

Ms. Tara Blum, P.E.
Project Manager
NYSDEC Region 7
615 Erie Boulevard West
Syracuse, NY 13209

February 3, 2012

Re: Quarterly Monitoring for Brownfield Site #C734102

Dear Ms. Blum,

The purpose of this letter report is to submit the results of the fourth quarter groundwater monitoring at the Pass and Seymour site located at 50 Boyd Ave, Solvay NY. The monitoring was completed in conformance with the approved Site Management Plan (SMP) for this site, which was issued a Certificate of Completion on December 16, 2010.

The groundwater monitoring was conducted in accordance with the SMP and for purposes of demonstrating:

1. The effectiveness of the In-Situ Chemical Oxidation System Remedy utilized for two areas of concern, and
2. To evaluate chlorinated VOC levels in wells MW05-21 and BR 07-31 in the western portion of the site.

There are six (6) observation wells in AOC-1 overburden screened in the till/fill unit above the top of competent bedrock, to monitor ISCO effectiveness: MW05-02, MW05-03, MW05-04, MW05-05, MW05-10 and MW05-11.

There are six (6) observation wells in AOC -1 overburden-screened in the upper fifteen feet of bedrock to monitor ISCO effectiveness: OW1-1, OW1-2, OW1-3, OW1-4, BR09-37 and BR09-39.

In AOC-2, there are five (5) observation wells screened in the overburden till/weathered shale unit to monitor ISCO effectiveness: IW2-1, IW2-3, OW2-2, OB09-36, and OB09-38.

In the northwest corner of the site, a pair of wells screened in overburden (MW05-21) and bedrock (BR07-31) are also monitored quarterly for VOC's.

Monitoring was conducted in accordance with the Field Sampling Plan included in the approved SMP. Sampling was completed on December 5 and 6, 2011. The Groundwater Field Sampling logs are included as Attachment A. The following were noteworthy observations or actions taken during sampling:

1. No sheen was observed in any well during fourth quarter sampling.
2. Wells MW05-05 and MW05-11 did not contain sufficient water to sample.

Groundwater Monitoring Results:

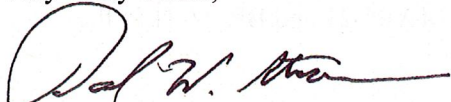
Locations of groundwater monitoring wells are shown on Figure 1. Field observations are shown on Tables 1 and 2. The analytical results are shown on Table 3. The ISCO injection appears to be causing a significant reduction in concentrations of chlorinated organics. Some variability has been observed and will be addressed in the Periodic Review Report.

Results of samples from the two western wells indicate that VOC's are still somewhat above groundwater standards.

As you requested and as required we have entered the data in the New York State Department of Environmental Conservation DER electronic database.

Please contact me if you have any questions.

Very Truly Yours,

A handwritten signature in dark ink, appearing to read "David W. Stoner", with a long horizontal flourish extending to the right.

David W. Stoner
President

Legend:

MW25-28



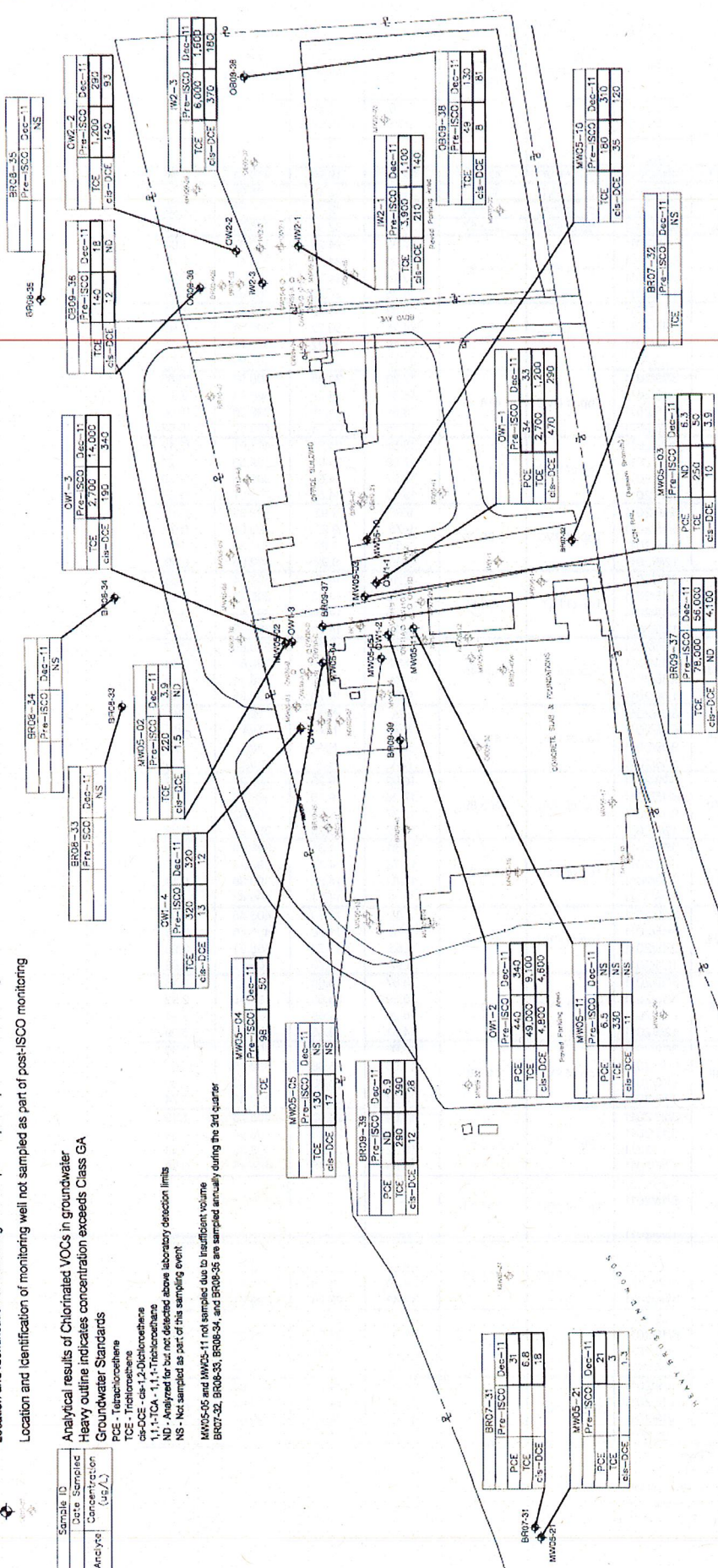
Location and Identification of monitoring well sampled as part of post-ISCO monitoring
 Location and Identification of monitoring well not sampled as part of post-ISCO monitoring

