



November 3, 2015

Reference No.007097

Submitted via email (pdf)

Mr. Peter Ramanauskas
U.S. Environmental Protection Agency, Region 5
77 West Jackson Blvd., LU-9J
Chicago, IL 60604-3590

Dear Mr. Ramanauskas:

**Re: Well Abandonment Summary Report
USEPA Facility ID No. MID005356902
660 South Boulevard East
Pontiac, Michigan**

1. Introduction

GHD Services Inc. (GHD), formerly Conestoga-Rovers & Associates (CRA), has prepared this letter report to summarize monitoring well abandonment activities completed at the former Pontiac CenterPoint Business Campus (Site) located at 660 South Boulevard East in Pontiac, Michigan. This letter details the abandonment of monitoring and recovery wells at areas of interest (AOIs) 50, 52, 53, and 71 (Figure 1). The well locations are identified in Figures 2, 3, 4, and 5.

A total of 101 wells at the four AOIs were properly closed in accordance with GHD standard operating procedures which comply with ASTM and state requirements (where applicable). The wells were installed between 2005 and 2009 for groundwater investigation and recovery purposes. The location of each AOI within the Site is presented in Figure 1. Figures 2, 3, 4, and 5 provide the location of abandoned wells within AOIs 50, 52, 53 and 71, respectively. Table 1 presents a summary of wells abandoned, surveyed northing/easting coordinates, well details, water levels and abandonment details. Attachment A presents GHD's stratigraphic and instrumentation logs of abandoned monitoring well locations.

2. Monitoring Well Abandonment Procedures

Well abandonment activities were completed on June 5, 2014 (AOI-71) and June 8, 2015 through June 16, 2015 (AOIs 50, 52 and 53) under the direct supervision of a GHD representative. Wells were grouted into place using a Portland Mixture (94 lbs cement, 5 percent bentonite gel, and 7 gallons of potable water), cut and capped 2 feet below ground surface and finished to match the surrounding ground cover.

At each well, a tremie pipe was placed to the bottom of the well and grout was pumped into the well. The lower end of the tremie pipe was kept immersed in fresh grout so rising grout from the bottom displaced fluids without washing out the grout content. The tremie pipe was raised when grout could no longer be easily forced from the pipe into the well or when grout reached to within 2 feet below ground surface. All liquids were captured as they flowed out of the well and placed into 55-gallon drums for off-Site disposal. A total of eight drums of waste were generated from well abandonment activities. The eight drums were transported by Waste Management of MI, Inc. (WM) to an off-Site facility for disposal.

3. Summary

Upon completion of well abandonment at the four AOIs (50, 52, 53 and 71), no additional remedial and/or environmental activities are anticipated at the Site.

Please contact me at (734) 453-5123 if you require further information or clarification.

Sincerely,

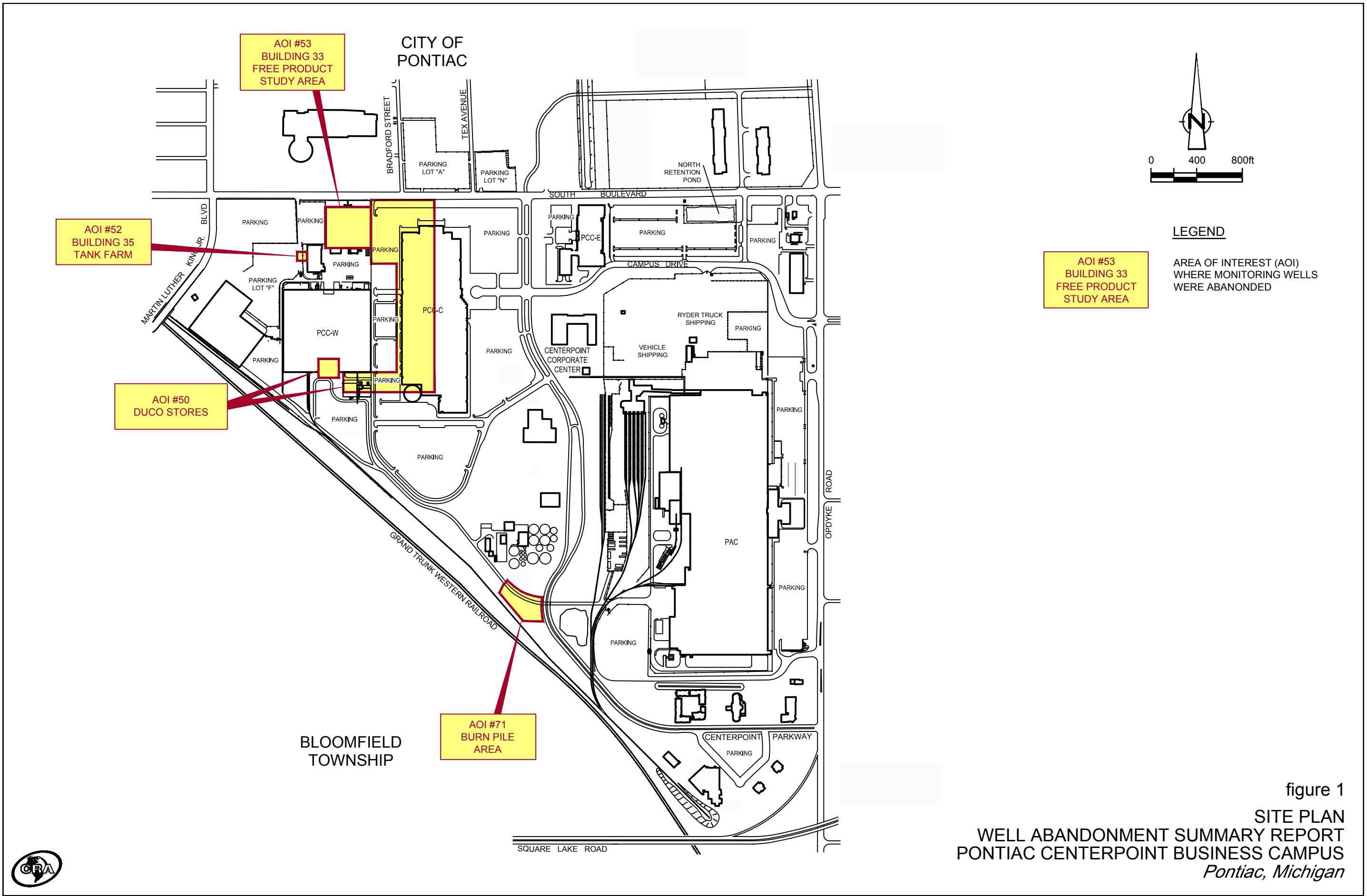
GHD Services Inc.



Thomas M. Kinney, C.P.G.

TMK/MJC/ds/1/Det.

Encl: Figure 1 – Site Plan
Figure 2 – AOI 50 Well Location Map
Figure 3 – AOI 52 Well Location Map
Figure 4– AOI 53 Well Location Map
Figure 5 – AOI 71 Well Location Map
Table 1 – Monitoring/Recovery Well Details
Attachment A - CRA's Stratigraphic and Instrumentation Logs



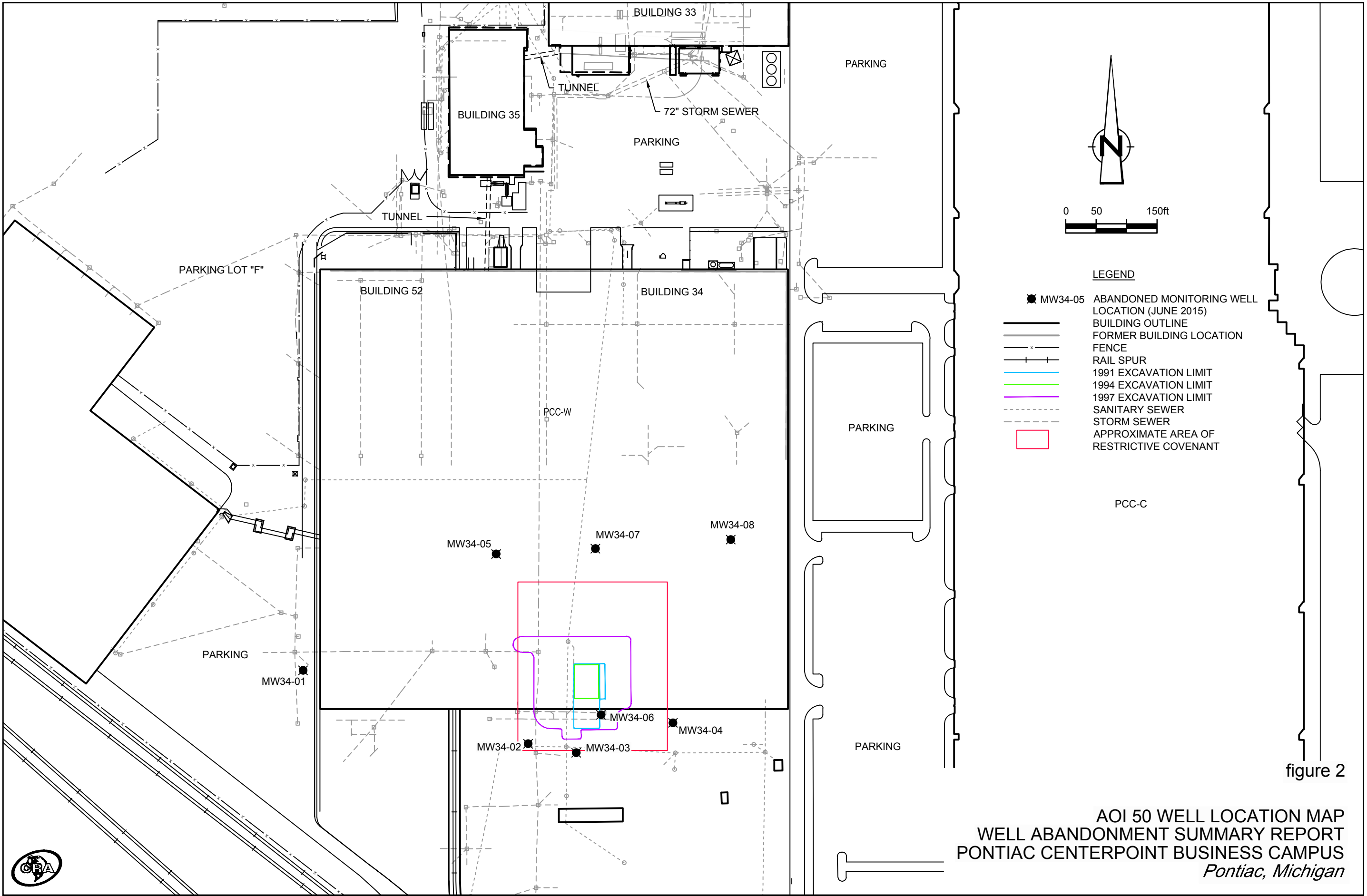
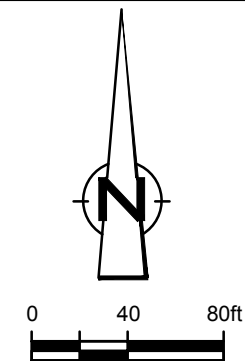


