLBENZENE	5.0	5.7 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
ISOPROPYLBENZENE	5.0	5.7 U	UG/KG
METHYL ACETATE	10	11 U	UG/KG
METHYLCYCLOHEXANE	5.0	5.7 U	UG/KG
METHYLENE CHLORIDE	5.0	5.7 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.7 U	UG/KG
TETRACHLOROETHENE	5.0	5.7 U	UG/KG
TOLUENE	5.0	1.2 J	UG/KG
1,2,4-TRICHLOROBENZENE	5.0	5.7 U	UG/KG
1,2,3-TRICHLOROBENZENE	5.0	5.7 U	UG/KG

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/18/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD115N-SC-I-1

Date Sampled : 12/13/07 09:01 **Order #:** 1057922 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 12/14/07 **Submission #:** R2741330 **Percent Solid:** 75.9

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 0.87			Dry Weight
1,1,1-TRICHLOROETHANE	5.0	5.7 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.7 U	UG/KG
TRICHLOROETHENE	5.0	5.7 U	UG/KG
TRICHLOROFLUOROMETHANE	5.0	5.7 U	UG/KG
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	5.0	5.7 U	UG/KG
VINYL CHLORIDE	5.0	5.7 U	UG/KG
O-XYLENE	5.0	5.7 U	UG/KG
M+P-XYLENE	5.0	5.7 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(50 - 135 %)	35 *	%
TOLUENE-D8	(75 - 128 %)	158 *	%
DIBROMOFLUOROMETHANE	(58 - 133 %)	192 *	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB7-SC-B-3

Date Sampled : 12/13/07 09:50 **Order #:** 1058170 **Sample Matrix:** WATER
Date Received: 12/14/07 **Submission #:** R2741330 **Analytical Run** 155339

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
ACETONE	10	1.3 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 UJ	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 0.22 ~~JB~~ U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	0.81 J	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB7-SC-B-3

Date Sampled : 12/13/07 09:50 **Order #:** 1058170 **Sample Matrix:** WATER
Date Received: 12/14/07 **Submission #:** R2741330 **Analytical Run** 155339

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	115	%
TOLUENE-D8	(88 - 124 %)	113	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	103	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB8-SC-3

Date Sampled : 12/13/07 11:55 **Order #:** 1058171 **Sample Matrix:** WATER
Date Received: 12/14/07 **Submission #:** R2741330 **Analytical Run** 155339

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	1.4 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 UJ	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 ~~0.24 JB~~ U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	0.73 J	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : 04SD-EB8-SC-3

Date Sampled : 12/13/07 11:55 **Order #:** 1058171 **Sample Matrix:** WATER
Date Received: 12/14/07 **Submission #:** R2741330 **Analytical Run** 155339

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	117	%
TOLUENE-D8	(88 - 124 %)	113	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 3

Date Sampled : 12/13/07 09:45 **Order #:** 1062505 **Sample Matrix:** WATER
Date Received: 12/14/07 **Submission #:** R2741330 **Analytical Run** 155339

DATE ANALYZED : 12/19/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	0.95 J	UG/L
BENZENE	1.0	1.0 U	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 UJ	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100 U~~ UJ	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 ~~0.23 JB~~ U	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/17/08

ENSR International
Project Reference: BASF - RENSSELAER - DEEP SUB-SURFICIAL
Client Sample ID : TRIP BLANK 3

Date Sampled : 12/13/07 09:45 **Order #:** 1062505 **Sample Matrix:** WATER
Date Received: 12/14/07 **Submission #:** R2741330 **Analytical Run** 155339

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 12/19/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	115	%
TOLUENE-D8	(88 - 124 %)	113	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	103	%

Prepared for:
BASF Corporation
Florham Park, New Jersey

Appendix C, Part 2

Data Validation Memoranda and Forms – Pore Water

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Memorandum

Date: January 31, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation, VOC Analysis
Surface Sediment Porewater Sampling, December 2007
BASF Rensselaer Site, NY
CAS Submission # R2740994

Distribution: L. Herberich/Westford 00760-171-408 File
BR023voclms.doc

SUMMARY

Limited validation was performed on the data for 10 porewater samples and two trip blanks analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by SW-846 method 8260B. The sediment samples were collected at the BASF site in Rensselaer, NY, on December 13-15, 2007 and were submitted to Columbia Analytical Services (CAS) in Rochester, NY for analysis. CAS Rochester sub-contracted the sediment samples to their facility in Kelso, WA for porewater extraction. CAS-Kelso shipped the porewater extractions back to CAS-Rochester for analysis. CAS processed the samples and reported the results under sample submission # R2740994.

The analytical data were evaluated with reference to the USEPA Region 2 Standard Operating Procedure for the Validating of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry, SW-846 Method 8260B (SOP No. HW-24 Revision 2, October 2006), the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical method.

In general, the data appear valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as undetected (U) due to laboratory blank contamination. All positive and nondetect results in all samples were qualified as estimated (J, UJ, respectively) due to cooler temperature exceedance (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
03PW032N-WC-A-1	03PW094N-WC-A-1
03PW087N-WC-A-1	03PW087N-WC-A-2 (Field duplicate of 03PW087N-WC-A-1)
03PW085N-WC-A-1	03PW006U-WC-A-1

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Sample IDs	
03PW027U-WC-A-1	03PW097N-WC-A-1
03PW069C-WC-A-1	03PW126C-WC-A-1
Trip Blank 1	Trip Blank 2

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) tuning
- Calibrations
- Laboratory blanks/equipment blanks/trip blanks
- Surrogate spike recoveries
- Matrix spike (MS)/matrix spike duplicate (MSD) results
- Laboratory control sample (LCS) results
- Field duplicate results
- Internal standard recoveries
- Sample quantitation/reporting limits

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancies were noted.

- The COC did not indicate VOC analysis for sample 03PW027U-WC-A-1. A revised COC was issued to the laboratory indicating the 8260 analysis.

- Sample 03PW133W-WC-A-1 was listed on the COC for VOC analysis. Insufficient porewater sample was extracted from the sediment sample to complete this analysis. The VOC analysis was therefore canceled.

Holding Times/Sample Preservation

The temperature (12°C) of the cooler containing the porewater extracts upon receipt CAS-Rochester exceeded the QC acceptance criteria of 4± 2°C. Due to a shipping problem, the receipt of the cooler at CAS-Rochester from CAS-Kelso was delayed. All positive and nondetect results in all samples were therefore qualified as estimated (J, UJ, respectively).

All samples were preserved to a pH of <2; and all samples were analyzed within the method-specified holding time.

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GC/MS Tuning

The frequency and abundance of the bromofluorobenzene (BFB) tunes were within the QC acceptance criteria. All samples were analyzed within 12 hours from the BFB tunes.

Calibrations

The percent relative standard deviations (%RSDs), correlation coefficients (r), and/or relative response factors (RRFs) of all target compounds were within the QC acceptance criteria in the initial calibrations (IC); and the RRFs and percent differences and/or percent drifts (%Ds) of all target compounds were within the QC acceptance criteria in the continuing calibrations (CC) with the following exceptions.

Calibration (Instrument ID)	Compound	RRF	Actions (Detects/Nondetects)
IC 11/10/07 (MSVOA10)	1,4-Dioxane	0.002	J/UJ*
Associated samples: All samples in this data set.			
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.			

Calibration (Instrument ID)	Compound	RRF	%D	Actions (Detects/Nondetects)
CC 11/27/07 (MSVOA10)	1,4-Dioxane	0.002	ok	J/UJ*
Associated samples: All samples except 03PW085N-WC-A-1				
CC 11/28/07 (MSVOA10)	1,4-Dioxane	0.002	ok	J/UJ*
	Bromomethane	ok	21.9	J/UJ
Associated samples: 03PW085N-WC-A-1				
Note*: Rather than qualify results as rejected (R), as stipulated in the Region II guidance, professional judgment was used to qualify the results as estimated (UJ) and to raise the reporting limit in all associated samples for 1,4-dioxane to the level spiked in the laboratory control sample (LCS) (400 ppb) since the recovery for this compound was within the QC acceptance criteria for all LCS analyses. The reporting limits were further corrected for the sample-specific preparation factors.				

Laboratory Blanks/Equipment Blanks/Trip Blanks

Equipment blanks were not collected with this sample set. No validation action was taken on this basis as this was consistent with the QAPP.

Several target compounds were detected in the laboratory method blanks and trip blanks associated with the samples in this data set. The presence of blank contamination indicates that false positives may exist for these compounds in the associated samples. The following table summarizes the highest blank contamination detected and the associated samples. Note that contaminants detected in trip blank samples were negated due to the method blank actions.

Blank type (lab ID)	Compound	Concentration (µg/L)
Method (MET BLK1)	Acetone	0.79 J
	Methylene chloride	0.24 J

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Blank type (lab ID)	Compound	Concentration (µg/L)
Associated samples: All samples in this data set except 03PW085N-WC-A-1.		
Method (MET BLK2)	Acetone	0.61 J
	Carbon tetrachloride	0.29 J
	Chloroform	0.39 J
	Methylene chloride	0.25 J
Associated sample: 03PW085N-WC-A-1		

Sample results were qualified as follows:

For common lab contaminants (methylene chloride, acetone, 2-butanone):

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ 2x RL	≤ RL	Report sample RL value with a U
		≥ RL and ≤ 4x the RL	Report the sample result with a U**
		≥ 4x the RL	No qualifications
	> 2x RL	< 2x RL	Report sample RL value with a U
		≥ 2x RL and < blank contamination	Report the sample result with a U
		≥ 2x RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			

For all other compounds:

Blank type	Blank result	Sample result	Action for samples
Method, Storage, Field, Trip, or Instrument*	Detects	Not detected	No qualification
	≤ RL	< RL	Report sample RL value with a U
		≥ RL and ≤ 2x the RL	Report the sample result with a U**
		≥ 2x the RL	No qualifications
	> RL	< RL	Report sample RL value with a U
		≥ RL and < blank contamination	Report the sample result with a U
		≥ RL and ≥ blank contamination	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
	TIC detected	Detects	If the result is ≤2x blank result, report the sample result U.** If the result is > 2x blank result, no qualification is required.**
* Qualifications based on instrument blank results affect only the sample analyzed immediately after the sample that has target compounds that exceed the calibration range or non-target compounds that exceed 100 µg/L.			
**Based on ENSR professional judgment			

RL (Reporting Limit) is equivalent to the lowest calibration standard

Surrogate Spike Recoveries

The surrogate percent recoveries (%Rs) were within the QC acceptance criteria in all sample analyses.