Analytical results of Chlorinated VOCs in groundwater
 Heavy outline indicates concentration exceeds Class GA Groundwater Standards

Sample ID	Date Sampled	Concentration (ug/L)
AW-1		

PCB - Polychlorinated biphenyls
 TCE - Trichloroethene
 cis-DCE - cis-1,2-Dichloroethane
 1,1,1-TCA - 1,1,1-Trichloroethane
 ND - Analyzed for but not detected above laboratory detection limits
 NS - Not sampled as part of this sampling event

MW25-05 and MW25-11 not sampled due to insufficient volume
 BR07-32, BR08-33, BR08-34, and BR08-35 are sampled annually during the 3rd quarter



DW Stoner & Associates
 LLC

Manlius, New York

DATE: 01/2012 JOB No: 1201



NOTES:
 1. ALL DATA ARE PRELIMINARY AND SUBJECT TO REVIEW AND APPROVAL BY THE CLIENT.
 2. ALL DATA ARE PRELIMINARY AND SUBJECT TO REVIEW AND APPROVAL BY THE CLIENT.
 3. ALL DATA ARE PRELIMINARY AND SUBJECT TO REVIEW AND APPROVAL BY THE CLIENT.

Pass & Seymour, Inc./Boyd Avenue
 50 Boyd Avenue
 Solway, New York
 Post-ISCO Groundwater Monitoring
 Figure 1 - Analytical Results
 for Chlorinated VOCs in Groundwater

Table 1: (Page 1 of 1) Groundwater Elevations, Pass & Seymour.

Monitoring Well I.D.	Date	Reference Point	Reference Elevation (feet)	DTW (feet)	DOW (feet)	Water Elevation	Volume (gal)
BR07-31	3/30/2011	Top of PVC		7.80	19.78		1.92
	6/15/2011			9.15	19.78		1.70
	9/19/2011			9.47	19.78		1.65
	12/6/2011			8.32	19.78		1.83
BR07-32	9/19/2011	Top of PVC	427.42	16.51	19.90	410.91	0.54
BR08-33	9/19/2011	Top of PVC	408.11	22.45	42.11	385.66	3.15
BR08-34	9/19/2011	Top of PVC	408.70	8.90	42.35	399.80	5.35
BR08-35	9/19/2011	Top of PVC	408.57	8.53	32.13	400.04	3.78
BR09-37	3/29/2011	Top of PVC	417.85	17.83	24.28	400.02	1.03
	6/15/2011			19.36	24.28	398.49	0.79
	9/19/2011			19.28	24.28	398.57	0.80
	12/6/2011			18.25	24.28	399.60	0.96
BR09-39	3/29/2011	Top of PVC	424.06	20.03	30.22	404.03	1.63
	6/15/2011			24.25	30.22	399.81	0.96
	9/19/2011			24.16	30.22	399.90	0.97
	12/5/2011			23.10	30.22	400.96	1.14
IW2-1	3/29/2011	Top of PVC	418.25	17.33	34.35	400.92	10.89
	6/15/2011			18.81	34.35	399.44	9.95
	9/19/2011			18.69	34.35	399.56	10.00
	12/5/2011			17.75	34.35	400.50	10.62
IW2-3	3/29/2011	Top of PVC	416.62	15.55	34.60	401.07	12.19
	6/15/2011			17.09	34.60	399.53	11.21
	9/19/2011			16.97	34.60	399.65	11.30
	12/5/2011			16.05	34.60	400.57	11.87
MW05-02	3/29/2011	Top of PVC	408.83	9.00	9.92	399.83	0.15
	6/15/2011			9.75	9.92	399.08	0.03
	9/19/2011			9.53	9.92	399.30	0.06
	12/6/2011			6.80	9.92	402.03	0.50
MW05-03	3/29/2011	Top of PVC	408.50	12.16	14.20	396.34	0.33
	6/15/2011			12.72	14.20	395.78	0.24
	9/19/2011			12.55	14.20	395.95	0.26
	12/5/2011			12.21	14.20	396.29	0.32
MW05-04	3/30/2011	Top of PVC	408.45	9.57	10.70	398.88	0.18
	6/15/2011			9.81	10.70	398.64	0.14
	9/19/2011			9.74	10.70	398.71	0.15
	12/6/2011			9.50	10.70	398.95	0.19
MW05-05	3/30/2011	Top of PVC	410.40	N/A	N/A	N/A	N/A
	6/15/2011			N/A	N/A	N/A	N/A
	9/19/2011			N/A	N/A	N/A	N/A
	12/6/2011			N/A	N/A	N/A	N/A
MW05-10	3/29/2011	Top of PVC	403.89	16.62	19.25	387.27	0.42
	6/15/2011			17.28	19.25	386.61	0.32
	9/19/2011			17.27	19.25	386.62	0.32
	12/5/2011			16.92	19.25	386.97	0.38
MW05-11	3/30/2011	Top of PVC	410.00	13.31	14.31	396.69	0.16
	6/15/2011			13.75	14.31	396.25	0.09
	9/19/2011			13.64	14.31	396.36	0.11
	12/6/2011			13.57	14.31	396.43	0.12
MW05-21	3/30/2011	Top of PVC	411.46	5.01	11.70	406.45	1.07
	6/15/2011			5.70	11.70	405.76	0.96
	9/19/2011			5.55	11.70	405.91	0.98
	12/6/2011			4.97	11.70	406.49	1.08
OB09-36	3/29/2011	Top of PVC	414.84	13.87	33.65	400.97	3.16
	6/15/2011			15.39	33.65	399.45	2.92
	9/19/2011			15.26	33.65	399.58	2.94
	12/5/2011			14.31	33.65	400.53	3.09
OB09-38	3/29/2011	Top of PVC	416.68	15.86	33.38	400.82	2.80
	6/15/2011			17.33	33.38	399.35	2.57
	9/19/2011			17.15	33.38	399.53	2.60
	12/5/2011			16.28	33.38	400.40	2.74
OW1-1	3/29/2011	Top of PVC	421.40	15.64	23.05	405.76	1.19
	6/15/2011			17.86	23.05	403.54	0.83
	9/19/2011			18.02	23.05	403.38	0.48
	12/5/2011			16.95	23.05	404.45	0.98
OW1-2	3/29/2011	Top of PVC	421.25	-	-	-	-
	6/15/2011			-	-	-	-
	9/19/2011			-	-	-	-
	12/6/2011			-	-	-	-
OW1-3	3/29/2011	Top of PVC	417.16	17.04	25.75	400.12	1.39
	6/15/2011			18.55	25.75	398.61	1.15
	9/19/2011			18.50	25.75	398.66	1.16
	12/6/2011			17.43	25.75	399.73	1.33
OW1-4	3/29/2011	Top of PVC	419.90	18.13	27.91	401.77	1.56
	6/15/2011			19.90	27.91	400.00	1.28
	9/19/2011			19.77	27.97	400.13	1.30
	12/5/2011			18.60	27.97	401.30	1.49
OW2-2	3/29/2011	Top of PVC	416.59	15.60	34.71	400.99	3.06
	6/15/2011			17.10	34.71	399.49	2.82
	9/19/2011			17.02	34.71	399.57	2.83
	12/5/2011			16.03	34.71	400.56	2.99