figure 2

AOI 50 WELL LOCATION MAP
WELL ABANDONMENT SUMMARY REPORT
PONTIAC CENTERPOINT BUSINESS CAMPUS
Pontiac, Michigan





- LEGEND**
- HISTORIC STRUCTURES
 - HISTORIC USTs
 - FENCE LINE
 - SANITARY LINE
 - STORM SEWER LINE
 - RETAINING WALL
 - MW35-1-05 ABANDONED MONITORING WELL (6/8/06)
 - RW33-44 ABANDONED RECOVERY WELL (JUNE 2015)
 - MW35-8-06 ABANDONED MONITORING WELL (JUNE 2015)
 - TW33-18-04 TEMPORARY MONITORING WELL LOCATION (HISTORICAL LOCATION COMPLETED FOR BLDG 33)
 - APPROXIMATE AREA OF RESTRICTIVE COVENANT

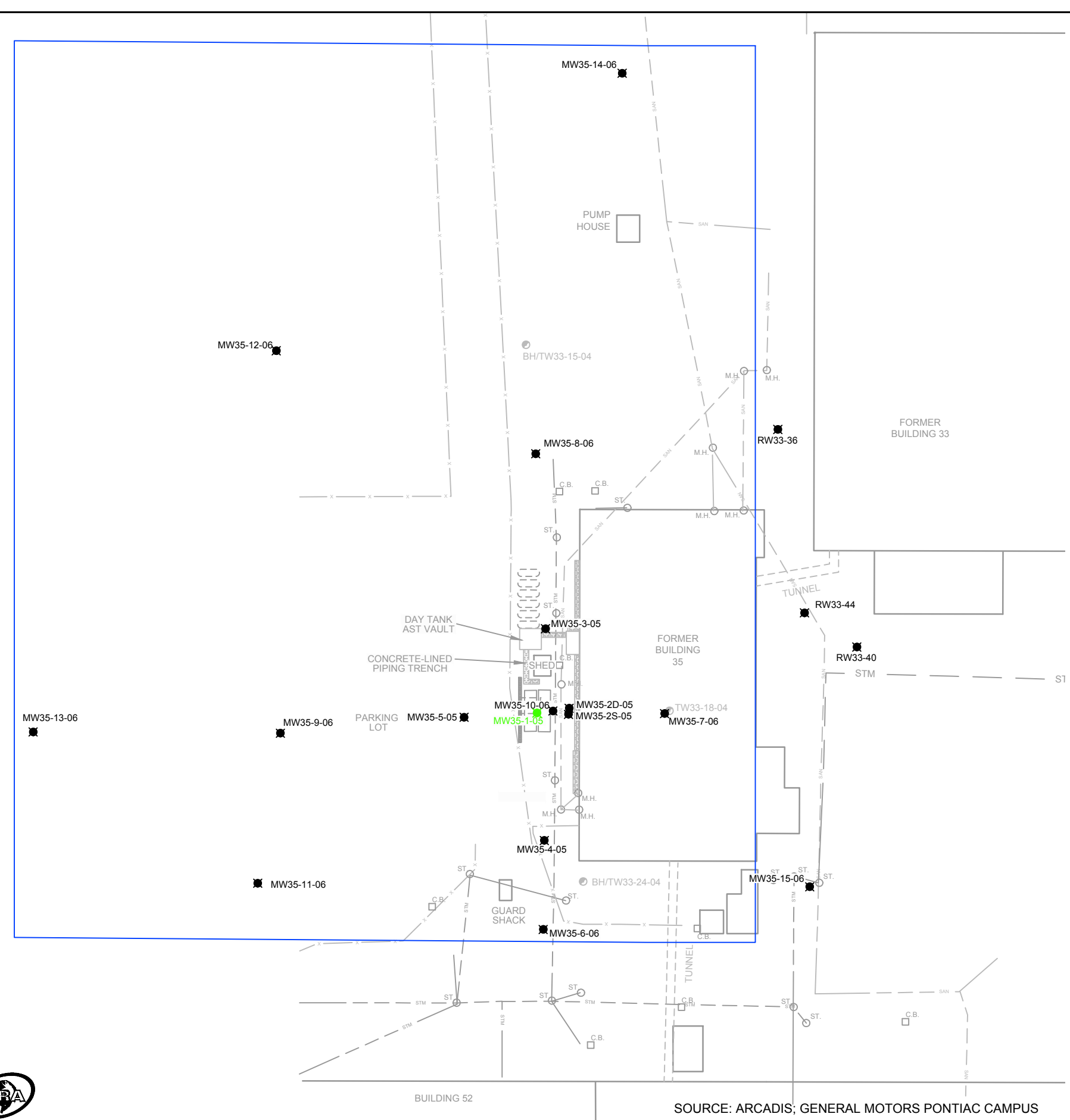


figure 3

AOI 52 WELL LOCATION MAP
WELL ABANDONMENT SUMMARY REPORT
PONTIAC CENTERPOINT BUSINESS CAMPUS
Pontiac, Michigan



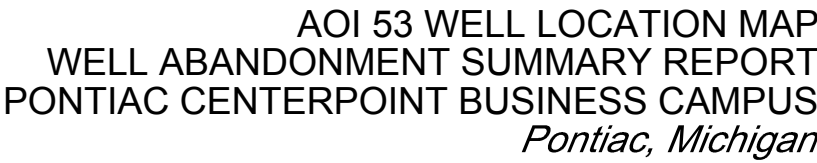


Table 1

**Monitoring/Recovery Well Details
Pontiac Centerpoint Business Campus
Pontiac, Michigan**

Well ID	Easting	Northing	Date Installed	Date Abandoned	Well Diameter (inches)	Screened Interval		Depth to Water (6/8/2015)	Depth to Bottom (6/8/2015)	Estimated Volume of Grout (gallons)
						Top	Bottom			
						(ft bgs)	(ft bgs)			
AOI 50										
MW34-01	13419574.46	408515.44	10/1/2007	6/12/2015	2	15	25	14.73	25.12	0.00
MW34-02	13419943.86	408394.78	10/1/2007	6/12/2015	2	18	23	8.53	23.26	3.45
MW34-03	13420022.85	408380.03	10/2/2007	6/12/2015	2	7	22	3.75	22.42	3.31
MW34-04*	408429.25	13420181.76	NA	NA	NA	NA	NA	NA	NA	NA
MW34-05	13419891.36	408706.56	7/24/2009	6/15/2015	2	12	22	13.28	21.95	3.23
MW34-06	13420063.58	408442.47	7/20/2009	6/12/2015	2	5	15	4.90	14.66	2.05
MW34-07	13420054.39	408715.37	7/21/2009	6/15/2015	2	9	19	13.90	18.70	2.71
MW34-08	13420276.59	408730.25	7/24/2009	6/15/2015	2	11	21	20.04	20.95	3.07
AOI 52										
TW35-1-06	NA	NA	6/7/2006	6/15/2015	1	NA	NA	3.73	7.95	0.24
TW35-2-06	NA	NA	6/7/2006	6/15/2015	1	NA	NA	4.31	10.07	0.33
TW35-3-06	NA	NA	6/7/2006	6/15/2015	1	NA	NA	8.84	15.07	0.53
TW35-4-06	NA	NA	6/7/2006	6/15/2015	1	NA	NA	8.61	15.52	0.55
MW35-2D-05	13419772	409441.8	9/15/2005	6/15/2015	2	19	24	15.54	23.85	3.54
MW35-2S-05	13419772	409437.5	9/15/2005	6/15/2015	2	6	11	3.82	10.95	1.45
MW35-3-05	13419756	409497.4	9/15/2005	6/15/2015	2	15	20	15.48	19.61	2.86
MW35-4-05	13419755	409349.3	9/15/2005	6/15/2015	2	18	23	15.36	22.59	3.34
MW35-5-05	13419699	409435.4	9/15/2005	6/15/2015	2	18	23	19.47	23.12	3.42
MW35-6-06	13419754	409286.9	6/7/2006	6/15/2015	2	12	17	14.04	16.55	2.36
MW35-7-06	13419839	409438	6/7/2006	6/15/2015	2	17	22	15.93	21.01	3.08
MW35-8-06	13419749	409619.8	6/28/2006	6/15/2015	2	21	26	19.58	25.92	3.88
MW35-9-06	13419570	409424.3	6/28/2006	6/15/2015	2	22	27	22.97	25.47	3.81
MW35-10-06	13419764	409439.8	6/28/2006	6/15/2015	2	3	8	2.05	7.96	0.97
MW35-11-06	13419554	409319.3	6/29/2006	6/15/2015	2	25	30	23.36	31.40	4.77
MW35-12-06	13419567	409692	6/29/2006	6/15/2015	2	22	27	22.90	27.46	4.13
MW35-13-06	13419397	409425.2	11/20/2006	6/15/2015	2	28	33	26.48	31.87	4.84
MW35-14-06	13419809	409886	11/20/2006	6/15/2015	2	21	26	19.35	26.11	3.91
MW35-15-06	13419940	409316.8	11/20/2006	6/15/2015	2	17	22	13.16	21.82	3.21
AOI 53										
RW33-01	13420003.73	409506.11	6/12/2006	6/9/2015	4	10	25	15.28	27.12	16.41
RW33-02	13420103.09	409503.85	6/12/2006	6/9/2015	4	10	25	15.52	26.54	16.03
RW33-03	13420121.15	409546.37	6/29/2006	6/9/2015	4	10	25	9.56	27.03	16.35
RW33-04	13420085.04	409546.84	6/13/2006	6/9/2015	4	10	25	9.70	26.85	16.23
RW33-05	13420047.66	409548.66	6/23/2006	6/9/2015	4	10	25	12.00	26.86	16.24
RW33-06	13420015.47	409549.64	6/15/2006	6/9/2015	4	10	25	12.04	27.10	16.40
RW33-07	13419986.14	409570.36	6/13/2006	6/8/2015	4	10	25	13.34	27.03	16.35
RW33-08	13420014.70	409585.16	6/15/2006	6/11/2015	4	10	25	12.61	26.59	16.06
RW33-09	13420049.78	409585.65	6/23/2006	6/11/2015	4	10	25	11.57	27.15	16.43
RW33-10	13420084.79	409586.63	6/29/2006	6/8/2015	4	10	25	9.35	26.55	16.04
RW33-11	13420122.71	409586.01	6/29/2006	6/8/2015	4	10	25	9.56	27.06	16.37
RW33-12	13420158.63	409566.07	6/20/2006	6/8/2015	4	10	25	7.81	27.10	16.40
RW33-13	13420158.42	409598.20	6/19/2006	6/8/2015	4	10	25	7.64	27.04	16.36
RW33-14	13420114.47	409615.25	6/19/2006	6/10/2015	4	10	25	12.12	24.58	14.75
RW33-15	13420086.44	409615.89	6/29/2006	6/11/2015	4	10	25	9.60	26.04	15.70
RW33-16	13420048.91	409613.49	6/26/2006	6/11/2015	4	11	26	10.81	28.18	17.10
RW33-17	13420014.03	409615.63	6/20/2006	6/11/2015	4	10	25	12.67	26.81	16.21
RW33-18	13419885.47	409600.26	6/14/2006	6/9/2015	4	10	25	13.72	26.51	16.01
RW33-19	13419987.50	409631.19	6/14/2006	6/9/2015	4	10	25	14.22	27.00	16.33
RW33-20	13420014.21	409647.68	6/22/2006	6/11/2015	4	10	25	11.96	27.20	16.46