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MS/MSD Results

MS/MSD analyses were requested on sample 03PW097N-WC-A-1. As noted in the case narrative, insufficient porewater sample volume was extracted from the sediment sample to perform the MS/MSD analysis on this sample. No validation action was taken on this basis.

LCS Results

All target compounds were spiked for the LCS analyses. The %Rs of all spiked compounds were within the QC acceptance criteria for all LCS analyses with the following exception.

Compound	LCS %R	QC Limits %R	Actions (Detects/Nondetects)
Dichlorodifluoromethane	133	70-130	Estimate (J)/Accept result
Associated samples: All samples in this data set except 03PW085N-WC-A-1.			

Field Duplicate Results

Samples 03PW087N-WC-A-1/03PW087N-WC-A-2 were submitted as the field duplicate pair with this sample set. It should be noted that sample 03PW087N-WC-A-1 was analyzed undiluted and sample 03PW087N-WC-A-2 was analyzed at a 2x dilution (and at a 5x dilution for chlorobenzene) causing slightly higher RLs.

The following table summarizes the RPDs of the detected compounds. The positive results that were >RL for benzene, chlorobenzene, 1,4-dichlorobenzene, and o-xylene in either sample 03PW087N-WC-A-1 or sample 03PW087N-WC-A-2 were qualified as estimated (J) since the RPD criteria was exceeded. It should be noted that the positive result for methylene chloride in field duplicate sample 03PW087N-WC-A-2 was qualified as undetected (U) due to blank actions. The RPD for methylene chloride was therefore not calculable (NC). Precision for methylene chloride was deemed acceptable since one result was not detected and the positive result in sample 03PW087N-WC-A-1 was <5x the RL. The RPD for 1,3-dichlorobenzene and m+p xylene were also NC. Precision for 1,3-dichlorobenzene and m+p xylene were deemed acceptable since one result was <5x the RL and the other result was not detected. Although the RPD of ethylbenzene exceeded the acceptance criteria, both the sample and field duplicate results were qualified by the laboratory as estimated (J) due to quantitation below the RL. Further qualification of the data for ethylbenzene was not required. The RPDs for cyclohexane and 1,2-dichlorobenzene met the acceptance criteria.

Compound	03PW087N-WC-A-1 (µg/L)	03PW087N-WC-A-2 (µg/L)	RPD
Benzene	0.26 J	18	194
Chlorobenzene	180	780	125
Cyclohexane	1.4	1.5 J	7
1,3-Dichlorobenzene	0.28 J	2.0 U	NC
1,4-Dichlorobenzene	1.2	3.9	106
1,2-Dichlorobenzene	0.40 J	0.50 J	11
Ethylbenzene	0.21 J	0.54 J	88

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Compound	03PW087N-WC-A-1 (µg/L)	03PW087N-WC-A-2 (µg/L)	RPD
Methylene chloride	6.4	6.6 U	NC
o-Xylene	0.35 J	2.8	156
m+p-Xylene	1.0 U	1.1 J	NC
Criteria: RPD <30% if both results are >5x RL; RPD criteria doubled if both results <5x RL. RPD criterion doubled, if both sample and duplicate results are <5x RL. Note that the soil RPD criteria was used since the pore water samples were extracted from sediment samples.			

NC-Not calculable due to a nondetected result in the original or duplicate sample.

Internal Standard Recoveries

The internal standard areas and retention times were within the QC acceptance criteria in all sample analyses.

Sample Quantitation/Reporting Limits

The following samples were analyzed at the dilution factor listed in parentheses due to the high concentration of target compounds present in the samples: 03PW094N-WC-A-1 (2x), 03PW087N-WC-A-2 (2x), and 03PW085N-WC-A-1 (50x). RLs and sample results were adjusted accordingly by the laboratory to reflect the dilutions. Samples 03PW094N-WC-A-1 and 03PW087N-WC-A-2 were each re-analyzed at a 5x dilution since the concentration of chlorobenzene exceeded the calibration range in the original 2x dilution analysis. The results were combined during data validation in order to report all results within the calibration range while also reporting the lowest achievable RLs.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW032N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057285 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

DATE ANALYZED : 11/27/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	13 ~~10~~ ~~13~~ UJ	UG/L
BENZENE	1.0	1.0 UJ	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	2.0 J	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 UJ	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	6.8 J	UG/L
CHLOROETHANE	2.0	2.0 UJ	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	0.59 J	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 UJ	UG/L
1,2-DIBROMOETHANE	1.0	1.0 UJ	UG/L
1,3-DICHLOROBENZENE	1.0	0.33 J	UG/L
1,4-DICHLOROBENZENE	1.0	1.4 J	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 UJ	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	4.0 J	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 UJ	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW032N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057285 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U J	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	108	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW094N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057286 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 2.00			
ACETONE	10	20 15 ~~15 J~~ UJ	UG/L
BENZENE	1.0	26 J	UG/L
BROMOCHLOROMETHANE	1.0	2.0 U J	UG/L
BROMODICHLOROMETHANE	1.0	2.0 U	UG/L
BROMOFORM	1.0	2.0 U	UG/L
BROMOMETHANE	2.0	4.0 U	UG/L
2-BUTANONE (MEK)	5.0	2.6 J	UG/L
METHYL-TERT-BUTYL ETHER	1.0	2.0 U J	UG/L
CARBON DISULFIDE	1.0	2.0 U	UG/L
CARBON TETRACHLORIDE	1.0	2.0 U	UG/L
CHLOROBENZENE	1.0	680 ~~660 E~~ J	UG/L
CHLOROETHANE	2.0	4.0 U J	UG/L
CHLOROFORM	1.0	2.0 U	UG/L
CHLOROMETHANE	2.0	4.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	4.0 U	UG/L
CYCLOHEXANE	1.0	1.0 J	UG/L
DIBROMOCHLOROMETHANE	1.0	2.0 U J	UG/L
1,2-DIBROMOETHANE	1.0	2.0 U J	UG/L
1,3-DICHLOROBENZENE	1.0	0.42 J	UG/L
1,4-DICHLOROBENZENE	1.0	2.9 J	UG/L
1,2-DICHLOROBENZENE	1.0	0.70 J	UG/L
DICHLORODIFLUOROMETHANE	1.0	2.0 U J	UG/L
1,1-DICHLOROETHANE	1.0	2.0 U	UG/L
1,2-DICHLOROETHANE	1.0	2.0 U	UG/L
1,1-DICHLOROETHENE	1.0	2.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	2.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	2.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	2.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	2.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	2.0 U	UG/L
1,4-DIOXANE	100	800 ~~200~~ U	UG/L
ETHYLBENZENE	1.0	0.56 J	UG/L
2-HEXANONE	5.0	10 U J	UG/L
ISOPROPYLBENZENE	1.0	2.0 U	UG/L
METHYL ACETATE	10	20 U	UG/L
METHYLCYCLOHEXANE	1.0	0.68 J	UG/L
METHYLENE CHLORIDE	1.0	~~1.8~~ 2.0 ~~1.8 JB~~ UJ	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	10 U J	UG/L
STYRENE	1.0	2.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	2.0 U	UG/L
TETRACHLOROETHENE	1.0	2.0 U	UG/L
TOLUENE	1.0	2.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	2.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	2.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW094N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057286 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 2.00			
1,1,1-TRICHLOROETHANE	1.0	2.0 UJ	UG/L
1,1,2-TRICHLOROETHANE	1.0	2.0 U	UG/L
TRICHLOROETHENE	1.0	2.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	2.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	2.0 U	UG/L
VINYL CHLORIDE	1.0	2.0 U	UG/L
O-XYLENE	1.0	4.8 J	UG/L
M+P-XYLENE	1.0	0.46 J	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	102	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW094N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057286 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/28/07			
ANALYTICAL DILUTION: 5.00			
ACETONE	10	13 JB	UG/L
BENZENE	1.0	28	UG/L
BROMOCHLOROMETHANE	1.0	5.0 U	UG/L
BROMODICHLOROMETHANE	1.0	5.0 U	UG/L
BROMOFORM	1.0	5.0 U	UG/L
BROMOMETHANE	2.0	10 U	UG/L
2-BUTANONE (MEK)	5.0	2.4 J	UG/L
METHYL-TERT-BUTYL ETHER	1.0	5.0 U	UG/L
CARBON DISULFIDE	1.0	5.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.2 JB	UG/L
CHLOROBENZENE	1.0	680 D	UG/L
CHLOROETHANE	2.0	10 U	UG/L
CHLOROFORM	1.0	1.7 JB	UG/L
CHLOROMETHANE	2.0	10 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	10 U	UG/L
CYCLOHEXANE	1.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	5.0 U	UG/L
1,2-DIBROMOETHANE	1.0	5.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	3.5 J	UG/L
1,2-DICHLOROBENZENE	1.0	5.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	5.0 U	UG/L
1,1-DICHLOROETHANE	1.0	5.0 U	UG/L
1,2-DICHLOROETHANE	1.0	5.0 U	UG/L
1,1-DICHLOROETHENE	1.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	5.0 U	UG/L
1,4-DIOXANE	100	500 U	UG/L
ETHYLBENZENE	1.0	5.0 U	UG/L
2-HEXANONE	5.0	25 U	UG/L
ISOPROPYLBENZENE	1.0	5.0 U	UG/L
METHYL ACETATE	10	50 U	UG/L
METHYLCYCLOHEXANE	1.0	5.0 U	UG/L
METHYLENE CHLORIDE	1.0	7.3	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	25 U	UG/L
STYRENE	1.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	5.0 U	UG/L
TETRACHLOROETHENE	1.0	5.0 U	UG/L
TOLUENE	1.0	5.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	5.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	5.0 U	UG/L

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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW094N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057286 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/28/07			
ANALYTICAL DILUTION: 5.00			
1,1,1-TRICHLOROETHANE	1.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	5.0 U	UG/L
TRICHLOROETHENE	1.0	5.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	5.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	5.0 U	UG/L
O-XYLENE	1.0	5.2	UG/L
M+P-XYLENE	1.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	102	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057287 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