DTW - depth to water

DOW - depth of well

(-) - not measured due to presence of an oil layer in well

N/A - not applicable because well was dry

Top of PVC elevation for BR07-31 is not measured

Shadowed cells indicate that well was raised due to soil cover so top of PVC elevation listed above is incorrect

Table 2: (Page 1 of 1) Groundwater Field Parameters, Pass & Seymour.

Well I.D.	Date	Time	Temp (°C)	Conductivity (mmhos/cm)	Salinity	Dissolved Oxygen (%)	pH (units)	Eh (mV)	Turbidity (NTU)	Amount Purged (gal)
BR07-31	3/30/2011	9:40	3.86	2.282	2.01	0.76	7.25	120.0	17.0	6.00
	6/15/2011	17:15	9.77	2.983	2.25	0.04	7.29	63.0	100	5.00
	9/19/2011	14:25	11.34	2.885	2.07	3.91	8.72	12.1	160	5.00
	12/6/2011	12:30	6.34	2.399	1.97	2.15	7.83	90.5	11.0	5.50
BR07-32	9/19/2011	11:15	11.02	1.342	0.93	8.19	8.94	23.7	310	2.00
BR08-33	9/19/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.00/Dry
BR08-34	9/19/2011	15:28	9.62	4.852	3.78	11.07	8.94	29.4	450	7.00/Dry
BR08-35	9/19/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.25/Dry
BR09-37	3/29/2011	16:23	8.72	2.741	2.11	0.23	6.86	160.2	120	3.25
	6/15/2011	14:33	10.81	2.710	1.97	0.47	7.55	32.1	80.0	2.75
	9/19/2011	13:07	10.36	2.424	1.78	4.44	8.51	80.4	65.0	2.50
	12/6/2011	10:05	8.44	2.388	1.84	2.13	8.52	56.8	32.0	3.00
BR09-39	3/29/2011	14:50	9.86	1.346	0.97	0.52	7.05	112.5	24.0	5.00
	6/15/2011	16:20	10.64	1.642	1.17	0.04	7.48	77.3	1.30	3.00
	9/19/2011	11:45	11.02	1.242	0.86	7.14	8.70	37.1	1.40	3.00
	12/5/2011	14:30	9.09	1.196	0.87	3.81	8.02	58.2	6.10	3.50
IW2-1	3/29/2011	11:34	9.84	3.439	2.61	0.65	7.03	110.5	110	29.00
	6/15/2011	10:57	11.13	3.720	2.73	0.03	7.43	69.7	160	30.00
	9/19/2011	8:42	9.12	3.225	2.48	6.12	8.49	23.9	75.0	30.00
	12/5/2011	12:30	8.03	3.193	2.53	2.08	7.85	43.2	50.0	32.00
IW2-3	3/29/2011	NS	NS	NS	NS	NS	NS	NS	NS	1.00
	6/15/2011	10:00	11.10	3.725	2.74	0.10	7.58	77.7	22.0	35.00
	9/19/2011	9:10	9.00	3.318	2.57	6.70	8.59	31.0	>1000	34.00
	12/5/2011	11:40	7.90	3.245	2.59	1.87	7.99	53.3	40.0	36.00
MW05-02	3/29/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.25/Dry
	6/15/2011	-	-	-	-	-	-	-	-	-
	9/19/2011	-	-	-	-	-	-	-	-	-
	12/6/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.25/Dry
MW05-03	3/29/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00
	6/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.75/Dry
	9/19/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.80
	12/5/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00
MW05-04	3/30/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.50
	6/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.50
	9/19/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.50
	12/6/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.50
MW05-05	3/30/2011	-	-	-	-	-	-	-	-	-
	6/15/2011	-	-	-	-	-	-	-	-	-
	9/19/2011	-	-	-	-	-	-	-	-	-
	12/6/2011	-	-	-	-	-	-	-	-	-
MW05-10	3/29/2011	12:20	7.59	3.589	2.90	0.75	6.94	161.1	120	1.50
	6/15/2011	11:33	9.75	3.167	2.39	1.00	7.52	80.3	130	1.00
	9/19/2011	10:15	9.89	2.768	2.07	8.64	8.81	67.2	340	1.00
	12/5/2011	13:00	8.73	2.776	2.14	3.15	7.94	42.8	55.0	1.25
MW05-11	3/30/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.50
	6/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.25/Dry
	9/19/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.25/Dry
	12/6/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.25/Dry
MW05-21	3/30/2011	10:02	3.20	1.881	1.67	0.34	6.98	117.7	>1000	3.50
	6/15/2011	16:55	11.33	2.855	2.05	0.08	7.38	54.1	>1000	3.00
	9/19/2011	14:24	12.40	2.820	1.97	6.05	8.87	8.0	>1000	3.00
	12/6/2011	12:45	5.53	1.957	1.62	2.24	8.02	81.0	>1000	3.50
OB09-36	3/29/2011	10:16	8.13	3.743	2.99	0.53	7.10	101.8	800	10.50
	6/15/2011	8:48	8.83	4.164	3.28	0.18	7.39	71.1	300	9.00
	9/19/2011	9:55	8.57	3.723	2.94	5.24	8.62	55.8	550	9.00
	12/5/2011	10:05	7.84	3.639	2.93	2.05	7.79	46.2	110	9.50
OB09-38	3/29/2011	8:00	8.52	2.378	1.83	0.43	7.58	58.3	>1000	9.00
	6/15/2011	7:05	8.31	2.477	1.92	0.64	7.34	28.6	700	8.00
	9/19/2011	8:12	8.09	2.270	1.76	3.44	8.40	-1.6	>1000	8.00
	12/5/2011	8:40	8.06	2.224	1.73	1.80	8.10	34.5	320	8.50
OW1-1	3/29/2011	13:10	7.73	2.940	2.34	0.48	7.09	113.7	120	3.50
	6/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.50/Dry
	9/19/2011	10:39	10.93	2.669	1.93	9.97	8.68	47.6	400	1.50
	12/5/2011	13:35	8.90	2.548	1.95	5.23	7.83	59.1	45.0	2.50/Dry
OW1-2	3/29/2011	NM	NM	NM	NM	NM	NM	NM	NM	2.00
	6/15/2011	NM	NM	NM	NM	NM	NM	NM	NM	0.00
	9/19/2011	NM	NM	NM	NM	NM	NM	NM	NM	0.00
	12/6/2011	NM	NM	NM	NM	NM	NM	NM	NM	0.00
OW1-3	3/29/2011	15:40	7.28	1.466	1.14	0.55	7.08	108.8	23.0	4.25
	6/15/2011	15:06	10.21	1.499	1.07	0.31	7.40	61.6	6.70	4.00
	9/19/2011	12:30	12.83	1.278	0.84	7.62	8.38	86.4	3.00	3.50
	12/6/2011	11:00	9.50	0.986	0.70	4.13	8.45	50.1	2.90	4.00
OW1-4	3/29/2011	14:07	8.56	0.794	0.58	1.03	7.41	89.4	65.0	5.00
	6/15/2011	15:51	10.24	0.928	0.65	0.04	7.57	55.2	60.0	4.00
	9/19/2011	12:08	12.21	0.823	0.54	10.41	8.70	89.6	90.0	4.00
	12/5/2011	15:10	10.01	0.688	0.48	4.69	7.95	60.6	7.30	5.00
OW2-2	3/29/2011	9:24	8.55	2.958	2.31	0.46	6.75	84.2	>1000	9.75
	6/15/2011	8:03	9.86	3.235	2.43	0.30	7.33	67.8	900	9.00
	9/19/2011	9:33	8.52	2.714	2.10	5.56	8.65	56.7	>1000	9.00
	12/5/2011	9:30	9.78	2.446	1.92	2.18	7.74	43.7	370	9.00