RW33-21	13420048.37	409647.19	6/26/2006	6/11/2015	4	10	25	12.19	26.20	15.81
RW33-22	13420085.68	409647.25	6/28/2006	6/11/2015	4	10	25	9.85	26.64	16.10
RW33-23	13420122.79	409645.76	6/28/2006	6/9/2015	4	10	25	10.30	26.72	16.15
RW33-24	13420157.68	409626.81	6/19/2006	6/8/2015	4	10	25	5.52	25.02	15.04
RW33-25	13420166.03	409659.95	6/28/2006	6/9/2015	4	10	25	7.90	27.26	16.50
RW33-26	13420121.20	409683.46	6/27/2006	6/11/2015	4	10	25	9.82	27.91	16.93
RW33-27	13420085.93	409682.69	6/27/2006	6/11/2015	4	10	25	9.82	27.52	16.67
RW33-28	13420047.73	409683.05	6/27/2006	6/11/2015	4	10	25	11.11	27.22	16.48
RW33-29	13420014.54	409677.02	6/22/2006	6/11/2015	4	10	25	12.32	27.02	16.34
RW33-30	13419988.90	409668.63	6/15/2006	6/11/2015	4	10	25	13.79	27.17	16.44
RW33-31	13420025.80	409717.16	6/16/2006	6/11/2015	4	10	25	10.46	27.05	16.36
RW33-32	13420071.96	409717.58	6/16/2006	6/11/2015	4	10	25	14.08	27.19	16.46

Table 1

**Monitoring/Recovery Well Details
Pontiac Centerpoint Business Campus
Pontiac, Michigan**

Well ID	Easting	Northing	Date Installed	Date Abandoned	Well Diameter (inches)	Screened Interval		Depth to Water (6/8/2015)	Depth to Bottom (6/8/2015)	Estimated Volume of Grout (gallons)
						Top	Bottom			
						(ft bgs)	(ft bgs)			
RW33-33	13420104.49	409718.33	6/19/2006	6/11/2015	4	10	25	11.88	26.41	15.95
RW33-34	13420072.11	409767.74	8/16/2006	6/11/2015	4	8	23	14.92	25.00	15.03
RW33-35	13420026.39	409767.50	8/16/2006	6/10/2015	4	10	25	16.40	28.05	17.02
RW33-36	13419956.61	409631.10	8/17/2006	6/11/2015	4	10	25	16.48	28.37	17.23
RW33-37	13420211.73	409663.06	8/18/2006	6/9/2015	4	10	25	7.61	28.27	17.16
RW33-38	13420205.16	409621.35	8/18/2006	6/9/2015	4	8	23	8.34	26.31	15.88
RW33-40	13420009.31	409475.77	8/21/2006	6/15/2015	4	10	25	11.95	24.64	14.79
RW33-41	13420078.21	409473.73	8/21/2006	6/15/2015	4	8	23	13.23	22.92	13.67
RW33-42	13420124.84	409484.37	8/21/2006	6/15/2015	4	8	23	11.31	23.06	13.76
RW33-43	13420131.45	409509.62	8/22/2006	6/15/2015	4	8	23	7.75	23.01	13.73
RW33-44	13419973.28	409499.67	8/22/2006	6/9/2015	4	8	23	16.05	26.58	16.06
RW33-45	13419963.06	409733.04	8/22/2006	6/11/2015	4	10	25	15.27	27.60	16.72
RW33-46	13420167.22	409719.47	8/23/2006	6/11/2015	4	10	25	8.76	28.10	17.05
RW33-47	13420209.69	409740.81	9/4/2007	6/11/2015	4	8	23	7.88	22.58	13.44
RW33-48	13420140.29	409791.26	10/1/2007	6/11/2015	4	8	23	6.84	23.50	14.05
RW33-49	13419909.01	409843.9	11/19/2007	6/15/2015	4	10	25	15.66	25.01	15.03
RW33-50	13419851.58	409712.78	11/19/2007	6/15/2015	4	13	28	18.39	27.18	16.45
RW33-51	13419910.35	409669.57	10/1/2007	6/15/2015	4	13	28	18.52	27.61	16.73
RW33-52	13419969.77	409550.22	11/20/2007	6/9/2015	4	8	23	14.09	14.81	8.37
RW33-54	13420049.66	409814.01	10/2/2007	6/15/2015	4	8	23	10.34	23.00	13.72
RW33-55	13420188.81	409474.11	11/20/2007	6/15/2015	4	8	23	7.23	20.98	12.40
RW33-56	13419884.07	409783.37	11/20/2007	6/15/2015	4	11	26	17.58	25.15	15.12
RW33-57	13419972.8	409822.03	11/19/2007	6/11/2015	4	8	23	14.50	25.81	15.55
RW33-58	13419783.14	409798.81	11/19/2007	6/15/2015	4	14	29	20.01	28.17	17.10
MW33-21R	13420038.72	409912.27	9/6/2007	6/11/2015	2	7	22	16.99	24.70	3.68
MW33-26R	13420293.83	409670.38	9/5/2007	6/11/2015	2	7	22	8.32	21.99	3.24
MW33-27R	13420369.05	409625.91	9/5/2007	6/11/2015	2	7	22	6.32	21.22	3.12
MW33-28R	13420291.25	409565.64	9/5/2007	6/11/2015	2	8	23	8.16	22.36	3.30
MW33-30R	13420210.15	409941.04	9/6/2007	6/11/2015	2	10	25	13.78	27.50	4.13
MW33-32	13420295.61	409626.23	8/17/2006	6/9/2015	4	10	25	10.95	28.32	17.19
MW33-33	13420265.74	409628.66	8/17/2006	6/9/2015	4	10	25	18.27	28.50	17.31
MW33-34	13420337.96	409803.74	9/5/2007	6/11/2015	2	7	22	6.20	21.24	3.12
MW33-35	13420138.17	409405.97	11/20/2007	6/15/2015	2	6	21	12.66	21.40	3.15
MW33-36	13420361.84	409495.42	10/3/2007	6/11/2015	2	8	23	7.66	23.21	3.44
MW33-37	13419860.04	409965.54	2/11/2008	6/15/2015	2	10	25	18.21	23.19	3.44
AOI 71										
MW-1	13421919.59	406228.44	2/8/2007	6/5/2014	2	5	10	NA	10.00	1.30
MW-111	13421689.54	406258.91	6/22/2006	6/5/2014	2	5	15	NA	16.70	2.38
MW-112	13421804.82	406151.45	6/22/2006	6/5/2014	1	5	15	NA	17.00	0.61
MW-113	13421890.29	406082.56	6/22/2006	6/5/2014	1	5	15	NA	18.20	0.66
MW114*	13421977.41	406013.67	NA	NA	NA	NA	NA	NA	NA	NA
MW-115	13422039.08	406034.08	6/22/2006	6/5/2014	1	3	13	NA	18.00	0.65
MW-116	13422147.40	406099.82	6/22/2006	6/5/2014	1	12	22	NA	25.00	0.94
MW-117	13422090.22	406227.00	6/29/2006	6/5/2014	1	13	23	NA	25.00	0.94
MW-119	13422066.44	406015.41	6/29/2006	6/5/2014	2	6	7	NA	8.00	0.97

Notes:

ft AMSL - Feet Above Mean Sea Level.

ft bgs - Feet below ground surface.