DATE ANALYZED : 11/27/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 ~~4.7 J~~ UJ	UG/L
BENZENE	1.0	0.26 J	UG/L
BROMOCHLOROMETHANE	1.0	1.0 UJ	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	180 J	UG/L
CHLOROETHANE	2.0	2.0 UJ	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.4 J	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 UJ	UG/L
1,2-DIBROMOETHANE	1.0	1.0 UJ	UG/L
1,3-DICHLOROBENZENE	1.0	0.28 J	UG/L
1,4-DICHLOROBENZENE	1.0	1.2 J	UG/L
1,2-DICHLOROBENZENE	1.0	0.40 J	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 UJ	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U	UG/L
ETHYLBENZENE	1.0	0.21 J	UG/L
2-HEXANONE	5.0	5.0 UJ	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	6.4 J	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 UJ	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057287 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U J	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U J	UG/L
O-XYLENE	1.0	0.35 J	UG/L
M+P-XYLENE	1.0	1.0 U J	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	109	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-2

Date Sampled : 11/20/07 **Order #:** 1057288 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

DATE ANALYZED : 11/27/07
ANALYTICAL DILUTION: 2.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	20 ~~8.8 J~~ UJ	UG/L
BENZENE	1.0	18 J	UG/L
BROMOCHLOROMETHANE	1.0	2.0 U J	UG/L
BROMODICHLOROMETHANE	1.0	2.0 U	UG/L
BROMOFORM	1.0	2.0 U	UG/L
BROMOMETHANE	2.0	4.0 U	UG/L
2-BUTANONE (MEK)	5.0	10 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	2.0 U	UG/L
CARBON DISULFIDE	1.0	2.0 U	UG/L
CARBON TETRACHLORIDE	1.0	2.0 U	UG/L
CHLOROBENZENE	1.0	780 ~~730 E~~ J	UG/L
CHLOROETHANE	2.0	4.0 U J	UG/L
CHLOROFORM	1.0	2.0 U	UG/L
CHLOROMETHANE	2.0	4.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	4.0 U	UG/L
CYCLOHEXANE	1.0	1.5 J	UG/L
DIBROMOCHLOROMETHANE	1.0	2.0 U J	UG/L
1,2-DIBROMOETHANE	1.0	2.0 U J	UG/L
1,3-DICHLOROBENZENE	1.0	2.0 U J	UG/L
1,4-DICHLOROBENZENE	1.0	3.9 J	UG/L
1,2-DICHLOROBENZENE	1.0	0.50 J	UG/L
DICHLORODIFLUOROMETHANE	1.0	2.0 U J	UG/L
1,1-DICHLOROETHANE	1.0	2.0 U	UG/L
1,2-DICHLOROETHANE	1.0	2.0 U	UG/L
1,1-DICHLOROETHENE	1.0	2.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	2.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	2.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	2.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	2.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	2.0 U	UG/L
1,4-DIOXANE	100	800 ~~200~~ U	UG/L
ETHYLBENZENE	1.0	0.54 J	UG/L
2-HEXANONE	5.0	10 U J	UG/L
ISOPROPYLBENZENE	1.0	2.0 U	UG/L
METHYL ACETATE	10	20 U	UG/L
METHYLCYCLOHEXANE	1.0	2.0 U	UG/L
METHYLENE CHLORIDE	1.0	6.6 UJ	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	10 U J	UG/L
STYRENE	1.0	2.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	2.0 U	UG/L
TETRACHLOROETHENE	1.0	2.0 U	UG/L
TOLUENE	1.0	2.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	2.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	2.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-2

Date Sampled : 11/20/07 **Order #:** 1057288 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 2.00			
1,1,1-TRICHLOROETHANE	1.0	2.0 U J	UG/L
1,1,2-TRICHLOROETHANE	1.0	2.0 U	UG/L
TRICHLOROETHENE	1.0	2.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	2.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	2.0 U	UG/L
VINYL CHLORIDE	1.0	2.0 U	UG/L
O-XYLENE	1.0	2.8 J	UG/L
M+P-XYLENE	1.0	1.1 J	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	102	%
TOLUENE-D8	(88 - 124 %)	109	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	104	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-2

Date Sampled : 11/20/07 **Order #:** 1057288 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/28/07			
ANALYTICAL DILUTION: 5.00			
ACETONE	10	9.8 JB	UG/L
BENZENE	1.0	19	UG/L
BROMOCHLOROMETHANE	1.0	5.0 U	UG/L
BROMODICHLOROMETHANE	1.0	5.0 U	UG/L
BROMOFORM	1.0	5.0 U	UG/L
BROMOMETHANE	2.0	10 U	UG/L
2-BUTANONE (MEK)	5.0	25 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	5.0 U	UG/L
CARBON DISULFIDE	1.0	5.0 U	UG/L
CARBON TETRACHLORIDE	1.0	5.0 U	UG/L
CHLOROBENZENE	1.0	780 D	UG/L
CHLOROETHANE	2.0	10 U	UG/L
CHLOROFORM	1.0	1.4 JB	UG/L
CHLOROMETHANE	2.0	10 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	10 U	UG/L
CYCLOHEXANE	1.0	1.8 J	UG/L
DIBROMOCHLOROMETHANE	1.0	5.0 U	UG/L
1,2-DIBROMOETHANE	1.0	5.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	5.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	4.2 J	UG/L
1,2-DICHLOROBENZENE	1.0	5.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	5.0 U	UG/L
1,1-DICHLOROETHANE	1.0	5.0 U	UG/L
1,2-DICHLOROETHANE	1.0	5.0 U	UG/L
1,1-DICHLOROETHENE	1.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	5.0 U	UG/L
1,4-DIOXANE	100	500 U	UG/L
ETHYLBENZENE	1.0	5.0 U	UG/L
2-HEXANONE	5.0	25 U	UG/L
ISOPROPYLBENZENE	1.0	5.0 U	UG/L
METHYL ACETATE	10	50 U	UG/L
METHYLCYCLOHEXANE	1.0	5.0 U	UG/L
METHYLENE CHLORIDE	1.0	5.4 JB	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	25 U	UG/L
STYRENE	1.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	5.0 U	UG/L
TETRACHLOROETHENE	1.0	5.0 U	UG/L
TOLUENE	1.0	5.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	5.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	5.0 U	UG/L

DUP to Report

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-2

Date Sampled : 11/20/07 **Order #:** 1057288 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/28/07			
ANALYTICAL DILUTION: 5.00			
1,1,1-TRICHLOROETHANE	1.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	5.0 U	UG/L
TRICHLOROETHENE	1.0	5.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	5.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	5.0 U	UG/L
VINYL CHLORIDE	1.0	5.0 U	UG/L
O-XYLENE	1.0	2.6 J	UG/L
M+P-XYLENE	1.0	1.1 J	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	102	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	107	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW085N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057289 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

DATE ANALYZED : 11/28/07
ANALYTICAL DILUTION: 50.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	82 ~~50~~ ~~82 JB~~ UJ	UG/L
BENZENE	1.0	4200 J	UG/L
BROMOCHLOROMETHANE	1.0	50 UJ	UG/L
BROMODICHLOROMETHANE	1.0	50 U	UG/L
BROMOFORM	1.0	50 U	UG/L
BROMOMETHANE	2.0	100 U	UG/L
2-BUTANONE (MEK)	5.0	250 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	50 U	UG/L
CARBON DISULFIDE	1.0	50 U	UG/L
CARBON TETRACHLORIDE	1.0	50 U	UG/L
CHLOROBENZENE	1.0	1200 J	UG/L
CHLOROETHANE	2.0	100 UJ	UG/L
CHLOROFORM	1.0	50 ~~14 JB~~ UJ	UG/L
CHLOROMETHANE	2.0	100 UJ	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	100 U	UG/L
CYCLOHEXANE	1.0	50 U	UG/L
DIBROMOCHLOROMETHANE	1.0	50 U	UG/L
1,2-DIBROMOETHANE	1.0	50 U	UG/L
1,3-DICHLOROBENZENE	1.0	50 U	UG/L
1,4-DICHLOROBENZENE	1.0	11 J	UG/L
1,2-DICHLOROBENZENE	1.0	50 UJ	UG/L
DICHLORODIFLUOROMETHANE	1.0	50 U	UG/L
1,1-DICHLOROETHANE	1.0	50 U	UG/L
1,2-DICHLOROETHANE	1.0	50 U	UG/L
1,1-DICHLOROETHENE	1.0	50 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	50 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	50 U	UG/L
1,2-DICHLOROPROPANE	1.0	50 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	50 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	50 U	UG/L
1,4-DIOXANE	100	20000 ~~5000~~ U	UG/L
ETHYLBENZENE	1.0	50 U	UG/L
2-HEXANONE	5.0	250 U	UG/L
ISOPROPYLBENZENE	1.0	50 U	UG/L
METHYL ACETATE	10	500 U	UG/L
METHYLCYCLOHEXANE	1.0	50 U	UG/L
METHYLENE CHLORIDE	1.0	50 ~~18 J~~ UJ	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	250 UJ	UG/L
STYRENE	1.0	50 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	50 U	UG/L
TETRACHLOROETHENE	1.0	50 U	UG/L
TOLUENE	1.0	50 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	50 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	50 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW085N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057289 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154623

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/28/07			
ANALYTICAL DILUTION: 50.00			
1,1,1-TRICHLOROETHANE	1.0	50 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	50 U	UG/L
TRICHLOROETHENE	1.0	50 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	50 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	50 U	UG/L
VINYL CHLORIDE	1.0	50 U	UG/L
O-XYLENE	1.0	15 J	UG/L
M+P-XYLENE	1.0	44 J	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW006U-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057290 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
ACETONE	10	10 ~~1.7 JB~~ UJ	UG/L
BENZENE	1.0	1.0 U J	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.3 J	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U J	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 ~~0.99 JB~~ UJ	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U J	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW006U-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057290 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U J	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW027U-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057292 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
ACETONE	10	10 ~~3.6 JB~~ UJ	UG/L
BENZENE	1.0	1.0 UJ	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	0.70 J	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 UJ	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	0.45 J	UG/L
CHLOROETHANE	2.0	2.0 UJ	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	0.47 J	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 UJ	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.0 ~~B~~ UJ	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 UJ	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW027U-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057292 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : TRIP BLANK 2

Date Sampled : 11/20/07 **Order #:** 1057293 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

DATE ANALYZED : 11/27/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 ~~0.86 JB~~ UJ	UG/L
BENZENE	1.0	1.0 U J	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U	UG/L
ETHYLBENZENE	1.0	1.0 U J	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	MW 1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.7 ~~1.0~~ ~~1.7~~ UJ	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U J	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : TRIP BLANK 2

Date Sampled : 11/20/07 **Order #:** 1057293 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U J	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U J	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	100	%
TOLUENE-D8	(88 - 124 %)	109	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW097N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057295 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