N/A - Parameters not collected due to low volume

NM - Not measured due to presence of oil layer in well

NS - Not sampled due to presence of permanganate solution

(-) - Well dry

Field parameters collected using a YSI 6820 after sample was collected

Table 3: (Page 1 of 7) Post-ISCO Groundwater Sample Analytical Results, Pass & Seymour.

[illegible]

All values reported are ug/L.
 U = Analyzed for but Not Detected
 J = Indicates an estimated value
 B = Analyte also detected in the associated laboratory blank
 NS = Not sampled, Samples collected annually.
 (-) = No sample collected because well was dry
 Blank only indicated that the sample was not analyzed for that analyte
 Pre-HCO data collected
 Bold and boxed results indicate an exceedance of Groundwater

Sample Identification

U - Analyzed for but Not Detected

(*) = Not sampled due to presence

Pre-ISCO data collected

[illegible]

Analyte	MW50-24		C89-38		C99-46		C109-54		C119-62		C129-70		C139-78		C149-86		C159-94		C169-102		C179-110		C189-118		C199-126		C209-134		C219-142		C229-150		C239-158		C249-166		C259-174		C269-182		C279-190		C289-198		C299-206		C309-214		C319-222		C329-230		C339-238		C349-246		C359-254		C369-262		C379-270		C389-278		C399-286		C409-294		C419-302		C429-310		C439-318		C449-326		C459-334		C469-342		C479-350		C489-358		C499-366		C509-374		C519-382		C529-390		C539-398		C549-406		C559-414		C569-422		C579-430		C589-438		C599-446		C609-454		C619-462		C629-470		C639-478		C649-486		C659-494		C669-502		C679-510		C689-518		C699-526		C709-534		C719-542		C729-550		C739-558		C749-566		C759-574		C769-582		C779-590		C789-598		C799-606		C809-614		C819-622		C829-630		C839-638		C849-646		C859-654		C869-662		C879-670		C889-678		C899-686		C909-694		C919-702		C929-710		C939-718		C949-726		C959-734		C969-742		C979-750		C989-758		C999-766		C1009-774		C1019-782		C1029-790		C1039-798		C1049-806		C1059-814		C1069-822		C1079-830		C1089-838		C1099-846		C1109-854		C1119-862		C1129-870		C1139-878		C1149-886		C1159-894		C1169-902		C1179-910		C1189-918		C1199-926		C1209-934		C1219-942		C1229-950		C1239-958		C1249-966		C1259-974		C1269-982		C1279-990		C1289-998		C1299-1006		C1309-1014		C1319-1022		C1329-1030		C1339-1038		C1349-1046		C1359-1054		C1369-1062		C1379-1070		C1389-1078		C1399-1086		C1409-1094		C1419-1102		C1429-1110		C1439-1118		C1449-1126		C1459-1134		C1469-1142		C1479-1150		C1489-1158		C1499-1166		C1509-1174		C1519-1182		C1529-1190		C1539-1198		C1549-1206		C1559-1214		C1569-1222		C1579-1230		C1589-1238		C1599-1246		C1609-1254		C1619-1262		C1629-1270		C1639-1278		C1649-1286		C1659-1294		C1669-1302		C1679-1310		C1689-1318		C1699-1326		C1709-1334		C1719-1342		C1729-1350		C1739-1358		C1749-1366		C1759-1374		C1769-1382		C1779-1390		C1789-1398		C1799-1406		C1809-1414		C1819-1422		C1829-1430		C1839-1438		C1849-1446		C1859-1454		C1869-1462		C1879-1470		C1889-1478		C1899-1486		C1909-1494		C1919-1502		C1929-1510		C1939-1518		C1949-1526		C1959-1534		C1969-1542		C1979-1550		C1989-1558		C1999-1566		C2009-1574		C2019-1582		C2029-1590		C2039-1598		C2049-1606		C2059-1614		C2069-1622		C2079-1630		C2089-1638		C2099-1646		C2109-1654		C2119-1662		C2129-1670		C2139-1678		C2149-1686		C2159-1694		C2169-1702		C2179-1710		C2189-1718		C2199-1726		C2209-1734		C2219-1742		C2229-1750		C2239-1758		C2249-1766		C2259-1774		C2269-1782		C2279-1790		C2289-1798		C2299-1806		C2309-1814		C2319-1822		C2329-1830		C2339-1838		C2349-1846		C2359-1854		C2369-1862		C2379-1870		C2389-1878		C2399-1886		C2409-1894		C2419-1902		C2429-1910		C2439-1918		C2449-1926		C2459-1934		C2469-1942		C2479-1950		C2489-1958		C2499-1966		C2509-1974		C2519-1982		C2529-1990		C2539-1998		C2549-2006		C2559-2014		C2569-2022		C2579-2030		C2589-2038		C2599-2046		C2609-2054		C2619-2062		C2629-2070		C2639-2078		C2649-2086		C2659-2094		C2669-2102		C2679-2110		C2689-2118		C2699-2126		C2709-2134		C2719-2142		C2729-2150		C2739-2158		C2749-2166		C2759-2174		C2769-2182		C2779-2190		C2789-2198		C2799-2206		C2809-2214		C2819-2222		C2829-2230		C2839-2238		C2849-2246		C2859-2254		C2869-2262		C2879-2270		C2889-2278		C2899-2286		C2909-2294		C2919-2302		C2929-2310		C2939-2318		C2949-2326		C2959-2334		C2969-2342		C2979-2350		C2989-2358		C2999-2366		C3009-2374		C3019-2382		C3029-2390		C3039-2398		C3049-2406		C3059-2414		C3069-2422		C3079-2430		C3089-2438		C3099-2446		C3109-2454		C3119-2462		C3129-2470		C3139-2478		C3149-2486		C3159-2494		C3169-2502		C3179-2510		C3189-2518		C3199-2526		C3209-2534		C3219-2542		C3229-2550		C3239-2558		C3249-2566		C3259-2574		C3269-2582		C3279-2590		C3289-2598		C3299-2606		C3309-2614		C3319-2622		C3329-2630		C3339-2638		C3349-2646		C3359-2654		