MW - Monitoring well.

N/A - Not applicable or no data available.

VOC - Volatile Organic Compound.

TRACE - less than 0.1 inches of LNAPL in well.

MW114* - Well was destroyed or previously abandoned or could not locate.

Attachment A

CRA's (currently GHD) Stratigraphic and Instrumentation Logs



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW34-01

PROJECT NUMBER: 7097-08

DATE COMPLETED: October 1, 2007

CLIENT: ENCORE

DRILLING METHOD: 4-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.50	ASPHALT	0.50	CONCRETE					0.0
1.50	SC-CLAYEY SANDS, with gravels, medium grained sands, fine to coarse gravels, trace fine to coarse sands, moderately graded, loose, brown, moist	1.50	BENTONITE CHIPS	1HSA		80		0.0
3.50	SP-SANDS, fine grained, with medium to coarse grained, trace fine gravels, poorly graded, loose, brown, moist	3.50	2" PVC WELL CASING					0.0
6.00	CL-CLAYS, with sands, fine grained, trace medium grained, poorly graded, low plasticity, firm, black, moist	6.00		2HSA		70		0.3
8.00	- with fine to coarse gravels at 5.0ft BGS	8.00						0.0
10.00	- no gravels, trace fine sands, soft, brown, very moist to saturated at 8.5ft BGS	10.00						0.0
12.00	- with fine sands, trace fine gravels, firm, black, moist at 9.5ft BGS	12.00		3HSA		100		0.0
12.50	CH-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, high plasticity, olive green, very moist to moist	12.50						0.0
14.00	CI-CLAYS, with silts, trace fine sands and fine gravels, poorly graded, moderate plasticity, stiff, brown, moist, mottled	14.00	4-1/4" BOREHOLE					0.0
16.00		16.00	2" PVC WELL SCREEN	4HSA		100		0.0
18.00	SP-SANDS, medium grained with fine grained, poorly graded, loose, gray, very moist to saturated	18.00	SAND PACK					0.0
20.00	- fine grained at 20.0ft BGS	20.00						0.0
22.00		22.00		5HSA		45		0.0
24.00	- fine to medium grained at 22.5ft BGS	24.00						0.0
26.00		26.00						0.0
28.00		28.00		6HSA		15		0.0
30.00	END OF BOREHOLE @ 30.0ft BGS	30.00						0.0
32.00	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 12, 2015)							
34.00								
36.00								

WELL DETAILS

Screened interval:
15.00 to 25.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
13.00 to 30.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA_CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: MW34-02

DATE COMPLETED: October 1, 2007

DRILLING METHOD: 4-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	ASPHALT	0.50	CONCRETE	1HSA		100		--
4	SW-SANDS AND GRAVELS, fine sands, fine to coarse gravels with medium to coarse sands, moderately graded, loose, brown, moist	0.75	BENTONITE CHIPS	2HSA		100		0.0
6	CI-CLAYS, with coarse gravels, poorly graded, low plasticity, stiff, brown, moist	1.25	2" PVC WELL CASING	3HSA		100		0.1
8	SP-SANDS, fine grained, poorly graded, loose, brown, moist	5.50	4-1/4" BOREHOLE	4HSA		100		0.0
10	- with coarse sands and fine to coarse gravels at 3.0ft BGS		2" PVC WELL SCREEN	5HSA		100		0.0
12	- fine gravels, trace coarse sands at 3.8ft BGS		SAND PACK	6HSA		100		0.0
14	- with clays, very moist at 4.5ft BGS			7HSA		100		0.0
16	CH-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, high plasticity, firm to stiff, gray, moist			8HSA		100		0.0
18	- decrease in sands, stiff at 10.0ft BGS							
20	- with fine to coarse gravels at 15.0ft BGS							
22	SP-SANDS, fine to medium grained, with fine to coarse gravels, poorly graded, loose, gray, very moist	18.50						
24	CH-CLAYS, with sands, fine grained, trace fine to coarse gravels, poorly graded, high plasticity, stiff, gray, moist	19.00						
26								
28								
30								
32								
34								
36	END OF BOREHOLE @ 35.0ft BGS	35.00						
38	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 12, 2015)							
40								
42								
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA_CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW34-03

PROJECT NUMBER: 7097-08

DATE COMPLETED: October 2, 2007

CLIENT: ENCORE

DRILLING METHOD: 4-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0	ASPHALT	0.50	CONCRETE					-
2	SW/GW-SANDS AND GRAVELS, fine sands, fine to coarse gravels, trace coarse sands, moderately graded, loose, brown, moist	2.50	BENTONITE CHIPS	1HSA		80		3.1
4	SP-SANDS, fine sands, fine grained, trace medium grained, poorly graded, loose, brown, moist		2" PVC WELL CASING					0.8
6			4-1/4" BOREHOLE	2HSA		60		0.0
8								0.1
10	- very moist at 9.0ft BGS		2" PVC WELL SCREEN					0.0
12	- medium grained with fine grained at 10.0ft BGS	10.20	SAND PACK	3HSA		100		0.0
14	CH-CLAYS, with fine sands and coarse gravels, poorly graded, high plasticity, firm, gray, very moist							0.0
16	- stiff at 12.0ft BGS			4HSA		100		0.0
18								0.0
20	- firm to stiff at 15.0ft BGS			5HSA		100		0.7
22								0.3
24								
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 12, 2015)							
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32								
34								

WELL DETAILS

Screened interval:

7.00 to 22.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

5.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW34-05

PROJECT NUMBER: 7097-08

DATE COMPLETED: July 24, 2009

CLIENT: ENCORE

DRILLING METHOD: GEOPROBE

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	CONCRETE	1.00	CONCRETE	1GP		70		1.2
4	SP-SANDS, fine grained, trace coarse grained and fine to coarse gravels, poorly graded, loose, brown, moist	5.00	BENTONITE CHIPS					0.9
6	GP-GRAVELS, coarse grained, with fine grained and fine sands, poorly graded, loose, gray, moist	5.50	2" PVC WELL CASING					2.1
8	CL-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, firm, brown, moist			2GP		65		2.1
10	- no gravels, slight increase in plasticity, firm to soft, grayish brown, moist to very moist at 10.0ft BGS		8" BOREHOLE					2.4
12			SAND PACK	3GP		80		2.0
14								0.2
16			2" PVC WELL SCREEN	4GP		90		1.1
18	- decrease in plasticity, firm, gray, moist at 18.5ft BGS							0.0
20								0.0
22		22.50		5GP		75		0.0
24	SP-SANDS, fine grained, with medium grained, poorly graded, loose, gray, saturated	23.25						
26	CL-CLAYS, trace fine sands, poorly graded, low plasticity, firm to stiff, gray, moist	25.00						
28	END OF BOREHOLE @ 25.0ft BGS							
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
32								
34								

WELL DETAILS
 Screened interval:
 12.00 to 22.00ft BGS
 Length: 10ft
 Diameter: 2in
 Slot Size: 0.010
 Material: PVC
 Seal:
 1.00 to 9.50ft BGS
 Material: BENTONITE CHIPS
 Sand Pack:
 9.50 to 22.00ft BGS
 Material: SAND PACK

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15

PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW34-06

PROJECT NUMBER: 7097-08

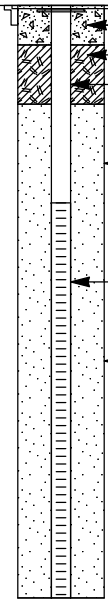
DATE COMPLETED: July 20, 2009

CLIENT: ENCORE

DRILLING METHOD: GEOPROBE

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	ASPHALT	0.40	 CONCRETE BENTONITE CHIPS 2" PVC WELL CASING 8" BOREHOLE 2" PVC WELL SCREEN SAND PACK	1GP		80		0.0
4	SP-GRAVELLY SANDS, fine grained sand, fine to coarse gravels, poorly graded, loose, brown, moist							0.0
6	- with clays, loose to compact at 3.5ft BGS							
8		4.75		2GP		35		0.0
10	SP-SANDS, fine grained, trace medium grained and fine to coarse gravels, poorly graded, loose, brown, moist							0.0
12	- saturated at 9.9ft BGS			3GP		55		0.0
14								0.0
16		15.00		4GP		100		0.0
18	CI-CLAYS, with gravels, fine to coarse gravels, trace fine sands, poorly graded, moderate plasticity, firm, gray, moist							0.0
20				5GP		95		0.0
22							0.0	
24							0.0	
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 12, 2015)							
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34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW34-07