DATE ANALYZED : 11/27/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 UJ	UG/L
BENZENE	1.0	1.0 UJ	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	0.72 J	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 UJ	UG/L
CARBON DISULFIDE	1.0	0.22 J	UG/L
CARBON TETRACHLORIDE	1.0	1.0 UJ	UG/L
CHLOROBENZENE	1.0	1.1 J	UG/L
CHLOROETHANE	2.0	2.0 UJ	UG/L
CHLOROFORM	1.0	1.0 UJ	UG/L
CHLOROMETHANE	2.0	0.23 J	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 UJ	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	14 J	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 UJ	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW097N-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057295 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 UJ	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	100	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW069C-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057296 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

DATE ANALYZED : 11/27/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 ~~9.2 J~~ UJ	UG/L
BENZENE	1.0	1.0 U J	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	1.6 J	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U J	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.9 J	UG/L
CHLOROETHANE	2.0	2.0 U J	UG/L
CHLOROFORM	1.0	1.0 U J	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	0.41 J	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U J	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	3.7 UJ	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U J	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW069C-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057296 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U J	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : TRIP BLANK 1

Date Sampled : 11/20/07 **Order #:** 1057297 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

DATE ANALYZED : 11/27/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 ~~1.1 JB~~ UJ	UG/L
BENZENE	1.0	1.0 U J	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	5.0 U	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.0 U	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	MW 1.0 U	UG/L
METHYLENE CHLORIDE	1.0	1.2 ~~1.0~~ ~~1.2~~ UJ	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U J	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : TRIP BLANK 1

Date Sampled : 11/20/07 **Order #:** 1057297 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U J	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	110	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	105	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW126C-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057301 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

DATE ANALYZED : 11/27/07
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	10	10 ~~7.9 J~~ UJ	UG/L
BENZENE	1.0	1.0 U J	UG/L
BROMOCHLOROMETHANE	1.0	1.0 U	UG/L
BROMODICHLOROMETHANE	1.0	1.0 U	UG/L
BROMOFORM	1.0	1.0 U	UG/L
BROMOMETHANE	2.0	2.0 U	UG/L
2-BUTANONE (MEK)	5.0	0.86 J	UG/L
METHYL-TERT-BUTYL ETHER	1.0	1.0 U J	UG/L
CARBON DISULFIDE	1.0	1.0 U	UG/L
CARBON TETRACHLORIDE	1.0	1.0 U	UG/L
CHLOROBENZENE	1.0	1.0 U	UG/L
CHLOROETHANE	2.0	2.0 U	UG/L
CHLOROFORM	1.0	1.0 U	UG/L
CHLOROMETHANE	2.0	2.0 U	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	2.0	2.0 U	UG/L
CYCLOHEXANE	1.0	1.3 J	UG/L
DIBROMOCHLOROMETHANE	1.0	1.0 U J	UG/L
1,2-DIBROMOETHANE	1.0	1.0 U	UG/L
1,3-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,4-DICHLOROBENZENE	1.0	1.0 U	UG/L
1,2-DICHLOROBENZENE	1.0	1.0 U	UG/L
DICHLORODIFLUOROMETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHANE	1.0	1.0 U	UG/L
1,2-DICHLOROETHANE	1.0	1.0 U	UG/L
1,1-DICHLOROETHENE	1.0	1.0 U	UG/L
CIS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	1.0	1.0 U	UG/L
1,2-DICHLOROPROPANE	1.0	1.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	1.0	1.0 U	UG/L
1,4-DIOXANE	100	400 ~~100~~ U	UG/L
ETHYLBENZENE	1.0	1.0 U	UG/L
2-HEXANONE	5.0	5.0 U	UG/L
ISOPROPYLBENZENE	1.0	1.0 U	UG/L
METHYL ACETATE	10	10 U	UG/L
METHYLCYCLOHEXANE	1.0	1.0 U	UG/L
METHYLENE CHLORIDE	1.0	13 J	UG/L
4-METHYL-2-PENTANONE (MIBK)	5.0	5.0 U J	UG/L
STYRENE	1.0	1.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	1.0	1.0 U	UG/L
TETRACHLOROETHENE	1.0	1.0 U	UG/L
TOLUENE	1.0	1.0 U	UG/L
1,2,4-TRICHLOROBENZENE	1.0	1.0 U	UG/L
1,2,3-TRICHLOROBENZENE	1.0	1.0 U	UG/L

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B
Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW126C-WC-A-1

Date Sampled : 11/20/07 **Order #:** 1057301 **Sample Matrix:** WATER
Date Received: 11/26/07 **Submission #:** R2740994 **Analytical Run** 154617

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/27/07			
ANALYTICAL DILUTION: 1.00			
1,1,1-TRICHLOROETHANE	1.0	1.0 U J	UG/L
1,1,2-TRICHLOROETHANE	1.0	1.0 U	UG/L
TRICHLOROETHENE	1.0	1.0 U	UG/L
TRICHLOROFLUOROMETHANE	1.0	1.0 U	UG/L
1,1,2-TRICHLORO1,2,2-TRIFLUOROETHA	1.0	1.0 U	UG/L
VINYL CHLORIDE	1.0	1.0 U	UG/L
O-XYLENE	1.0	1.0 U	UG/L
M+P-XYLENE	1.0	1.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(80 - 123 %)	101	%
TOLUENE-D8	(88 - 124 %)	111	%
DIBROMOFLUOROMETHANE	(89 - 115 %)	106	%

ENSR
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Memorandum

Date: January 27, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation
Inorganic Analyses
Surface Sediment Porewater Sampling, December 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2740994

Distribution: L. Herberich/Westford

00760-171-525 File
BR023inolms.doc

SUMMARY

Limited validation was performed on the data for 11 porewater samples analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 6020, and 7470; total suspended solids (TSS) according to EPA method 160.2; total organic carbon (TOC) according to SW-846 method 9060; and/or dissolved organic carbon (DOC) according to SW-846 method 9060. The samples were collected at the BASF Site in Rensselaer, NY on December 13-15, 2007 and submitted to Columbia Analytical Services in Rochester, NY (CAS-Rochester) for analysis. CAS Rochester subcontracted the sediment samples to their facility in Kelso, WA for porewater extraction. CAS-Kelso shipped the porewaters back to CAS-Rochester for analysis. CAS processed the samples and reported the results under sample submission # R2740994.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. Selected data points were rejected (R) or were qualified as estimated (J, UJ) due to poor field duplicate precision (see discussion below).

SAMPLES

The samples included in this review are listed below.

ENSR
2 Technology Park Drive, Westford, Massachusetts, 01886-3140
T 978.589.3000 F 978.589.3100 www.ensr.aecom.com

Sample IDs	
03PW097N-WC-A-1*	03PW027U-WC-A-1*
03PW087N-WC-A-1*	03PW087N-WC-A-2* (Field duplicate of 03PW087N-WC-A-1)
03PW094N-WC-A-1*	03PW069C-WC-A-1*
03PW126C-WC-A-1*	03PW006U-WC-A-1*
03PW085N-WC-A-1**	03PW032N-WC-A-1**
03PW133W-WC-A-1**	
*Sample ID appended with an "F" for dissolved metals and DOC **Analyzed for TSS only	

REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Inductively coupled plasma/mass spectrometry (ICP/MS) tuning (6020 metals only)
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results (6010B and 6020 metals only)
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- Internal standard performance (6020 metals only)
- ICP serial dilution results (6010B and 6020 metals only)
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. No discrepancies were noted.

The sample IDs for all samples except samples 03PW085N-WC-A-1, 03PW032N-WC-A-1, and 03PW133N-WC-A-1 were appended by the laboratory with an "F" to denote that the samples were analyzed for dissolved metals and DOC.

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Holding Times/Sample Preservation

The chemical preservations for all samples, where applicable, were acceptable. The cooler temperatures were 1°C upon receipt at the laboratory, which were below the acceptance criteria of 4 ± 2°C; however sample integrity was not affected and no validation action was taken on this basis.

All samples were digested and/or analyzed within the method and QAPP specified holding times.

ICP/MS Tuning

6020 Metals

A tuning solution containing elements representing the mass regions of interest was analyzed at the beginning of each analytical sequence. The percent relative standard deviations (%RSDs) met the QC acceptance criterion of <5%.

Calibrations

6010B Metals, 6020 Metals, and Mercury

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the laboratory's reporting limit (RL) with the exception of barium which was spiked at 10x the RL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes.

TSS, TOC and DOC

All criteria were met for the calibration curves and the ICV and CCV standards.

Laboratory Blanks/Equipment Blanks

Equipment blanks were not collected with this sample set. No validation action was taken on this basis.

6010B Metals, 6020 Metals, and Mercury

Target analytes were not detected in the laboratory method blanks or in the initial and continuing calibration blanks (ICBs/CCBs) associated with all samples in this sample set.

TSS, TOC, and DOC

TSS, TOC, and DOC were not detected in the laboratory method blanks associated with all sample analyses.

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ICP Interference Check Sample Results

6010B Metals and 6020 Metals

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

MS Results

6010B Metals and 6020 Metals

An MS analysis was requested on sample 03PW097N-WC-A-1. Insufficient sample volume was received from the porewater extraction in order to perform the MS analysis for 6010B metals and 6020 metals. No validation action was taken on this basis.

Mercury

MS analyses were performed on samples 03PW097N-WC-A-1 and 03PW097N-WC-A-1-F. The %Rs met the QC acceptance criteria.

TOC

An MS analysis was performed on sample 03PW126C-WC-A-1. The %R met the QC acceptance criteria for TOC.

DOC

An MS analysis was performed on sample 03PW085N-WC-A-1-F. The %R met the QC acceptance criteria for DOC.

Laboratory Duplicate Results

6010B Metals and Mercury

Laboratory duplicate analyses were performed on samples 03PW097N-WC-A-1 and 03PW097N-WC-A-1-F. The relative percent differences (RPDs) met the QC acceptance criteria for all analytes.

6020 Metals

A laboratory duplicate analysis was performed on sample 03PW087N-WC-A-1. The RPDs met the QC acceptance criteria for all analytes.

TOC

A laboratory duplicate analysis was performed on sample 03PW126C-WC-A-1. The RPD met the QC acceptance criteria for TOC.

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DOC

A laboratory duplicate analysis was performed on sample 03PW085N-WC-A-1-F. The RPD met the QC acceptance criteria for DOC.