C3369-2662		C3379-2670		C3389-2678		C3399-2686		C3409-2694		C3419-2702		C3429-2710		C3439-2718		C3449-2726		C3459-2734		C3469-2742		C3479-2750		C3489-2758		C3499-2766		C3509-2774		C3519-2782		C3529-2790		C3539-2798		C3549-2806		C3559-2814		C3569-2822		C3579-2830		C3589-2838		C3599-2846		C3609-2854		C3619-2862		C3629-2870		C3639-2878		C3649-2886		C3659-2894		C3669-2902		C3679-2910		C3689-2918		C3699-2926		C3709-2934		C3719-2942		C3729-2950		C3739-2958		C3749-2966		C3759-2974		C3769-2982		C3779-2990		C3789-2998		C3799-3006		C3809-3014		C3819-3022		C3829-3030		C3839-3038		C3849-3046		C3859-3054		C3869-3062		C3879-3070		C3889-3078		C3899-3086		C3909-3094		C3919-3102		C3929-3110		C3939-3118		C3949-3126		C3959-3134		C3969-3142		C3979-3150		C3989-3158		C3999-3166		C4009-3174		C4019-3182		C4029-3190		C4039-3198		C4049-3206		C4059-3214		C4069-3222		C4079-3230		C4089-3238		C4099-3246		C4109-3254		C4119-3262		C4129-3270		C4139-3278		C4149-3286		C4159-3294		C4169-3302		C4179-3310		C4189-3318		C4199-3326		C4209-3334		C4219-3342		C4229-3350		C4239-3358		C4249-3366		C4259-3374		C4269-3382		C4279-3390		C4289-3398		C4299-3406		C4309-3414		C4319-3422		C4329-3430		C4339-3438		C4349-3446		C4359-3454		C4369-3462		C4379-3470		C4389-3478		C4399-3486		C4409-3494		C4419-3502		C4429-3510		C4439-3518		C4449-3526		C4459-3534		C4469-3542		C4479-3550		C4489-3558		C4499-3566		C4509-3574		C4519-3582		C4529-3590		C4539-3598		C4549-3606		C4559-3614		C4569-3622		C4579-3630		C4589-3638		C4599-3646		C4609-3654		C4619-3662		C4629-3670		C4639-3678		C4649-3686		C4659-3694		C4669-3702		C4679-3710		C4689-3718		C4699-3726		C4709-3734		C4719-3742		C4729-3750		C4739-3758		C4749-3766		C4759-3774		C4769-3782		C4779-3790		C4789-3798		C4799-3806		C4809-3814		C4819-3822		C4829-3830		C4839-3838		C4849-3846		C4859-3854		C4869-3862		C4879-3870		C4889-3878		C4899-3886		C4909-3894		C4919-3902		C4929-3910		C4939-3918		C4949-3926		C4959-3934		C4969-3942		C4979-3950		C4989-3958		C4999-3966		C5009-3974		C5019-3982		C5029-3990		C5039-3998		C5049-4006		C5059-4014		C5069-4022		C5079-4030		C5089-4038		C5099-4046		C5109-4054		C5119-4062		C5129-4070		C5139-4078		C5149-4086		C5159-4094		C5169-4102		C5179-4110		C5189-4118		C5199-4126		C5209-4134		C5219-4142		C5229-4150		C5239-4158		C5249-4166		C5259-4174		C5269-4182		C5279-4190		C5289-4198		C5299-4206		C5309-4214		C5319-4222		C5329-4230		C5339-4238		C5349-4246		C5359-4254		C5369-4262		C5379-4270		C5389-4278		C5399-4286		C5409-4294		C5419-4302		C5429-4310		C5439-4318		C5449-4326		C5459-4334		C5469-4342		C5479-4350		C5489-4358		C5499-4366		C5509-4374		C5519-4382		C5529-4390		C5539-4398		C5549-4406		C5559-4414		C5569-4422		C5579-4430		C5589-4438		C5599-4446		C5609-4454		C5619-4462		C5629-4470		C5639-4478		C5649-4486		C5659-4494		C5669-4502		C5679-4510		C5689-4518		C5699-4526		C5709-4534		C5719-4542		C5729-4550		C5739-4558		C5749-4566		C5759-4574		C5769-4582		C5779-4590		C5789-4598		C5799-4606		C5809-4614		C5819-4622		C5829-4630		C5839-4638		C5849-4646		C5859-4654		C5869-4662		C5879-4670		C5889-4678		C5899-4686		C5909-4694		C5919-4702		C5929-4710		C5939-4718		C5949-4726		C5959-4734		C5969-4742		C5979-4750		C5989-4758		C5999-4766		C6009-4774		C6019-4782		C6029-4790		C6039-4798		C6049-4806		C6059-4814		C6069-4822		C6079-4830		C6089-4838		C6099-4846		C6109-4854		C6119-4862		C6129-4870		C6139-4878		C6149-4886		C6159-4894		C6169-4902		C6179-4910		C6189-4918		C6199-4926		C6209-4934		C6219-4942		C6229-4950		C6239-4958		C6249-4966		C6259-4974		C6269-4982		C6279-4990		C6289-4998		C6299-5006		C6309-5014		C6319-5022		C6329-5030		C6339-5038		C6349-5046		C6359-5054		C6369-5062		C6379-5070		C6389-5078		C6399-5086		C6409-5094		C6419-5102		C6429-5110		C6439-5118		C6449-5126		C6459-5134		C6469-5142		C6479-5150		C6489-5158		C6499-5166		C6509-5174		C6519-5182		C6529-5190		C6539-5198		C6549-5206		C6559-5214		C6569-5222		C6579-5230		C6589-5238		C6599-5246		C6609-5254		C6619-5262		C6629-5270		C6639-5278		C6649-5286		C6659-5294		C6669-5302		C6679-5310		C6689-5318		C6699-5326		C6709-5334		C6719-5342		C6729-5350		C6739-5358		C6749-5366		C6759-5374		C6769-5382		C6779-5390		C6789-5398		C6799-5406		C6809-5414		C6819-5422		C6829-5430		C6839-5438		C6849-5446		C6859-5454		C6869-5462		C6879-5470		C6889-5478		C6899-5486		C6909-5494		C6919-5502		C6929-5510		C6939-5518		C6949-5526		C6959-5534		C6969-5542		C6979-5550		C6989-5558		C6999-5566		C7009-5574		C7019-5582		C7029-5590		C7039-5598		C7049-5606		C7059-5614		C7069-5622	
---------	---------	--	--------	--	--------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	-----------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--	------------	--