PROJECT NUMBER: 7097-08

DATE COMPLETED: July 21, 2009

CLIENT: ENCORE

DRILLING METHOD: GEOPROBE

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.80	CONCRETE	0.80	CONCRETE					
2	CL-SANDY CLAYS, fine grained, trace medium grained and fine gravels, poorly graded, low plasticity, stiff, brown, moist	2.50	BENTONITE CHIPS	1GP		100		0.0
4	SP-SANDS, fine grained, with medium to coarse grained and fine gravels, poorly graded, loose to compact, brown, moist - compact at 5.0ft BGS		2" PVC WELL CASING					0.0
6				2GP		65		0.0
8	- dense at 8.0ft BGS		8" BOREHOLE					0.0
10								0.0
12	CL-SANDY CLAYS, fine grained, trace medium grained and fine gravels, poorly graded, low plasticity, firm, brown, moist to very moist	10.50	2" PVC WELL SCREEN	3GP		60		0.0
14	SP-SANDS, fine grained, with medium to coarse grained and fine gravels, poorly graded, compact, brown, moist to very moist	12.50	SAND PACK					0.0
16	CL-SANDY CLAYS, fine grained, poorly graded, low plasticity, firm, gray, moist to very moist	13.50		4GP		95		0.0
18	SP-SANDS, fine grained, with medium to coarse grained and fine gravels, poorly graded, compact, brown, moist to very moist	14.00						0.0
20	CI-CLAYS, trace fine to coarse sands and fine gravels, poorly graded, moderate plasticity, soft to firm, gray, moist to very moist	14.75		5GP		90		0.0
22								0.0
24								0.0
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
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WELL DETAILS

Screened interval:

9.00 to 19.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 6.50ft BGS

Material: BENTONITE CHIPS

Sand Pack:

6.50 to 19.00ft BGS

Material: SAND PACK

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW34-08

PROJECT NUMBER: 7097-08

DATE COMPLETED: July 24, 2009

CLIENT: ENCORE

DRILLING METHOD: GEOPROBE

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.40	CONCRETE	0.40	CONCRETE					
2	CL-CLAYS, with gravels, fine to coarse grained, trace fine to medium sands, poorly graded, low plasticity, firm, brown, moist		BENTONITE CHIPS	1GP		75		3.3
4			2" PVC WELL CASING					3.9
6	- trace fine to coarse gravels and fine sands, stiff, slightly mottled at 5.0ft BGS							3.9
8				2GP		85		4.1
9.40	- 2" sand lens at 9.3ft BGS	9.40	8" BOREHOLE					4.0
10	CL-SANDY CLAYS, fine grained, trace coarse gravels and silts, poorly graded, low plasticity, firm, brown, moist	10.50						3.4
12	SP-SANDS, fine grained, trace medium grained, poorly graded, loose, brown, moist	11.00	2" PVC WELL SCREEN	3GP		70		2.6
14	CL-SANDY CLAYS, fine grained, trace coarse gravels and silts, trace sand lenses, poorly graded, low plasticity, firm, brown, moist		SAND PACK					2.7
16	- no sand lenses, gray at 15.0ft BGS			4GP		90		1.0
18								1.2
20								
22	- increase in sands, soft to firm, very moist at 21.0ft BGS			5GP		80		
24	- decrease in sands, firm, moist to very moist at 21.8ft BGS							
26	- stiff at 23.5ft BGS							
25.00	END OF BOREHOLE @ 25.0ft BGS	25.00						
26	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
28								
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WELL DETAILS

Screened interval:

11.00 to 21.00ft BGS

Length: 10ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Seal:

1.00 to 8.50ft BGS

Material: BENTONITE CHIPS

Sand Pack:

8.50 to 21.00ft BGS

Material: SAND PACK

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-10-06

PROJECT NUMBER: 7097-20

DATE COMPLETED: June 8, 2006

CLIENT: ENCORE

DRILLING METHOD: SS/ 4-1/2" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409430.6 EASTING: 13419795.13 GROUND SURFACE TOP OF CASING	934.65 934.39						
2	SP-SANDS (FILL), trace silts, loose, poorly graded, fine grained, trace medium grained, brown, very moist		CONCRETE BENTONITE CHIPS 2" PVC WELL CASING 2" PVC WELL SCREEN SAND PACK 8-1/4" BOREHOLE	1SS				
4	CI-SILTY CLAYS, soft, low to medium plasticity, dark brown, very moist	931.15 930.65		2SS		75	5	1.6
6	SM-SILTY SANDS, loose, poorly graded, fine grained, brown, wet	929.15		3SS 4-6 -009		75	2	15
8	CI-SILTY CLAYS, soft, low to medium plasticity, dark brown, very moist			4SS		50	3	22.7
10	PT-PEAT-LIKE MATERIAL, soft, low plasticity, dark brown/black, moist	925.65 924.65		5SS		75	4	14.4
12	END OF BOREHOLE @ 10.0ft BGS		WELL DETAILS Screened interval: 931.65 to 926.65ft 3.00 to 8.00ft BGS Length: 5ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 932.15 to 924.65ft 2.50 to 10.00ft BGS Material: SANDS					
14	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA_CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-1-05 (Abandoned)
PROJECT NUMBER: 7097-20 DATE COMPLETED: September 14, 2004
CLIENT: ENCORE DRILLING METHOD: DIRECT PUSH/HSA
LOCATION: PONTIAC, MI FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409429.23 EASTING: 13419783.95 GROUND SURFACE TOP OF CASING	935.50 935.22						
2	SM-SILTY SANDS (FILL), trace fine gravels, loose to compact, fine to coarse gravel, poorly graded, brown, moist		CONCRETE	1DP 0-2' -021.-022		75		0.0
4			BENTONITE CHIPS	2DP		75		0.1
6			2" PVC WELL CASING	3DP 6-8' -023		75		0.5
8	- saturated, moderate petroleum-like odor at 8.0ft BGS		2" PVC WELL SCREEN	4DP		75		+2000
10			8-1/4" BOREHOLE	5DP		90		1866
12	- brown-grey, strong petroleum-like odor at 11.0ft BGS	924.00						
14	GP-GRAVELS (FILL), trace fine to coarse sands, loose, fine gravels, poorly graded, brown, saturated, moderate petroleum-like odor	921.50	SAND PACK	6DP		90		1095
16	- REFUSAL AT 14.0ft BGS APPARENT HOLD-DOWN PAD at 14.0ft BGS							
18	Abandoned on 6/8/2006. Abandoned by overdrilling w/HSA rig and grouting with cement/bentonite grout.							
20								
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WELL DETAILS

Screened interval:

928.50 to 923.50ft

7.00 to 12.00ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

930.50 to 921.50ft

5.00 to 14.00ft BGS

Material: #5 SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-11-06

PROJECT NUMBER: 7097-20

DATE COMPLETED: June 9, 2006

CLIENT: ENCORE

DRILLING METHOD: SS/ 4-1/2" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409310.07 EASTING: 13419588.53	GROUND SURFACE TOP OF CASING 942.62 942.14						
2	ASPHALT	942.12	CONCRETE	1SS		75	4	
4	FILL	940.62	BENTONITE CHIPS	2SS		10	7	0.4
6	CI-SILTY CLAYS, trace coarse sands, firm, low to medium plasticity, brown, moist	938.62		3SS		75	7	0.8
8	SC-CLAYEY SANDS, trace wood debris, loose, poorly graded, trace medium grained, dark brown, moist	935.62		4SS		45	4	0.6
10			8-1/4" BOREHOLE	5SS		60	4	0.6
12				6SS		90	12	0.7
14				7SS		90	13	0.7
16				8SS		80	15	0.6
18				9SS		100	12	0.6
20				10SS 18-20'-009		75	13	0.6
22				11SS		100	12	0.6
24				12SS		50	15	0.6
26	- 2" sandy layer at 25.0ft BGS			13SS		10	10	0.6
28			2" PVC WELL CASING	14SS 26-28'-010		80	9	0.5
30	SP-SANDS, trace fine subrounded gravels, loose, poorly graded, fine, medium and coarse grained, brown, wet	914.12	SAND PACK	15SS 28-30'-011		60	16	0.5
32			2" PVC WELL SCREEN	16SS		25	12	0.4
34	END OF BOREHOLE @ 32.0ft BGS	910.62						
36	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
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42								
44								

WELL DETAILS

Screened interval:

915.62 to 910.62ft

27.00 to 32.00ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

917.62 to 910.62ft

25.00 to 32.00ft BGS

Material: SANDS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-12-06

PROJECT NUMBER: 7097-20

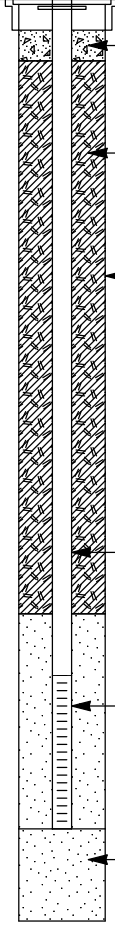
DATE COMPLETED: June 9, 2006

CLIENT: ENCORE

DRILLING METHOD: SS/ 4-1/2" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409682.73 EASTING: 13419601.49	GROUND SURFACE TOP OF CASING 941.82 941.46						
2	ASPHALT	941.32	 CONCRETE BENTONITE CHIPS 8-1/4" BOREHOLE 2" PVC WELL CASING 2" PVC WELL SCREEN SAND PACK	1SS				2.1
4	SC-CLAYEY SANDS (FILL), trace fine subangular gravel, loose, poorly graded, fine and medium grained, dark brown, moist	938.82		2SS		80	20	0.9
6	SM-SILTY SANDS, loose, poorly graded, fine grained, black, moist	937.32		3SS		50	5	0.8
8	- 2" brown layer at 3.5ft BGS			4SS		50	7	1.4
10	CI-SILTY CLAYS, firm, low plasticity, brown, moist			5SS		90	2	0.7
12	- cobble/slag-like material at 8.0ft BGS			6SS		75	1	1.1
14	- soft at 10.0ft BGS			7SS		50	4	0.7
16	SP-SANDS, trace silts, loose, poorly graded, fine grained, trace medium grained, brown, moist	929.82		8SS		40	4	1.4
18	- wet at 13.0ft BGS			9SS		30	4	0.9
20	GP/SC-GRAVELS AND CLAYEY SANDS, trace pieces of shale, loose, poorly graded, fine grained, trace medium grained, subangular, brown, wet	925.82		10SS		40	6	0.8
22				11SS		40	4	0.6
24	ML-SILTS, compact, poorly graded, fine grained, dark brown, moist	918.32 917.82		12SS		60	13	0.6
26	SM-SILTY SANDS, compact, poorly graded, fine grained, trace medium and coarse grained, brown, wet			13SS		40	23	0.6
28				14SS		80	32	0.3
30	CH-CLAYS, firm, medium to high plasticity, dark gray, moist	913.32 911.82		15SS		50	12	0.3
32	END OF BOREHOLE @ 30.0ft BGS		<u>WELL DETAILS</u> Screened interval: 919.82 to 914.82ft 22.00 to 27.00ft BGS Length: 5ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 921.82 to 911.82ft 20.00 to 30.00ft BGS Material: SANDS					
34	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
36								
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42								
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NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-13-06

PROJECT NUMBER: 7097-20

DATE COMPLETED: November 20, 2006

CLIENT: ENCORE

DRILLING METHOD: SPLIT SPOON/HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409415.93 EASTING: 13419431.37	TOP OF CASING 945.69 GROUND SURFACE 945.69						
2	ASPHALT	945.53	CONCRETE	1HSA				--
	NO SAMPLE							
4	SP-SANDS (FILL), with fine subangular gravels, trace wood debris, loose, poorly graded, fine grained, trace medium and coarse grained, dark brown, moist	943.69		2SS		80	23	0.0
6	- no wood, gray at 2.2ft BGS	942.69	BENTONITE CHIPS	3SS		75	9	0.0
8	CI-SILTY CLAYS, trace fine gravels, trace sands, firm, low plasticity, brown, gray, moist			4SS		40	13	0.0
10	- soft at 4.0ft BGS		2" PVC WELL CASING	5SS		100	15	0.0
12	- wet (perched) at 8.0ft BGS	936.69		6SS		100	14	0.0
14	CL-CLAYS, trace fine subrounded gravels, high plasticity, firm, moist			7SS		100	18	0.0
16	- 2" SP-SANDS seam, compact, poorly graded, fine grained, trace medium and coarse grained, brown, wet at 13.0ft BGS	931.69		8SS		90	27	0.0
18	- trace silts at 13.5ft BGS			9SS		90	11	0.0
20	SC-CLAYEY SANDS, compact, poorly graded, fine grained, brown, wet, slight plasticity			10SS		85	15	0.0
22	CI-CLAYS, trace coarse subrounded gravels, firm, low plasticity, brown, moist	926.69		11SS		60	18	0.0
24	- high plasticity at 21.5ft BGS	923.69		12SS		75	12	0.0
26	SP-SANDS, loose, poorly graded, fine grained, trace medium grained, brown, wet	922.19		13SS		100	8	0.0
28	CI-SILTY CLAYS, trace fine gravels, trace sands, firm, low plasticity, brown, gray, moist	919.69	8-1/2" BOREHOLE	14SS		75	24	0.0
30	SP-SANDS, trace fine subrounded gravels, loose, poorly graded, fine, medium and coarse grained, brown with beige grains, moist		2" PVC WELL SCREEN	15SS		70	21	0.0
32	- with fine and medium subrounded to subangular gravels, wet at 29.0ft BGS		SAND PACK	16SS		45	16	0.0
34	END OF BOREHOLE @ 34.0ft BGS	911.69		17SS		70	10	0.0
36	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)		WELL DETAILS Screened interval: 917.69 to 912.69ft 28.00 to 33.00ft BGS Length: 5ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 919.69 to 911.69ft 26.00 to 34.00ft BGS Material: #5 SANDS					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-14-06

PROJECT NUMBER: 7097-20

DATE COMPLETED: November 20, 2006

CLIENT: ENCORE

DRILLING METHOD: SPLIT SPOON/HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409876.91 EASTING: 13419843.54	TOP OF CASING 937.95 GROUND SURFACE 937.95						
2	ASPHALT NO SAMPLE	937.79	CONCRETE	1HSA				-
4	FILL, black	935.95 935.55		2SS		90	11	0.0
6	SP-SANDS, trace silts, loose, poorly graded, fine to medium grained, brown, moist			3SS		80	15	0.0
8	FILL-SANDS AND ASPHALT-LIKE MATERIAL, brown and black, moist	933.95	BENTONITE CHIPS	4SS		70	6	0.0
10	SM-SILTY SANDS, loose, poorly graded, fine to medium grained, brown, moist	931.95	2" PVC WELL CASING	5SS		40	8	0.0
12	- trace coarse grained sands and fine gravels at 8.0ft BGS			6SS		75	13	0.0
14	- slight plasticity at 12.0ft BGS			7SS		80	8	0.0
16				8SS		50	4	0.0
18	SP-SANDS, trace fine subangular gravels, loose, poorly graded, fine, medium and coarse grained, brown, moist	923.95		9SS		60	4	0.0
20				10SS		65	12	0.0
22	- 0.4' SM-SILTY SANDS seam, loose, poorly graded, fine grained, brown, moist at 20.9ft BGS		8-1/2" BOREHOLE	11SS		90	16	0.0
24	- wet at 22.0ft BGS - no gravels at 22.4ft BGS		2" PVC WELL SCREEN	12SS		70	21	0.0
26			SAND PACK	13SS		100	8	0.0
28	END OF BOREHOLE @ 26.0ft BGS	911.95						
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
32								
34								

WELL DETAILS

Screened interval:

916.95 to 911.95ft

21.00 to 26.00ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

918.95 to 911.95ft

19.00 to 26.00ft BGS

Material: #5 SANDS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-15-06

PROJECT NUMBER: 7097-20

DATE COMPLETED: November 21, 2006

CLIENT: ENCORE

DRILLING METHOD: SPLIT SPOON/HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409307.61 EASTING: 13419974.79	TOP OF CASING 932.12 GROUND SURFACE 932.12						
	ASPHALT	931.96	CONCRETE	1HSA				-
2	NO RECOVERY	930.12		2SS		100	11	0.0
4	SP-SANDS, trace silts, trace fine subangular gravels, loose, poorly graded, fine grained, brown, moist		BENTONITE CHIPS	3SS		100	20	0.0
6				4SS		35	26	0.0
8	- no gravels, trace medium to coarse grained at 8.0ft BGS		2" PVC WELL CASING	5SS		75	6	0.0
10	- trace gravels at 10.0ft BGS			6SS		75	13	0.0
12				7SS		50	11	0.0
14	CL-CLAYS, trace silts, soft, low plasticity, brown, wet	918.12		8SS		65	4	0.0
16	- firm, moist at 14.9ft BGS - trace vegetation (root) at 15.0ft BGS		8-1/2" BOREHOLE	9SS		85	11	0.0
18		913.92		10SS		80	11	0.0
20	SP-SANDS, with subangular and subrounded fine gravels, loose, poorly graded, fine, medium and coarse grained, gray, wet		2" PVC WELL SCREEN	11SS		65	5	0.0
22	- with fine gravels at 21.1ft BGS - trace fine gravels at 22.0ft BGS			12SS		75	6	0.0
24	- 0.4' fine grained sands seam, loose, poorly graded, gray, wet at 24.0ft BGS		SAND PACK	13SS		70	12	0.0
26				14SS		80	20	0.0
28	- 2" CL-CLAYS seam, firm, wet at 28.2ft BGS - 2" coarse grained sands at 28.6ft BGS	903.12		15SS		95	13	0.0
30	CL-CLAYS, trace sands, firm, low plasticity, brown, wet	902.12						
32	END OF BOREHOLE @ 30.0ft BGS							
34	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							

WELL DETAILS

Screened interval:
914.62 to 909.62ft
17.50 to 22.50ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

916.62 to 908.12ft

15.50 to 24.00ft BGS

Material: #5 SANDS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-2D-05

PROJECT NUMBER: 7097-20

DATE COMPLETED: September 15, 2005

CLIENT: ENCORE

DRILLING METHOD: DIRECT PUSH/HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409432.56 EASTING: 13419806.42 GROUND SURFACE TOP OF CASING	934.80 934.20						
2	ASPHALT, black	934.50	CONCRETE	1DP 0-2' -014		66		0.2
4	SM-SILTY SANDS (FILL), compact, fine to medium grained, poorly graded, brown, moist - medium brown at 1.3ft BGS - fine grained, increase in silt content at 1.5ft BGS		BENTONITE CHIPS	2DP		66		1.8
6				3DP 6-8' -015		66		8.5
8	- very moist to saturated at 7.5ft BGS - saturated, slight petroleum-like odor at 8.0ft BGS			4DP		66		32.8
10		924.30	2" PVC WELL CASING	5DP		85		30.5
12	CI-SILTY CLAYS, trace fine sands to fine gravels, firm, medium plasticity, gray, slight petroleum-like odor - brown and gray mottled at 12.5ft BGS			6DP		85		28.9
14			8-1/4" BOREHOLE	7DP		90		185
16	SC/CL-CLAYEY SANDS & CLAYS, with silts, soft, fine to medium sands, low plasticity, gray, very moist, slight petroleum-like odor	918.80		8DP		90		189
18	CI-SILTY CLAYS, trace fine to medium sands, firm, medium plasticity, gray, slight petroleum-like odor	917.80	SAND PACK	9DP		90		495
20	SM-SILTY SANDS, trace fine gravels, compact, fine grained, poorly graded, grey, saturated, slight petroleum-like odor	915.80	2" PVC WELL SCREEN	10DP		90		452
22								
24								
26	END OF BOREHOLE @ 25.0ft BGS	909.80						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