Field Duplicate Results

6010B Metals, 6020 Metals, and Mercury

Samples 03PW087N-WC-A-1/03PW087N-WC-A-2 and 03PW087N-WC-A-1-F/03PW087N-WC-A-2-F were submitted as the field duplicate pairs with this sample set.

The following table summarizes the RPDs of the detected analytes for the field duplicate pair 03PW087N-WC-A-1/03PW087N-WC-A-2.

Analyte	03PW087N-WC-A-1 (µg/L)	03PW087N-WC-A-2 (µg/L)	RPD
Aluminum	167	513	102
Barium	84.5	110	26
Calcium	46900	49000	4
Chromium	10.0 U	13.4	NC
Copper	5.0 U	9.1	NC
Iron	386	1670	125
Lead	1.0 U	6.9	NC
Magnesium	5670	6710	17
Manganese	2280	3480	42
Potassium	3590	2880	22
Sodium	15500	16700	8
Criteria: RPD ≤35% if both results are >5x SQL.			

NC-Not calculable due to a nondetect result in the original or duplicate sample.

Results for samples 03PW087N-WC-A-1 and 03PW087N-WC-A-2 were qualified as follows. It should be noted that the soil/sediment field duplicate criteria was used since the samples were collected as sediments in the field.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

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The following table summarizes the RPDs of the detected compounds for the field duplicate pair 03PW087N-WC-A-1-F/03PW087N-WC-A-2-F.

Analyte	03PW087N-WC-A-1-F (µg/L)	03PW087N-WC-A-2-F (µg/L)	RPD
Barium	78.6	98.9	23
Calcium	44700	48100	7
Magnesium	5330	6580	21
Manganese	2150	3310	43
Potassium	3530	2650	29
Sodium	15400	16000	4
Criteria: RPD ≤35% if both results are >5x SQL.			

Results for samples 03PW087N-WC-A-1-F and 03PW087N-WC-A-2-F were qualified as follows. It should be noted that the soil/sediment field duplicate criteria was used since the samples were collected as sediments in the field.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

TSS and TOC

Samples 03PW087N-WC-A-1/03PW087N-WC-A-2 were submitted as the field duplicate pair with this sample set.

Analyte	03PW087N-WC-A-1 (mg/L)	03PW087N-WC-A-2 (mg/L)	RPD
TSS	9.18	13.4	37
TOC Result 1	4.91	11.9	83
TOC Result 2	4.63	11.4	84
TOC Result 3	5.03	11.2	76
TOC Result 4	5.00	11.9	82
Criteria: RPD ≤35% if both results are >5x SQL.			

Results for samples 03PW087N-WC-A-1 and 03PW087N-WC-A-2 were qualified as follows. It should be noted that the soil/sediment field duplicate criteria was used since the samples were collected as sediments in the field.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.

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- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.
-

DOC

Samples 03PW087N-WC-A-1-F/03PW087N-WC-A-2-F were submitted as the field duplicate pair with this sample set.

Analyte	03PW087N-WC-A-1-F (mg/L)	03PW087N-WC-A-2-F (mg/L)	RPD
DOC Result 1	4.43	9.14	69
DOC Result 2	4.13	8.54	70
DOC Result 3	4.49	9.14	68
DOC Result 4	4.50	9.21	69
Criteria: RPD ≤35% if both results are >5x SQL.			

Results for samples 03PW087N-WC-A-1-F and 03PW087N-WC-A-2-F were qualified as follows: It should be noted that the soil/sediment field duplicate criteria was used since the samples were collected as sediments in the field.

- If the RPD was >35% but ≤120% and the sample and field duplicate results were >5x the SQL, estimate (J) results > the SQL
- If the RPD was >120%, reject (R) results > the SQL.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 2x the SQL, estimate (J) positive results <5x the SQL and estimate (UJ) nondetects.
- If sample and/or field duplicate result was <5x the SQL and the absolute difference was > ± 4x the SQL, reject (R) nondetects and positive results < 5x the SQL.

LCS/LCSD Results

6010B Metals, 6020 Metals, and Mercury

The LCS/LCSD associated with the porewater samples met the 80-120% recovery criteria.

TSS, TOC, and DOC

The LCSs associated with the porewater samples met the laboratory's QC acceptance limits.

Internal Standard Performance

6020 Metals

All internal standard performance criteria were met with the following exceptions. Qualification of the data for these samples was not required since these samples were reanalyzed at 5x dilutions and the internal standard recoveries were within the acceptance criteria in the diluted analyses. The affected analytes were reported from the 5x dilutions.

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Sample ID	%R Internal Standard	
	Ge	Sc
03PW097N-WC-A-1	ok	141
03PW087N-WC-A-2	ok	151
03PW027U-WC-A-1	139	215
03PW094N-WC-A-1	130	158
03PW069C-WC-A-1	142	215
03PW126C-WC-A-1	125	145
03PW087N-WC-A-1	128	153
03PW006U-WC-A-1	ok	156
03PW097N-WC-A-1-F	ok	152
03PW087N-WC-A-2-F	ok	158
03PW027U-WC-A-1-F	125	158
03PW094N-WC-A-1-F	ok	162
03PW069C-WC-A-1-F	126	159
03PW126C-WC-A-1-F	129	160
03PW087N-WC-A-1-F	129	158
03PW006U-WC-A-1-F	ok	153

Ge – Germanium Sc-Scandium

ICP Serial Dilution Results

6010B Metals

Serial dilution analyses were performed on samples 03PW097N-WC-A-1 and 03PW097N-WC-A-1-F. All analytes met the percent difference (%D) acceptance criteria in the serial dilution of these samples.

6020 Metals

Serial dilution analyses were performed on sample 03PW126C-WC-A-1 and 03PW087N-WC-A-1. All analytes met the %D acceptance criteria in the serial dilution analyses of these samples.

Sample Quantitation/Detection Limit Results

All metals results were reported to the sample quantitation limit (SQL). Due to software limitations, metal results greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantitation limits were achieved for all metals.

6010B Metals and Mercury

All samples were analyzed undiluted. SQLs were therefore not affected.

6020 Metals

As noted previously, one or more internal standard area recoveries exceeded the acceptance criteria in the analysis of all samples. All samples were re-analyzed at 5x dilutions yielding acceptable internal standard area recoveries. Positive and nondetect beryllium, cobalt, copper, selenium, and vanadium results were reported from the 5x dilutions. Additionally, lead was reported from the 5x dilution in

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sample 03PW027U-WC-A-1; and lead and thallium were reported from the 5x dilution for sample 03PW069C-WC-A-1. SQLs were adjusted accordingly.

TSS

Due to insufficient porewater sample volume extracted from most of the sediment samples, limited volume was used to complete the TSS analyses. TSS was detected in all samples except sample 03PW032N-WC-A-1. The SQL for sample 03PW032N-WC-A-1 was adjusted accordingly. Results were adjusted accordingly for the remaining samples due to the limited sample volume.

TOC

Samples 03PW097N-WC-A-1, 03PW027U-WC-A-1, 03PW094N-WC-A-1, and 03PW069C-WC-A-1 were analyzed at 4x dilutions due to the elevated concentration of TOC in the samples. Sample results were adjusted accordingly.

DOC

All samples were analyzed undiluted. SQLs were therefore not affected.

METALS
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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: 03PW087N-WC-A-1

ontract: R2740994

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-A

atrix (soil/water): WATER Lab Sample ID: 1057848

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	167 ~~167~~		R	P
7440-36-0	Antimony	1.0	U		MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	84.5		B	P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	46900			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	5.0	U		MS
7439-89-6	Iron	~~386~~		R	P
7439-92-1	Lead	~~1.0~~	~~U~~	R	MS
7439-95-4	Magnesium	5670			P
7439-96-5	Manganese	2280		J	P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	3590			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	15500			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

J

(B)

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03PW087N-WC-A-1-F

ontract: R2740994

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-F

atrix (soil/water): WATER Lab Sample ID: 1057865

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	1.0	U		MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	78.6		~~J~~	P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	44700			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	5.0	U		MS
7439-89-6	Iron	100	U		P
7439-92-1	Lead	1.0	U		MS
7439-95-4	Magnesium	5330		~~J~~	P
7439-96-5	Manganese	2150		J	P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	3530			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	15400			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

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METALS
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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW087N-WC-A-2

ontract: R2740994
ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-F
atrix (soil/water): WATER Lab Sample ID: 1057842
evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	513 ~~513~~		R	P
7440-36-0	Antimony	1.0	U		MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	110		J	P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	49000			P
7440-47-3	Chromium	13.4			P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	9.1			MS
7439-89-6	Iron	~~1670~~		R	P
7439-92-1	Lead	6.9			MS
7439-95-4	Magnesium	6710			P
7439-96-5	Manganese	3480		J	P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2880			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	16700			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03PW087N-WC-A-2-F

ontract: R2740994

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-F

atrix (soil/water): WATER Lab Sample ID: 1057859

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	1.0	U		MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	98.9		J	P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	48100			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	5.0	U		MS
7439-89-6	Iron	100	U		P
7439-92-1	Lead	1.0	U		MS
7439-95-4	Magnesium	6580		J	P
7439-96-5	Manganese	3310		J	P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2650			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	16000			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

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METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03PW006U-WC-A-1

ontract: R2740994

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-A

atrix (soil/water): WATER Lab Sample ID: 1057847

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1350			P
7440-36-0	Antimony	1.0	U		MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	103			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	56800			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	22.2			MS
7439-89-6	Iron	3080			P
7439-92-1	Lead	9.7			MS
7439-95-4	Magnesium	12000			P
7439-96-5	Manganese	5200			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	3270			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	27300			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