Table 1 Baseline characteristics of the study population

Characteristic	Number of patients (n)	Percentage (%)
Age (mean ± SD)	65.2 ± 12.5	
Gender		
Male	120	60.0
Female	80	40.0
Baseline characteristics		
Diabetes mellitus		
Yes	45	22.5
No	155	77.5
Hypertension		
Yes	60	30.0
No	140	70.0
Hyperlipidemia		
Yes	70	35.0
No	120	60.0
Chronic kidney disease		
Yes	30	15.0
No	170	85.0
Current smoking		
Yes	20	10.0
No	180	90.0
Alcohol consumption		
Yes	10	5.0
No	190	95.0
Medication at baseline		
Antidiabetic drugs		
Yes	45	22.5
No	155	77.5
Antihypertensive drugs		
Yes	60	30.0
No	140	70.0
Lipid-lowering drugs		
Yes	70	35.0
No	120	60.0
Cardiovascular drugs		
Yes	30	15.0
No	170	85.0

Abbreviations: SD, standard deviation; n, number of patients; %, percentage.

Footnote: Data were obtained from the baseline assessment of the study population.

Downloaded from <https://www.cambridge.org/core>. University of Cambridge, on 01 Jun 2020 at 10:00:00, subject to the Cambridge Core terms of use, available at <https://www.cambridge.org/core/terms>. <https://doi.org/10.1017/9781009050710.003>

Table 3: (Page 6 of 7) Post-ISCO Groundwater Sample Analytical Results. Pass & Seymour.

GW Sqr (sq-ft)	Analyte	BR07-24				BR07-42				BR08-43				BR08-44				BR08-45			
		Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11
10,000	Nitrate by EPA Method 9506	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NS	COD by EPA Method 415.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NS	Chemical Oxygen Demand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NS	TGC by EPA Method 9506A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
300	Total Organic Carbon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
300	Metals by EPA Method 610B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
300	Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GW Sqr (sq-ft)	Analyte	BR08-37				BR08-39				MW08-40				MW08-41				MW08-42			
		Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11
10,000	Nitrate by EPA Method 9506	2,100	860	1,300	1,200	510	7,200	5,200	5,700	4,900	440	730	560	850	760	1,000	770	370	1,000	730	500
NS	COD by EPA Method 415.4	9,400	J	10,000	43,000	17,000	4,300	J	14,000	17,000	5,800	J	43,000	35,000	45,000	10,000	71,000	J	NS	NS	U
NS	Chemical Oxygen Demand	U	2,300	2,000	2,400	2,800	1,400	1,100	1,700	1,800	U	3,300	2,800	1,600	1,600	1,600	1,400	2,300	1,600	2,400	2,400
300	TGC by EPA Method 9506A	17,600	1,600	630	770	850	132	U	U	160	U	1,500	3,300	550	970	970	4,370	NS	NS	NS	NS
300	Total Organic Carbon	1,900	2,100	1,800	1,400	1,300	272	U	27	27	U	250	300	1,200	320	320	473	NS	NS	NS	NS
GW Sqr (sq-ft)	Analyte	MW08-43				MW08-44				MW08-45				MW08-46				MW08-47			
		Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11
10,000	Nitrate by EPA Method 9506	1,900	17,900	8,600	12,900	54,900	2,700	2,300	2,600	3,500	2,100	-	-	-	-	-	-	3,000	2,300	2,300	3,600
NS	COD by EPA Method 415.4	U	46,000	18,000	12,000	U	U	U	10,000	U	-	-	-	-	-	-	-	8,100	J	34,000	62,000
NS	Chemical Oxygen Demand	1,100	3,400	2,500	3,300	3,000	1,100	1,400	1,400	1,700	2,100	-	-	-	-	-	-	1,800	U	1,600	2,000
300	TGC by EPA Method 9506A	8,150	8,800	3,100	3,300	2,800	290	U	U	210	U	-	-	-	-	-	-	3,530	420	780	3,400
300	Total Organic Carbon	850	700	730	730	710	49	U	33	43	U	-	-	-	-	-	-	89	25	35	150
GW Sqr (sq-ft)	Analyte	MW08-21				OW08-24				OW08-25				OW08-26				OW08-27			
		Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11
10,000	Nitrate by EPA Method 9506	NA	NA	NA	NA	NA	1,300	1,300	1,300	1,400	NA	94	J	U	U	U	3,700	7,400	1,300	500	1,400
NS	COD by EPA Method 415.4	NA	NA	NA	NA	NA	35,000	81,000	60,000	42,000	NA	3,900	J	79,000	50,000	38,000	55,000	23,000	58,000	220,000	130,000
NS	Chemical Oxygen Demand	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	2,400	1,300	2,500	2,000	2,600	2,600	U	4,100	5,300
NS	TGC by EPA Method 9506A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	U	1,800	2,100	2,000	2,000	1,900	2,600	U	1,900	1,600
300	Total Organic Carbon	NA	NA	NA	NA	NA	23,000	8,900	3,500	2,300	NA	33,700	17,000	34,000	34,000	42,000	42,000	9,500	2,600	2,600	2,600
300	Metals by EPA Method 610B	NA	NA	NA	NA	NA	373	260	170	200	NA	550	200	340	400	400	140	100	100	100	100
300	Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GW Sqr (sq-ft)	Analyte	OW08-3				OW08-4				OW08-5				OW08-6				OW08-7			
		Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11	Pre-ESGD	Mar-11	Sept-11	Dec-11
10,000	Nitrate by EPA Method 9506	760	1,900	2,300	3,400	2,100	3,000	1,600	1,800	1,300	210	170	U	340	1,800	860	2,600	860	860	860	860
NS	COD by EPA Method 415.4	3,700	J	U	38,000	11,000	15,000	10,000	10,000	U	180,000	61,000	36,000	53,000	27,000	30,000	70,000	36,000	41,000	41,000	41,000
NS	Chemical Oxygen Demand	U	2,100	2,500	4,100	2,100	U	1,300	1,700	7,000	1,300	U	2,800	1,900	2,500	2,400	1,900	1,600	1,600	2,400	2,400
NS	TGC by EPA Method 9506A	227	J	U	2,500	2,100	2,100	2,100	2,100	1,300	U	2,800	1,900	2,500	2,400	2,400	1,900	1,600	1,600	2,400	2,400
300	Total Organic Carbon	227	J	U	2,500	2,100	2,100	2,100	2,100	1,300	U	2,800	1,900	2,500	2,400	2,400	1,900	1,600	1,600	2,400	2,400
300	Metals by EPA Method 610B	227	J	U	2,500	2,100	2,100	2,100	2,100	1,300	U	2,800	1,900	2,500	2,400	2,400	1,900	1,600	1,600	2,400	2,400
300	Manganese	227	J	U	2,500	2,100	2,100	2,100	2,100	1,300	U	2,800	1,900	2,500	2,400	2,400	1,900	1,600	1,600	2,400	2,400