915.80 to 910.80ft

19.00 to 24.00ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

917.80 to 909.80ft

17.00 to 25.00ft BGS

Material: #5 SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-2S-05

PROJECT NUMBER: 7097-20

DATE COMPLETED: September 15, 2005

CLIENT: ENCORE

DRILLING METHOD: DIRECT PUSH/HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409428.25 EASTING: 13419806	GROUND SURFACE 934.70 TOP OF CASING 934.34						
2	ASPHALT, black	934.40	CONCRETE	1DP		66		0.2
4	SM-SILTY SANDS (FILL), compact, fine to medium grained, poorly graded, brown, moist - medium brown at 1.3ft BGS - fine grained, increase in silt content at 1.5ft BGS		BENTONITE CHIPS	2DP		66		1.8
6			2" PVC WELL CASING	3DP		66		8.5
8	- very moist to saturated at 7.5ft BGS - saturated at 8.0ft BGS		2" PVC WELL SCREEN	4DP		66		32.5
10		924.20	8-1/4" BOREHOLE	5DP		85		30.5
12	CI-SILTY CLAYS, trace fine sands to fine gravels, firm, medium plasticity, gray, slight petroleum-like odor	922.70	SAND PACK					
14	END OF BOREHOLE @ 12.0ft BGS							
16	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
18								
20								
22								
24								
26								
28								
30								
32								
34								

WELL DETAILS

Screened interval:

928.70 to 923.70ft

6.00 to 11.00ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

930.70 to 922.70ft

4.00 to 12.00ft BGS

Material: #5 SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-3-05

PROJECT NUMBER: 7097-20

DATE COMPLETED: September 15, 2005

CLIENT: ENCORE

DRILLING METHOD: DIRECT PUSH/HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409488.19 EASTING: 13419789.91	GROUND SURFACE TOP OF CASING						
		934.90 934.13						
2	ASPHALT	934.60	CONCRETE	1DP 0-2' 016/-017				0.7
4	SM-SILTY SANDS (FILL), compact, fine to medium grained, poorly graded, brown, moist - fine grained, increase in silt content at 1.0ft BGS			2DP				2.5
6	CL-SANDY CLAYS, firm, low plasticity, gray to dark gray, moist to very moist, slight petroleum-like odor	929.40	BENTONITE CHIPS	3DP 5-7' 018				94.3
8	CL-SILTY CLAYS, trace, fine to medium sands, firm, low plasticity, brown and gray, moist, slight petroleum-like odor	927.40		4DP				81.1
10			2" PVC WELL CASING	5DP				185
12								
14				6DP 12-14' 019				195
16	SM-SILTY SANDS, trace fine gravels, compact, fine grained, poorly graded, grey, moist, slight petroleum like odor - with fine gravels, very moist at 15.0ft BGS	920.90	8-1/4" BOREHOLE	7DP				380
18	- saturated, strong petroleum-like odor at 17.0ft BGS			8DP				345
20	- trace fine gravels at 20.0ft BGS		2" PVC WELL SCREEN	9DP				358
22			SAND PACK	10DP				310
24	- fine grained, no gravels at 24.0ft BGS							
26	CL-SILTY CLAYS, trace fine sands, firm, low plasticity, gray, moist, slight petroleum-like odor	910.40 909.90						
28	END OF BOREHOLE @ 25.0ft BGS							
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
32								
34								

WELL DETAILS

Screened interval:

919.90 to 914.90ft

15.00 to 20.00ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

921.90 to 909.90ft

13.00 to 25.00ft BGS

Material: #5 SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-4-05

PROJECT NUMBER: 7097-20

DATE COMPLETED: September 15, 2005

CLIENT: ENCORE

DRILLING METHOD: DIRECT PUSH/HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409340.02 EASTING: 13419789.03 GROUND SURFACE TOP OF CASING	934.60 934.02						
2	ASPHALT SM/SC-SANDS (FILL), with silts & clays, trace fine gravels, fine to coarse grained, poorly graded, medium brown, moist, trace concrete debris	934.30	CONCRETE	1DP 0-2' -035				1.8
4	CL-CLAYS, with silts and fine to medium sands, firm, low plasticity, brown-gray, moist	931.10	BENTONITE CHIPS	2DP				2.1
6				3DP 6-8' -036				2.5
8	CI-SILTY CLAYS, trace fine sands, soft to firm, medium plasticity, brown and gray, very moist	926.10		4DP				1.5
10	- with peat at 9.8ft BGS	924.10	2" PVC WELL CASING	5DP				0.0
12	CL-SILTY CLAYS, trace fine to coarse sands, stiff, low plasticity, brown and gray, moist			6DP				0.0
14	- trace fine sands to fine gravels, brown-gray at 14.0ft BGS		8-1/4" BOREHOLE	7DP				16.8
16	SM-SILTY SANDS, trace fine gravels, compact, fine grained, poorly graded, grey, moist, slight petroleum-like odor	918.60		8DP				159
18	- very moist to saturated at 18.0ft BGS			9DP				195
20	- saturated, moderate petroleum-like odor at 18.5ft BGS		2" PVC WELL SCREEN	10DP				1455
22	- increase in coarse sands and fine gravel content, strong petroleum-like odor at 20.5ft BGS		SAND PACK	11DP				13.5
24	- fine grained at 23.0ft BGS	910.35						
26	CI-SILTY CLAYS, trace fine to medium sands, firm, medium plasticity, gray, moist	909.60						
28	END OF BOREHOLE @ 25.0ft BGS							
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
32								
34								

WELL DETAILS

Screened interval:

916.60 to 911.60ft

18.00 to 23.00ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

919.60 to 909.60ft

15.00 to 25.00ft BGS

Material: #5 SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-5-05

PROJECT NUMBER: 7097-20

DATE COMPLETED: September 15, 2005

CLIENT: ENCORE

DRILLING METHOD: DIRECT PUSH/HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: D. RIVERS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409426.19 EASTING: 13419732.94	GROUND SURFACE TOP OF CASING						
		938.60 938.23						
2	ASPHALT	938.10	CONCRETE	1DP 0-2' -031		80		0.0
4	SM-SILTY SANDS (FILL), trace fine gravels, loose, fine to coarse grained, poorly graded, dark brown, moist	937.10		2DP		80		0.0
6	CL-SILTY CLAYS, trace to with fine to medium sands, firm, low plasticity, brown and gray, moist		BENTONITE CHIPS	3DP		80		0.0
8	- brown-gray, trace fine to medium sands at 5.5ft BGS			4DP 8-10' -032		80		0.0
10	- stiff at 7.5ft BGS		2" PVC WELL CASING	5DP		75		0.8
12	- firm, gray at 9.5ft BGS			6DP		75		22.4
14	PT-PEAT, w clays, firm, low to non-plastic, dark brown, moist	926.60		7DP 16-18' -033		80		65.1
16	CL-SILTY CLAYS, trace fine to medium sands, stiff, low plasticity, brown and green-gray, moist	925.10	8-1/4" BOREHOLE	8DP		80		62.0
18	- firm, slight increase in plasticity at 17.0ft BGS			9DP		75		1185
20	- gray, slight increase in moisture at 18.0ft BGS	919.60	2" PVC WELL SCREEN	10DP		75		1018
22	SM-SILTY SANDS, trace fine gravels, compact, fine grained, poorly graded, grey, very moist, slight petroleum-like odor		SAND PACK	11DP		75		1024
24	- with fine gravels, saturated, moderate petroleum-like odor at 21.0ft BGS			12DP		75		898
26	SW-SANDS, trace silts, compact, fine to coarse grained, well graded, gray, saturated	912.60	BENTONITE CHIPS & NATURAL COLLAPSE	13DP		85		27.8
28				14DP		85		3.5
30	SM-SILTY SANDS, compact, fine to coarse grained, poorly graded, gray, saturated	908.60 908.10						
32	CI-SILTY CLAYS, trace fine to coarse sands, firm, medium plasticity, gray, moist							
34								
36	END OF BOREHOLE @ 35.0ft BGS	903.60						
38	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
40								
42								
44								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-6-06