Color Before: YELLOW Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS
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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW006U-WC-A-1-F

ontract: R2740994
ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-F
atrix (soil/water): WATER Lab Sample ID: 1057864
evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	1.0	U		MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	83.3			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	56500			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	5.0			MS
7439-89-6	Iron	100	U		P
7439-92-1	Lead	1.0	U		MS
7439-95-4	Magnesium	11800			P
7439-96-5	Manganese	4830			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2990			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	27600			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: 03PW027U-WC-A-1

ntract: R2740994

b Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-A

trix (soil/water): WATER Lab Sample ID: 1057843

vel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18400			P
7440-36-0	Antimony	16.4			MS
7440-38-2	Arsenic	19.3			P
7440-39-3	Barium	982			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	15.3			MS
7440-70-2	Calcium	59400			P
7440-47-3	Chromium	1460			P
7440-48-4	Cobalt	7.5			MS
7440-50-8	Copper	496			MS
7439-89-6	Iron	19400			P
7439-92-1	Lead	751			MS
7439-95-4	Magnesium	7280			P
7439-96-5	Manganese	1720			P
7439-97-6	Mercury	1.2			CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	4380			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	10.3			MS
7440-23-5	Sodium	17300			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	682			P
7440-62-2	Vanadium	5.0	U		MS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW027U-WC-A-1-F

ontract: R2740994
ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-A
atrix (soil/water): WATER Lab Sample ID: 1057860
evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	4.6			MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	78.6			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	48600			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	9.4			MS
7439-89-6	Iron	100	U		P
7439-92-1	Lead	1.6			MS
7439-95-4	Magnesium	5010			P
7439-96-5	Manganese	780			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	15900			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	30.9			P
7440-62-2	Vanadium	6.9			MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

olumbia Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03PW094N-WC-A-1

ontract: R2740994

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-A

atrix (soil/water): WATER Lab Sample ID: 1057844

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5600			P
7440-36-0	Antimony	4.6			MS
7440-38-2	Arsenic	10.9			P
7440-39-3	Barium	293			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	3.5			MS
7440-70-2	Calcium	74100			P
7440-47-3	Chromium	239			P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	96.4			MS
7439-89-6	Iron	4470			P
7439-92-1	Lead	156			MS
7439-95-4	Magnesium	8690			P
7439-96-5	Manganese	2180			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	3480			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.5			MS
7440-23-5	Sodium	17500			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	145			P
7440-62-2	Vanadium	11.2			MS

Color Before: YELLOW Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

olumbia Analytical Services

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW094N-WC-A-1-F

ontract: R2740994
ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-F
atrix (soil/water): WATER Lab Sample ID: 1057861
evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	3.0			MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	115			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	72300			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	6.8			MS
7439-89-6	Iron	100	U		P
7439-92-1	Lead	2.2			MS
7439-95-4	Magnesium	8220			P
7439-96-5	Manganese	1920			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2860			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	17300			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	28.9			P
7440-62-2	Vanadium	5.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW126C-WC-A-1

ontract: R2740994
ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-A
atrix (soil/water): WATER Lab Sample ID: 1057846
evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	1.0	U		MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	103			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	48000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	7.4			MS
7439-89-6	Iron	751			P
7439-92-1	Lead	1.9			MS
7439-95-4	Magnesium	6740			P
7439-96-5	Manganese	4660			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2090			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	17100			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03PW126C-WC-A-1-F

ontract: R2740994

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-A

atrix (soil/water): WATER Lab Sample ID: 1057863

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	1.0	U		MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	87.5			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	45400			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	7.1			MS
7439-89-6	Iron	100	U		P
7439-92-1	Lead	1.0	U		MS
7439-95-4	Magnesium	6390			P
7439-96-5	Manganese	4160			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2070			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	16500			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

olumbia Analytical Services

METALS
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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW069C-WC-A-1

ontract: R2740994
ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-F
atrix (soil/water): WATER Lab Sample ID: 1057845
evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	25600			P
7440-36-0	Antimony	13.4			MS
7440-38-2	Arsenic	32.4			P
7440-39-3	Barium	1250			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	17.1			MS
7440-70-2	Calcium	60100			P
7440-47-3	Chromium	1220			P
7440-48-4	Cobalt	6.8			MS
7440-50-8	Copper	380			MS
7439-89-6	Iron	17100			P
7439-92-1	Lead	772			MS
7439-95-4	Magnesium	7080			P
7439-96-5	Manganese	2020			P
7439-97-6	Mercury	0.842			CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	4540			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	8.7			MS
7440-23-5	Sodium	16500			P
7440-28-0	Thallium	5.0	U		MS
7440-66-6	Zinc	543			P
7440-62-2	Vanadium	5.0	U		MS

Color Before: BROWN Clarity Before: CLOUDY Texture: _____
Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW069C-WC-A-1-F

ontract: R2740994
ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-F
atrix (soil/water): WATER Lab Sample ID: 1057862
evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	4.3			MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	101			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.2			MS
7440-70-2	Calcium	49600			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	11.8			MS
7439-89-6	Iron	100	U		P
7439-92-1	Lead	3.3			MS
7439-95-4	Magnesium	4940			P
7439-96-5	Manganese	1020			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2000	U		P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	15500			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	30.7			P
7440-62-2	Vanadium	7.2			MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

olumbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03PW097N-WC-A-1

ontract: R2740994

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-A

atrix (soil/water): WATER Lab Sample ID: 1057840

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	560			P
7440-36-0	Antimony	1.2			MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	116			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	43800			P
7440-47-3	Chromium	18.8			P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	9.6			MS
7439-89-6	Iron	726			P
7439-92-1	Lead	11.5			MS
7439-95-4	Magnesium	7200			P
7439-96-5	Manganese	6770			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	3120			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	16000			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW097N-WC-A-1-F

ontract: R2740994

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 03PW126C-WC-F

atrix (soil/water): WATER Lab Sample ID: 1057857

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	100	U		P
7440-36-0	Antimony	1.0	U		MS
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	84.7			P
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	1.0	U		MS
7440-70-2	Calcium	38800			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	5.0	U		MS
7439-89-6	Iron	100	U		P
7439-92-1	Lead	1.0	U		MS
7439-95-4	Magnesium	6450			P
7439-96-5	Manganese	5850			P
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2850			P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	1.0	U		MS
7440-23-5	Sodium	14800			P
7440-28-0	Thallium	1.0	U		MS
7440-66-6	Zinc	20.0	U		P
7440-62-2	Vanadium	5.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW126C-WC-A-1

Date Sampled : 11/19/07 Order #: 1057001 Sample Matrix: WATER
Date Received: 11/24/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	12.4	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW085N-WC-A-1

Date Sampled : 11/19/07 Order #: 1057002 Sample Matrix: WATER
Date Received: 11/24/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	124	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-1

Date Sampled : 11/19/07 Order #: 1057003 Sample Matrix: WATER
Date Received: 11/24/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	9.18 J	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-2

Date Sampled : 11/19/07
Date Received: 11/24/07

Order #: 1057053
Submission #: R2740994

Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	13.4 J	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW006U-WC-A-1

Date Sampled : 11/19/07 Order #: 1057004 Sample Matrix: WATER
Date Received: 11/24/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	12.1	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW069C-WC-A-1

Date Sampled : 11/19/07 Order #: 1057005 Sample Matrix: WATER
Date Received: 11/24/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	110	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW097N-WC-A-1

Date Sampled : 11/19/07
Date Received: 11/24/07
Order #: 1057006
Submission #: R2740994
Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	10.4	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW032N-WC-A-1

Date Sampled : 11/19/07 Order #: 1057008 Sample Matrix: WATER
Date Received: 11/24/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	10.1 U	MG/L	11/26/07	15:20	10.1

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW027U-WC-A-1

Date Sampled : 11/19/07 Order #: 1057010 Sample Matrix: WATER
Date Received: 11/24/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	117	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW094N-WC-A-1

Date Sampled : 11/19/07
Date Received: 11/24/07
Order #: 1057013
Submission #: R2740994
Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	63.6	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW133W-WC-A-1

Date Sampled : 11/19/07 Order #: 1057054 Sample Matrix: WATER
Date Received: 11/24/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL SUSPENDED SOLIDS	160.2	1.00	24.5	MG/L	11/26/07	15:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW006U-WC-A-1

Date Sampled : 11/19/07 Order #: 1057847 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	7.93	MG/L	12/05/07	19:17	1.0
TOTAL ORGANIC CARBON	9060	1.00	7.63	MG/L	12/05/07	19:27	1.0
TOTAL ORGANIC CARBON	9060	1.00	8.34	MG/L	12/05/07	19:36	1.0
TOTAL ORGANIC CARBON	9060	1.00	8.40	MG/L	12/05/07	19:45	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW006U-WC-A-1-F

Date Sampled : 11/19/07 Order #: 1057864 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.93	MG/L	12/08/07	05:52	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.88	MG/L	12/08/07	06:02	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.81	MG/L	12/08/07	06:11	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	5.01	MG/L	12/08/07	06:20	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW126C-WC-A-1

Date Sampled : 11/19/07 Order #: 1057846 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	6.32	MG/L	12/05/07	17:23	1.0
TOTAL ORGANIC CARBON	9060	1.00	5.85	MG/L	12/05/07	17:33	1.0
TOTAL ORGANIC CARBON	9060	1.00	6.30	MG/L	12/05/07	17:42	1.0
TOTAL ORGANIC CARBON	9060	1.00	6.35	MG/L	12/05/07	17:51	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW126C-WC-A-1-F

Date Sampled : 11/19/07 Order #: 1057863 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.80	MG/L	12/08/07	05:14	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.57	MG/L	12/08/07	05:24	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.97	MG/L	12/08/07	05:33	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.66	MG/L	12/08/07	05:42	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW069C-WC-A-1

Date Sampled : 11/19/07 Order #: 1057845 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	31.9	MG/L	11/30/07	06:38	4.0
TOTAL ORGANIC CARBON	9060	1.00	30.5	MG/L	11/30/07	06:47	4.0
TOTAL ORGANIC CARBON	9060	1.00	32.6	MG/L	11/30/07	06:57	4.0
TOTAL ORGANIC CARBON	9060	1.00	32.5	MG/L	11/30/07	07:06	4.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW069C-WC-A-1-F

Date Sampled : 11/19/07 Order #: 1057862 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	8.59	MG/L	12/08/07	04:37	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	8.41	MG/L	12/08/07	04:46	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	9.03	MG/L	12/08/07	04:55	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	8.88	MG/L	12/08/07	05:05	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW094N-WC-A-1

Date Sampled : 11/19/07 Order #: 1057844 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	26.4	MG/L	11/30/07	06:00	4.0
TOTAL ORGANIC CARBON	9060	1.00	26.7	MG/L	11/30/07	06:09	4.0
TOTAL ORGANIC CARBON	9060	1.00	26.6	MG/L	11/30/07	06:19	4.0
TOTAL ORGANIC CARBON	9060	1.00	28.1	MG/L	11/30/07	06:28	4.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW094N-WC-A-1-F

Date Sampled : 11/19/07
Date Received: 11/28/07

Order #: 1057861
Submission #: R2740994

Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	12.2	MG/L	12/08/07	03:59	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	11.6	MG/L	12/08/07	04:08	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	12.3	MG/L	12/08/07	04:17	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	12.5	MG/L	12/08/07	04:27	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW027U-WC-A-1