All values reported as ug/L
 U = Analyzed for but Not Detected
 J = Indicates an estimated value
 NA = Not analyzed for
 NS = No standard

Pre-ISCO data collected

Table 3: (Page 7 of 7) Post-ISCO Groundwater Sample Analytical Results, Pass & Seymour.

Analyte	GW Std ^A (ug/L)	Sample Identification								
		OW1-2					Duplicate			
Date Sampled		Pre-ISCO	Mar-11	Jun-11	Sep-11	Dec-11	Mar-11 (OW1-2)	Jun-11 (OW1-2)	Sep-11 (OW1-2)	Dec-11 (OW1-2)
SVOCs by EPA Method 8270C										
Acenaphthene	20	U	U	U	U	U	U	U	U	U
Acenaphthylene			U		U	U			U	U
Anthracene	50	460 J	U	U	U	U	U	U	U	U
Benidine	5	U	U		U	U	U	U	U	U
Benzo(a)anthracene	0.002	2,200	46	24	88	230	38	30	230	170
Benzo(b)fluoranthene	0.002	3,300	86	43	190	790	70	61	540	520
Benzo(k)fluoranthene	0.002	1,300	26		96		23	25		
Benzo(g,h,i)perylene		3,000	35	24	50	400	32	22	220	280
Benzo(a)pyrene	ND	2,100	52	29	110	500	41	37	340	320
Bis(2-chlorethoxy)methane	5	U	U	U	U	U	U	U	U	U
Bis(2-chloroethyl)ether	1.0						U	U	U	U
Bis(2-chloroisopropyl)ether		U	U		U	U	U	U	U	U
4-Bromophenyl-phenylether		U	U	U	U	U	U	U	U	U
2-Chloronaphthalene	10	U	U		U	U	U	U	U	U
4-Chlorophenyl-phenylether		U	U		U	U	U	U	U	U
Chrysene	0.002	2,300	43		64	180	30	24	230	140
Dibenz(a,h)anthracene		760	U			U	U	U	U	U
3,3-Dichlorobenzidine	5	U	U		U	U	U	U	U	U
2,4-Dinitrotoluene	5	U	U		U	U	U	U	U	U
2,6-Dinitrotoluene	5	U	U		U	U	U	U	U	U
Fluoranthene	50	4,100	98	43	120	410	72	59	380	280
Fluorene	50	410 J	U		U	U	U	U	U	U
Hexachlorobenzene	0.04	U	U		U	U	U	U	U	U
Hexachloro-1,3-butadiene	0.5	U	U		U	U	U	U	U	U
Hexachlorocyclopentadiene	5	U	U		U	U	U	U	U	U
Hexachloroethane	5	U	U		U	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	0.002	3,400	39	26	52	390	32	23	210	
Isophorone		U	U		U	U	U	U	U	U
Naphthalene	10	U	U		U	U	U	U	U	U
Nitrobenzene	0.4	U	U		U	U	U	U	U	U
n-Nitrosodimethylamine		U	U		U	U	U	U	U	U
n-Nitrosodiphenylamine		U	U		U	U	U	U	U	U
n-Nitrosodi-n-propylamine		U	U		U	U	U	U	U	U
Phenanthrene	50	450 J	U		U	U	U	U	U	U
Benzylbutyl phthalate		U	U		U	U	U	U	U	U
Bis(2-ethylhexyl)phthalate	5	1,300	35	32	77	260	30		210	170
Di-n-butyl phthalate	50	U	U	U	U	U	U		U	U
Diethyl phthalate	50	U	U		U	U	U		U	U
Dimethyl phthalate	50	U	U		U	U	U		U	U
Di-n-octyl phthalate	50	U	U		U	U	U		U	U
Pyrene	50	3,600	95	40	220	880	72	54	560	810
1,2,4-Trichlorobenzene	5	U	U		U	U	U	U	U	U
4-Chloro-3-methylphenol		U	U		U	U	U	U	U	U
2-Chlorophenol		U	U		U	U	U	U	U	U
2,4-Dichlorophenol	5	U	U		U	U	U	U	U	U
2,4-Dimethylphenol	50	U	U		U	U	U	U	U	U
4,6-Dinitro-2-methylphenol		U	U		U	U	U	U	U	U
2,4-Dinitrophenol	10	U	U		U	U	U	U	U	U
2-Nitrophenol		U	U		U	U	U	U	U	U
4-Nitrophenol		U	U		U	U	U	U	U	U
Pentachlorophenol	1	U	U		U	U	U	U	U	U
Phenol	1	U	U		U	U	U	U	U	U
2,4,6-Trichlorophenol		U	U		U	U	U	U	U	U

All values reported as ug/L

U - Analyzed for but Not Detected

J - Indicates an estimated value

ND - Non-detect

Pre-ISCO data collected

Bold and boxed results indicate an exceedance of Groundwater Standards

^A - GW Std - Class GA Groundwater Quality Standard or Guidance Value from New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (June 1998).

APPENDIX A

DW STONER & ASSOCIATES, LLC**DAILY FIELD REPORT**

DATE: Dec. 5, 2011

DW STONER & ASSOC REPRESENTATIVE: (SWRNA REP Ian McNamara)

PROJECT NAME: Pass and Seymour 2011 Monitoring

PROJECT NO. N1103

TIME ON /TIME OFF SITE: 7:30 AM /1600 PMSUBCONTRACTORS: Sampling completed by SWRNA personnel

1. Indicate the day's work objective, and summarize specific work that was actually completed today.

- ☐ Soil Borings
- ☐ Monitoring Wells Installed
- ☐ Test Pits
- ☐ Soil Excavation Removal
- ☐ Phase I Excavation
- ☒ Groundwater Sampling
- ☐ Explosive Gas Survey
- ☐ Soil Gas Survey
- ☐ Tank Removal
- ☐ Other

Describe (include site sketch if applicable):

Sampling completed in accordance with approved field sampling plan.

2. What manpower and equipment were used today? (Field personnel for each contractor, major power equipment, indicate DW STONER & ASSOCIATES-owned equipment, rental equipment, and subcontractor equipment)

Used disposable bailers, PID, Meters for temperature, conductivity, salinity, dissolved oxygen, pH, ORP turbidity and water level.

Describe any problems operating or (if applicable) calibrating field monitoring instruments (PID), air monitors, explosive gas meters, water quality meters, pumps, etc.)

NONE

3. Were samples collected for laboratory analysis (YES or NO?) If YES, indicate sample location and/or I.D. sample depth (soils borings), and analytical program

SOIL SAMPLES	GROUNDWATER SAMPLES	OTHER
	Samples taken from OB09-38, OW2-2, OB09-36,IW2-3, IW2-1,MW05-10,MW05-03, OW1-1,BR09-39,OW1-4, MW05-02 and MW05-03	

4. Were there any changes to scope of work or departures from approved work plan? If so, describe:
NONE

5. Were there any damages to property? _____YES ____X____NO
If YES, explain and locates.

6. Were photographs taken by project representative? _____YES ____X____NO If YES, then indicate specific location, description, and number of photos.

7. What were weather and site conditions?

TIME	PRECIPITATION	SKIES	AIR TEMPERATURE	GROUND/PAVEMENT MOISTURE
9:00 a.m.	Overcast		45 degrees F	damp
Noon	Overcast			damp
3:00 p.m.	Overcast		55 degrees F	damp

8. Who were the visitors that came to the site? List names.
NONE

9. Additional Comments: Elevated turbidity noted in OB09-35, OW2-2, OB09-36, IW2-3, IW2-1, OW1-1.
No sheen or odor observed in any wells sampled.

DW STONER & ASSOCIATES, LLC**DAILY FIELD REPORT**

DATE: December 6, 2011

DW STONER & ASSOC REPRESENTATIVE: (SWRNA rep Ian McNamara)

PROJECT NAME: _____ Pass and Seymour 2011 Monitoring _____

PROJECT NO. N1103

TIME ON /TIME OFF SITE: _____ 8:00 AM / 13:15 PM _____

SUBCONTRACTORS: _____ Sampling completed by SWRNA personnel _____

1. Indicate the day's work objective, and summarize specific work that was actually completed today.

- ☐ Soil Borings
- ☐ Monitoring Wells Installed
- ☐ Test Pits
- ☐ Soil Excavation Removal
- ☐ Phase I Excavation
- ☒ Groundwater Sampling
- ☐ Explosive Gas Survey
- ☐ Soil Gas Survey
- ☐ Tank Removal
- ☐ Other

Describe (include site sketch if applicable):

Sampling completed in accordance with approved field-sampling plan.

2. What manpower and equipment were used today? (Field personnel for each contractor, major power equipment, indicate DW STONER & ASSOCIATES-owned equipment, rental equipment, and subcontractor equipment)

Used disposable bailers, PID, meters for temperature, conductivity, salinity, dissolved oxygen, pH, ORP, turbidity and water level.

Describe any problems operating or (if applicable) calibrating field monitoring instruments (PID), air monitors, explosive gas meters, water quality meters, pumps, etc.)

Insufficient volume to sample MW05-11 and MW05-05 (dry).

3. Were samples collected for laboratory analysis (**YES** or NO?) If YES, indicate sample location and/or I.D. sample depth (soils borings), and analytical program

SOIL SAMPLES	GROUNDWATER SAMPLES	OTHER
	Samples taken from OW1-2, BR09-37, MW05-04, MW05-02, OW1-3, MW05-21 and BR07-31	

4. Were there any changes to scope of work or departures from approved work plan? If so, describe:

No samples taken from MW05-05 NS MW05-11 due to insufficient volume.

5. Were there any damages to property? _____ YES ___X___ NO
If YES, explain and locates.

6. Were photographs taken by project representative? _____ YES ___X___ NO If YES, then indicate specific location, description, and number of photos.

7. What were weather and site conditions?

TIME	PRECEIPATION	SKIES	AIR TEMPERATURE	GROUND/PAVEMENT MOISTURE
9:00 a.m.	Showers	O.C.	40 degrees F	Wet
Noon	Showers	O.C.	40 degrees F	Wet
3:00 p.m.				

8. Who were the visitors that came to the site? List names.

NONE

9. Additional Comments:

Elevated turbidity noted for wells BR09-37, MW05-02, OW1-3, and MW05-21. Slight odor in BR09-37. No sheen in any wells. Appearance of floating material believed to be spent permanganate in OW1-3.