Date Sampled : 11/19/07 Order #: 1057843 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	22.6	MG/L	11/30/07	05:22	4.0
TOTAL ORGANIC CARBON	9060	1.00	21.9	MG/L	11/30/07	05:31	4.0
TOTAL ORGANIC CARBON	9060	1.00	24.6	MG/L	11/30/07	05:40	4.0
TOTAL ORGANIC CARBON	9060	1.00	23.4	MG/L	11/30/07	05:50	4.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW027U-WC-A-1-F

Date Sampled : 11/19/07 Order #: 1057860 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	10.0	MG/L	12/08/07	03:21	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	9.68	MG/L	12/08/07	03:30	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	9.90	MG/L	12/08/07	03:39	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	10.3	MG/L	12/08/07	03:49	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-2

Date Sampled : 11/19/07 Order #: 1057842 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	11.9	MG/L	12/05/07	16:45	1.0
TOTAL ORGANIC CARBON	9060	1.00	11.4	MG/L	12/05/07	16:55	1.0
TOTAL ORGANIC CARBON	9060	1.00	11.2	MG/L	12/05/07	17:04	1.0
TOTAL ORGANIC CARBON	9060	1.00	11.9	MG/L	12/05/07	17:13	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-2-F

Date Sampled : 11/19/07
Date Received: 11/28/07

Order #: 1057859
Submission #: R2740994

Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	9.14	MG/L	12/08/07	02:43	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	8.54	MG/L	12/08/07	02:52	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	9.14	MG/L	12/08/07	03:01	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	9.21	MG/L	12/08/07	03:11	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-1

Date Sampled : 11/19/07 Order #: 1057848 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	4.91 R	MG/L	12/05/07	19:55	1.0
TOTAL ORGANIC CARBON	9060	1.00	4.63	MG/L	12/05/07	20:05	1.0
TOTAL ORGANIC CARBON	9060	1.00	5.03	MG/L	12/05/07	20:14	1.0
TOTAL ORGANIC CARBON	9060	1.00	5.00	MG/L	12/05/07	20:23	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW087N-WC-A-1-F

Date Sampled : 11/19/07 Order #: 1057865 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.48	MG/L	12/08/07	06:30	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.13	MG/L	12/08/07	06:40	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.49	MG/L	12/08/07	06:49	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.50	MG/L	12/08/07	06:58	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW097N-WC-A-1

Date Sampled : 11/19/07 Order #: 1057840 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	13.8	MG/L	11/30/07	03:55	4.0
TOTAL ORGANIC CARBON	9060	1.00	13.3	MG/L	11/30/07	03:46	4.0
TOTAL ORGANIC CARBON	9060	1.00	13.1	MG/L	11/30/07	03:36	4.0
TOTAL ORGANIC CARBON	9060	1.00	13.8	MG/L	11/30/07	03:27	4.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW097N-WC-A-1-F

Date Sampled : 11/19/07 Order #: 1057857 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2740994

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	7.41	MG/L	12/07/07	22:18	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	6.82	MG/L	12/07/07	22:27	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	7.40	MG/L	12/07/07	22:36	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	7.36	MG/L	12/07/07	22:45	1.0

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Memorandum

Date: January 27, 2008

To: John Bleiler/Westford

From: Linda Sulkowski/Westford

Subject: Data Validation
Inorganic Analyses
Surface Sediment Porewater Sampling, December 2007
BASF Site, Rensselaer, NY
CAS Submission Number R2741256

Distribution: L. Herberich/Westford

00760-171-525 File
BR027inolms.doc

SUMMARY

Limited validation was performed on the data for three porewater samples analyzed for Target Analyte List (TAL) metals according to SW-846 methods 6010B, 6020, and 7470; total organic carbon (TOC) according to SW-846 method 9060; and/or dissolved organic carbon (DOC) according to SW-846 method 9060. The samples were collected at the BASF Site in Rensselaer, NY on December 15, 2007 and submitted to Columbia Analytical Services in Rochester, NY (CAS-Rochester) for analysis. CAS Rochester subcontracted the sediment samples to their facility in Kelso, WA for porewater extractions. CAS-Kelso shipped the porewaters back to CAS-Rochester for analysis. CAS processed the samples and reported the results under sample submission # R2741256.

The analytical data were evaluated with reference to the Region 2 Standard Operating Procedure "Validation of Metals for the Contract Laboratory program (CLP)" based on Statement of Work [SOW 9/2006 (Rev 13)], the Quality Assurance Project Plan (QAPP), and the quality control (QC) criteria specified in the analytical methods.

In general, the data appear to be valid as reported and may be used for decision making purposes. No data were rejected. Selected data points were qualified as estimated (J) due to nonconformances of certain QC criteria (see discussion below).

SAMPLES

The samples included in this review are listed below.

Sample IDs	
03PW032N-WC-A-1*	03PW085N-WC-A-1*
03PW133W-WC-A-1*	
*Sample ID appended with an "F" for dissolved metals and DOC.	

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REVIEW ELEMENTS

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests
- Holding times/sample preservation
- Inductively coupled plasma/mass spectrometry (ICP/MS) tuning (6020 metals only)
- Calibrations
- Laboratory blanks/equipment blanks
- Inductively coupled plasma (ICP) interference check sample results (6010B and 6020 metals only)
- Matrix spike (MS) results
- Laboratory duplicate results
- Field duplicate results
- Laboratory control sample (LCS) results
- Internal standard performance (6020 metals only)
- ICP serial dilution results (6010B and 6020 metals only)
- Sample quantitation/detection limit results

DISCUSSION

Agreement of Analyses Conducted With COC Requests

The sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC. The following discrepancy was noted. The bottle label on sample 03PW133W-WC-A-1 listed the sample ID as 03PW133W-WC-A-2. The sample was correctly logged in and reported by the laboratory as 03PW133W-WC-A-1.

The sample IDs for all samples were appended by the laboratory with an "F" to denote that the samples were analyzed for dissolved metals and DOC.

Holding Times/Sample Preservation

The chemical preservations for all samples, where applicable, were acceptable. The cooler temperatures were 1°C upon receipt at the laboratory, which were below the acceptance criteria of 4 ± 2°C; however sample integrity was not affected and no validation action was taken on this basis.

All samples were digested and/or analyzed within the method and QAPP specified holding times.

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ICP/MS Tuning

6020 Metals

A tuning solution containing elements representing the mass regions of interest was analyzed at the beginning of each analytical sequence. The percent relative standard deviations (%RSDs) met the QC acceptance criterion of <5%.

Calibrations

6010B Metals, 6020 Metals, and Mercury

All criteria were met for the calibration curves and the initial and continuing calibration verification (ICV/CCV) standards.

Although the analysis of a low level check standard is not required by SW-846 methods, the laboratory chose to analyze low-level check standards containing analytes at concentrations 1 to 2x the laboratory's reporting limit (RL) with the exception of barium which was spiked at 10x the RL. An acceptance limit of 100 ± 30 percent recovery (%R) was used to evaluate these standards. The standards met recovery criteria for all analytes except vanadium and zinc. The following tables summarize the standard recoveries that exceeded the QC acceptance criteria and the associated samples.

Date Analyzed	Standard	Analyte	%R	True Value CRI	ICV/CCV
12/19/07	CRI2	Vanadium	137	1.0 µg/L	50 µg/L
Associated Samples: All samples in this data set except 03PW085N-WC-A-1.					

Date Analyzed	Standard	Analyte	%R	True Value CRI	ICV/CCV
12/19/07	CRI1	Zinc	141	5.0 µg/L	50 µg/L
12/19/07	CRI2	Zinc	140	5.0 µg/L	50 µg/L
Associated Samples: All samples in this sample set.					

Sample results were qualified as follows:

- If the %R was >130% but <180%, and the positive sample result was < 2x the concentration of the check standard, then the positive result was qualified as estimated (J).
- If the %R was >130% but <180%, and the positive sample result was > 2x the concentration of the check standard and < the concentration of the ICV/CCV, then the result was accepted unqualified.
- If the %R was >130% but <180%, then the nondetect result was accepted unqualified.
- If the positive sample result was qualified as undetected (U) due to blank contamination, the nondetect result was not further qualified due to CRI recoveries since a high bias was indicated.

TOC and DOC

All criteria were met for the calibration curves and the ICV and CCV standards.

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Laboratory Blanks/Equipment Blanks

Equipment blanks were not collected with this sample set. No validation action was taken on this basis.

6010B Metals, 6020 Metals, and Mercury

Target analytes were not detected in the laboratory method blanks or in the initial and continuing calibration blanks (ICBs/CCBs) associated with all samples in this sample set.

TOC and DOC

TOC and DOC were not detected in the laboratory method blanks associated with all sample analyses.

ICP Interference Check Sample Results

6010B Metals and 6020 Metals

All %R criteria were met for the spiked analytes in the analyses of the interference check solution ICS AB.

MS Results

6010B Metals, 6020 Metals, and Mercury

An MS analysis was performed on sample 03PW032N-WC-A-1. The %Rs met the QC acceptance criteria in both the pre-digest MS analysis and in the post-digestion MS analysis.

TOC

An MS analysis was not performed on a sample from this sample set. No validation action was taken on this basis.

DOC

An MS analysis was performed on sample 03PW085N-WC-A-1-F. The %R met the QC acceptance criteria for DOC.

Laboratory Duplicate Results

6010B Metals, 6020 Metals, and Mercury

A laboratory duplicate analysis was performed on sample 03PW032N-WC-A-1. The relative percent differences (RPDs) met the QC acceptance criteria for all analytes with the following exception.

Analyte	RPD	SQL	Actions
Lead	44	5 µg/L	Estimate (J) positive results >SQL
Associated Samples: Samples 03PW032N-WC-A-1, 03PW085N-WC-A-1, and 03PW133W-WC-A-1.			

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TOC

A laboratory duplicate analysis was not performed on a sample from this sample set. No validation action was taken on this basis.

DOC

A laboratory duplicate analysis was performed on sample 03PW085N-WC-A-1-F. The RPD met the QC acceptance criteria for DOC.

Field Duplicate Results

A field duplicate pair was not provided with this data set. No validation actions were taken on this basis.

LCS Results

6010B Metals, 6020 Metals, and Mercury

The LCSs associated with the porewater samples met the 80-120% recovery criteria.

TOC and DOC

The LCSs associated with the porewater samples met the laboratory's QC acceptance limits.

Internal Standard Performance

6020 Metals

All internal standard performance criteria were met.

ICP Serial Dilution Results

6010B and 6020 Metals

A serial dilution analysis was performed on sample 03PW032N-WC-A-1. All analytes met the percent difference (%D) acceptance criteria in the serial dilution analysis of this sample.

Sample Quantitation/Detection Limit Results

All metals results were reported to the sample quantitation limit (SQL). Due to software limitations, metal results greater than the method detection limit (MDL) but less than the SQL were not reportable as detected values. Therefore results were reported as nondetect at the SQL with no values being reported between the MDL and SQL. No actions were taken since project-specific quantitation limits were achieved for all metals except sodium.

6010B Metals and Mercury

All samples were analyzed undiluted. SQLs were therefore not affected.

The SQL for sodium (5000 µg/L) did not meet the project specified SQL of 1000 µg/L. No validation action was taken on this basis other than this notation.

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6020 Metals

Manganese was reported from the 5x dilution in samples 03PW032N-WC-A-1, 03PW085N-WC-A-1, and 03PW032N-WC-A-1-F due to the elevated concentration of manganese in these samples. Sample results were adjusted accordingly.

Due to matrix interference, vanadium was reported from the 5x dilution for sample 03PW085N-WC-A-1. Vanadium was not detected in this sample. The SQL was adjusted accordingly.

TOC

Sample 03PW085N-WC-A-1 was analyzed at a 4x dilution due to the elevated concentration of TOC in the sample. Sample results were adjusted accordingly.

DOC

All samples were analyzed undiluted. SQLs were therefore not affected.

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METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW032N-WC-A-1

ontract: R2741256

.b Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 1043069

trix (soil/water): WATER Lab Sample ID: 1057838

vel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	636			P
7440-36-0	Antimony	5.0	U		MS
7440-38-2	Arsenic	7.8			MS
7440-39-3	Barium	95.5			MS
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	5.0	U		MS
7440-70-2	Calcium	54400			P
7440-47-3	Chromium	15.0	U		MS
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	19.0			MS
7439-89-6	Iron	1270			P
7439-92-1	Lead	12.8		J	MS
7439-95-4	Magnesium	6560			P
7439-96-5	Manganese	1520			MS
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	5.0	U		MS
7440-09-7	Potassium	10000	U		P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	5.0	U		MS
7440-23-5	Sodium	25000	U		P
7440-28-0	Thallium	5.0	U		MS
7440-62-2	Vanadium	5.0	U		MS
7440-66-6	Zinc	25.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: 03PW032N-WC-A-1-F

ontract: R2741256
ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 1043069
atrix (soil/water): WATER Lab Sample ID: 1057856
evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	500	U		P
7440-36-0	Antimony	5.0	U		MS
7440-38-2	Arsenic	5.0	U		MS
7440-39-3	Barium	89.3			MS
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	5.0	U		MS
7440-70-2	Calcium	53800			P
7440-47-3	Chromium	15.0	U		MS
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	9.5			MS
7439-89-6	Iron	500	U		P
7439-92-1	Lead	5.0	U		MS
7439-95-4	Magnesium	6500			P
7439-96-5	Manganese	1440			MS
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	5.0	U		MS
7440-09-7	Potassium	10000	U		P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	5.0	U		MS
7440-23-5	Sodium	25000	U		P
7440-28-0	Thallium	5.0	U		MS
7440-62-2	Vanadium	5.0	U		MS
7440-66-6	Zinc	25.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

olumbia Analytical Services

METALS
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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW085N-WC-A-1

ontract: R2741256
ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 1043069
atrix (soil/water): WATER Lab Sample ID: 1057841
evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10400			P
7440-36-0	Antimony	10.1			MS
7440-38-2	Arsenic	21.4			MS
7440-39-3	Barium	583			MS
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	7.2			MS
7440-70-2	Calcium	48800			P
7440-47-3	Chromium	714			MS
7440-48-4	Cobalt	7.0			MS
7440-50-8	Copper	239			MS
7439-89-6	Iron	16100			P
7439-92-1	Lead	647		J	MS
7439-95-4	Magnesium	10500			P
7439-96-5	Manganese	1240			MS
7439-97-6	Mercury	0.374			CV
7440-02-0	Nickel	21.6			MS
7440-09-7	Potassium	10000	U		P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	5.0	U		MS
7440-23-5	Sodium	38700			P
7440-28-0	Thallium	5.0	U		MS
7440-62-2	Vanadium	25.0	U		MS
7440-66-6	Zinc	345			MS

Color Before: BROWN Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03PW085N-WC-A-1-F

ontract: R2741256

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 1043069

atrix (soil/water): WATER Lab Sample ID: 1057858

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	500	U		P
7440-36-0	Antimony	5.0	U		MS
7440-38-2	Arsenic	5.0	U		MS
7440-39-3	Barium	59.4			MS
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	5.0	U		MS
7440-70-2	Calcium	42400			P
7440-47-3	Chromium	21.9			MS
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	27.6			MS
7439-89-6	Iron	500	U		P
7439-92-1	Lead	5.6			MS
7439-95-4	Magnesium	9080			P
7439-96-5	Manganese	638			MS
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	6.6			MS
7440-09-7	Potassium	10000	U		P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	5.0	U		MS
7440-23-5	Sodium	38300			P
7440-28-0	Thallium	5.0	U		MS
7440-62-2	Vanadium	5.0	U		MS
7440-66-6	Zinc	25.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

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METALS
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.
03PW133W-WC-A-1

ntract: R2741256

b Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 1043069

trix (soil/water): WATER Lab Sample ID: 1057853

vel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	500	U		P
7440-36-0	Antimony	5.0	U		MS
7440-38-2	Arsenic	5.0	U		MS
7440-39-3	Barium	140			MS
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	5.0	U		MS
7440-70-2	Calcium	41000			P
7440-47-3	Chromium	15.0	U		MS
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	22.5			MS
7439-89-6	Iron	1470			P
7439-92-1	Lead	7.0		J	MS
7439-95-4	Magnesium	7390			P
7439-96-5	Manganese	32.5			MS
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	5.0	U		MS
7440-09-7	Potassium	10000	U		P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	5.0	U		MS
7440-23-5	Sodium	25000	U		P
7440-28-0	Thallium	5.0	U		MS
7440-62-2	Vanadium	5.0	U		MS
7440-66-6	Zinc	25.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

olumbia Analytical Services

METALS

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

03PW133W-WC-A-1-F

ontract: R2741256

ab Code: _____ Case No.: _____ SAS No.: _____ SDG NO.: 1043069

atrix (soil/water): WATER Lab Sample ID: 1057866

evel (low/med): LOW Date Received: 11/28/2007

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	500	U		P
7440-36-0	Antimony	5.0	U		MS
7440-38-2	Arsenic	5.0	U		MS
7440-39-3	Barium	120			MS
7440-41-7	Beryllium	5.0	U		MS
7440-43-9	Cadmium	5.0	U		MS
7440-70-2	Calcium	44600			P
7440-47-3	Chromium	15.0	U		MS
7440-48-4	Cobalt	5.0	U		MS
7440-50-8	Copper	11.1			MS
7439-89-6	Iron	500	U		P
7439-92-1	Lead	5.0	U		MS
7439-95-4	Magnesium	8420			P
7439-96-5	Manganese	5.0	U		MS
7439-97-6	Mercury	0.200	U		CV
7440-02-0	Nickel	5.0	U		MS
7440-09-7	Potassium	10000	U		P
7782-49-2	Selenium	5.0	U		MS
7440-22-4	Silver	5.0	U		MS
7440-23-5	Sodium	25000	U		P
7440-28-0	Thallium	5.0	U		MS
7440-62-2	Vanadium	5.0	U		MS
7440-66-6	Zinc	25.0	U		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW032N-WC-A-1

Date Sampled : 11/19/07 Order #: 1057838 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2741256

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	15.8	MG/L	12/10/07	14:40	1.0
TOTAL ORGANIC CARBON	9060	1.00	15.1	MG/L	12/10/07	14:50	1.0
TOTAL ORGANIC CARBON	9060	1.00	15.2	MG/L	12/10/07	14:59	1.0
TOTAL ORGANIC CARBON	9060	1.00	15.6	MG/L	12/10/07	15:08	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW032N-WC-A-1-F

Date Sampled : 11/19/07
Date Received: 11/28/07
Order #: 1057856
Submission #: R2741256
Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	11.6	MG/L	12/07/07	21:40	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	11.3	MG/L	12/07/07	21:49	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	12.3	MG/L	12/07/07	21:58	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	12.4	MG/L	12/07/07	22:08	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW085N-WC-A-1

Date Sampled : 11/19/07 Order #: 1057841 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2741256

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	61.4	MG/L	11/30/07	04:05	4.0
TOTAL ORGANIC CARBON	9060	1.00	62.6	MG/L	11/30/07	04:15	4.0
TOTAL ORGANIC CARBON	9060	1.00	64.8	MG/L	11/30/07	04:24	4.0
TOTAL ORGANIC CARBON	9060	1.00	66.5	MG/L	11/30/07	04:33	4.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW085N-WC-A-1-F

Date Sampled : 11/19/07 Order #: 1057858 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2741256

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	7.70	MG/L	12/07/07	23:33	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	7.49	MG/L	12/07/07	23:43	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	8.22	MG/L	12/07/07	23:52	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	8.17	MG/L	12/07/07	00:01	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENSSELAER PROJECT #00760-171-502
Client Sample ID : 03PW133W-WC-A-1

Date Sampled : 11/19/07 Order #: 1057853 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2741256

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL ORGANIC CARBON	9060	1.00	5.57	MG/L	12/05/07	20:33	1.0
TOTAL ORGANIC CARBON	9060	1.00	5.58	MG/L	12/05/07	20:43	1.0
TOTAL ORGANIC CARBON	9060	1.00	5.60	MG/L	12/05/07	20:52	1.0
TOTAL ORGANIC CARBON	9060	1.00	5.66	MG/L	12/05/07	21:01	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 01/02/08

ENSR International
Project Reference: BASF - RENNSELAER PROJECT #00760-171-502
Client Sample ID : 03PW133W-WC-A-1-F

Date Sampled : 11/19/07 Order #: 1057866 Sample Matrix: WATER
Date Received: 11/28/07 Submission #: R2741256

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.78	MG/L	12/08/07	07:08	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.52	MG/L	12/08/07	07:18	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	4.84	MG/L	12/08/07	07:27	1.0
SOLUBLE ORGANIC CARBONS	9060.F	1.00	5.04	MG/L	12/08/07	07:36	1.0