PROJECT NUMBER: 7097-20

DATE COMPLETED: June 7, 2006

CLIENT: ENCORE

DRILLING METHOD: SS/ 4-1/2" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409277.71 EASTING: 13419788.33 GROUND SURFACE TOP OF CASING	936.18 935.97						
	ASPHALT	935.60		1SS				
	FILL-loose gravels		CONCRETE	2SS		75	9	0.9
2	SP-SANDS, trace silts, loose, poorly graded, fine grained, trace medium grained, brown, moist	934.18		3SS		67	5	0.7
4	ML-SILTS, compact, poorly graded, fine grained, brown, moist	931.98 931.68	BENTONITE CHIPS	4SS		54	3	0.7
6	SP-SANDS, trace silts, loose, poorly graded, fine grained, trace medium grained, brown, moist	929.18		5SS		79	3	0.7
8	CI-CLAYS, firm, low plasticity, brown and gray mottled, moist	927.68		6SS		71	7	0.6
10	SC-CLAYEY SANDS, compact, poorly graded, fine grained, brown, very moist	926.18	2" PVC WELL CASING	7SS		75	5	0.6
12	CI-CLAYS, firm, low plasticity, brown and gray mottled, moist	924.18		8SS 14-16' 001		75	5	0.7
14	SC-CLAYEY SANDS, compact, poorly graded, fine grained, brown, very moist		2" PVC WELL SCREEN	9SS		83	4	0.7
16	- wet at 14.0ft BGS		8-1/4" BOREHOLE	10SS		50	7	0.7
18	CH-CLAYS, trace medium grained sands, firm, high plasticity, dark gray, moist	919.18	SAND PACK	11SS		50	9	0.7
20				12SS		67	7	0.7
22				13SS		79	9	0.3
24				14SS		10	9	0.7
26	SP-SANDS, loose, poorly graded, fine and medium grained, dark brown, wet	911.18	BENTONITE CHIPS					
28	END OF BOREHOLE @ 28.0ft BGS	908.18						
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
32								
34								
36								

WELL DETAILS

Screened interval:
924.18 to 919.18ft
12.00 to 17.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
926.18 to 916.18ft
10.00 to 20.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-7-06

PROJECT NUMBER: 7097-20

DATE COMPLETED: June 7, 2006

CLIENT: ENCORE

DRILLING METHOD: SS/ 4-1/2" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409428.81 EASTING: 13419873.21 GROUND SURFACE TOP OF CASING	934.87 934.48						
2	CONCRETE		CONCRETE	1SS				
	SP-SANDS, loose, poorly graded, fine grained, trace medium grained, brown, moist	932.87 931.87		2SS				
4	SM-SILTY SANDS, loose, poorly graded, fine grained, black, moist	931.37	8-1/4" BOREHOLE	3SS		83	11	0.7
6	CI-CLAYS, trace coarse sands, trace fine subrounded gravels, low plasticity, brown and gray mottled, moist-almost brittle			4SS		75	10	3.3
8				5SS		75	6	16.6
10	- gray, chemical-like odor at 9.0ft BGS			6SS				
12	SC-CLAYEY SANDS, trace wood debris, compact, poorly graded, fine grained, dark brown, moist, petroleum-like odor	924.87		10-12-002		79	9	220
14	CH-CLAYS, firm, high plasticity, dark gray, moist	922.87	BENTONITE CHIPS	7SS		71	4	12.4
16				8SS		50	3	41.3
18			2" PVC WELL CASING	9SS		25	4	27
20	SP-SANDS, trace silts, trace fine subrounded gravels, loose, poorly graded, fine and medium grained, dark brown, wet, petroleum-like odor	916.87	2" PVC WELL SCREEN	10SS		50	9	115
22				18-20-003				
24	SM-SILTY SANDS, compact, poorly graded, fine grained, dark gray, wet, petroleum-like odor	911.87		11SS		42	9	1020
26			SAND PACK	20-22-004				
28	CI-CLAYS, firm, low plasticity, brown, moist	908.87	NATURAL COLLAPSE	12SS		63	8	16.4
30	END OF BOREHOLE @ 28.0ft BGS	906.87		13SS		50	8	0.8
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)			14SS		25	5	1.7
34								
36								

WELL DETAILS

Screened interval:
917.87 to 912.87ft
17.00 to 22.00ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Material: PVC
Sand Pack:
919.87 to 910.87ft
15.00 to 24.00ft BGS
Material: SANDS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-8-06

PROJECT NUMBER: 7097-20

DATE COMPLETED: June 8, 2006

CLIENT: ENCORE

DRILLING METHOD: SS/ 4-1/2" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409610.6 EASTING: 13419783.03 GROUND SURFACE TOP OF CASING	938.75 938.17						
	ASPHALT	938.17						
2	FILL-SANDS AND GRAVELS, loose, poorly graded, fine to coarse grained, subrounded, brown, moist	936.55	CONCRETE	1SS				
		935.75	BENTONITE CHIPS	2SS		86	9	0.6
4	SC-CLAYEY SANDS, compact, poorly graded, fine grained, trace medium and coarse grained, dark brown, moist			3SS		79	7	0.5
6	CI-SILTY CLAYS, firm, low plasticity, brown, moist - trace fine subrounded gravels at 4.0ft BGS			4SS		95	19	0.5
8				5SS		100	15	0.6
10			8-1/4" BOREHOLE	6SS 10-12'-002		79	12	0.5
12				7SS		95	13	0.4
14		924.15		8SS		86	22	0.6
16	SP/GP-SANDS/GRAVELS, compact, poorly graded, fine and medium grained, trace coarse grained, fine/subrounded, brown, moist - with coarse grained at 15.0ft BGS			9SS		60	16	0.7
18				10SS		83	27	2.4
20	- very moist at 19.0ft BGS		2" PVC WELL CASING	11SS		83	18	1.0
22	- trace medium and coarse grained, trace gravels at 21.5ft BGS - wet, petroleum-like odor at 22.0ft BGS		SAND PACK	12SS 22-24'-005		67	10	647
24			2" PVC WELL SCREEN	13SS 24-26'-006		71	16	110
26	ML-SILTS, compact, poorly graded, fine grained, dark gray, wet, petroleum-like odor	913.75		14SS		67	3	24.2
28	CH-CLAYS, firm, high plasticity, dark gray, very moist	912.75						
30	END OF BOREHOLE @ 28.0ft BGS	910.75						
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
34								
36								

WELL DETAILS

Screened interval:

917.75 to 912.75ft

21.00 to 26.00ft BGS

Length: 5ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

919.75 to 910.75ft

19.00 to 28.00ft BGS

Material: SANDS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: GM-CENTERPOINT BUSINESS CAMPUS-BLDG 35 HOLE DESIGNATION: MW35-9-06

PROJECT NUMBER: 7097-20

DATE COMPLETED: June 8, 2006

CLIENT: ENCORE

DRILLING METHOD: SS/ 4-1/2" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: M. MATHE DRADER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409415.07 EASTING: 13419604.39	GROUND SURFACE TOP OF CASING 942.24 941.73						
2	ASPHALT	941.74 941.24	CONCRETE	1SS				
4	SP/GP FILL-SANDS AND GRAVELS, loose, poorly graded, fine grained, brown, moist		BENTONITE CHIPS	2SS		86	11	1.5
6	CI-SILTY CLAYS, firm, low plasticity, brown, moist	938.74 938.24		3SS		50	20	8.5
8	SM-SILTY SANDS, compact, poorly graded, fine grained, brown, moist			4SS		71	3	1.9
10	CL-SILTY CLAYS, firm, low plasticity, brown, moist		8-1/4" BOREHOLE	5SS		58	4	2.9
12	- medium plasticity, trace silts at 8.0ft BGS			6SS		79	3	1.5
14				7SS		100	8	1.7
16	SM-SILTY SANDS, loose, poorly graded, fine grained, brown, wet	927.24 926.24		8SS		96	5	1.5
18	CI-SILTY CLAYS, firm, low plasticity, brown, moist	924.74 924.24		9SS		83	10	1.4
20	SP-SANDS, loose, poorly graded, fine grained, with medium grained, dark brown, wet			10SS		96	11	1.4
22	CI-SILTY CLAYS, firm, low plasticity, gray, moist		2" PVC WELL CASING	11SS		80	13	1.4
24				12SS		0	17	49.5
26	SP-SANDS, compact, poorly graded, medium grained, trace fine and coarse grained, dark brown/gray, wet slight petroleum-like odor	919.24	2" PVC WELL SCREEN	13SS 24-26'-007		58	20	2.8
28			SAND PACK	14SS 26-28'-008		56	26	10.4
30	END OF BOREHOLE @ 30.0ft BGS	912.24		15SS		40	9	470
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)		WELL DETAILS Screened interval: 920.24 to 915.24ft 22.00 to 27.00ft BGS Length: 5ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 922.24 to 912.24ft 20.00 to 30.00ft BGS Material: SANDS					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-20.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: MW33-21R

DATE COMPLETED: September 6, 2007

DRILLING METHOD: 4-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	SP-SANDS, fine grained, trace clays and fine to coarse gravels, poorly graded, loose, dark brown, moist		CONCRETE					0.0
	- no clays, loose to compact, brown at 0.5ft BGS		BENTONITE CHIPS	1HSA		85		0.0
4			2" PVC WELL CASING					0.0
6	- with silts, no gravels, compact at 5.0ft BGS		4-1/4" BOREHOLE	2HSA		80		0.0
	- no silts, loose at 6.0ft BGS		2" PVC WELL SCREEN					0.1
	- with silts, compact, brown and gray at 6.5ft BGS		SAND PACK	3HSA		100		2.1
8	- no silts, loose, brown at 8.0ft BGS							2.9
10	ML-SILTS, trace fine sands, poorly graded, no plasticity, brown, compact, moist	9.75						1.2
12	CI-CLAYS, trace fine sands, silts and fine gravels, poorly graded, moderate plasticity, stiff, gray, moist	11.00		4HSA		100		0.0
14								0.2
16	- decrease in plasticity at 15.0ft BGS			5HSA		100		0.0
18	- moderate to high plasticity at 18.0ft BGS							0.0
20	- trace cobbles at 19.8ft BGS							0.0
22	- no cobbles, very stiff at 20.0ft BGS							0.0
24	- trace cobbles at 23.5ft BGS							0.0
26	- no cobbles at 24.0ft BGS	25.00						0.0
28	END OF BOREHOLE @ 25.0ft BGS							
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
32								
34								

WELL DETAILS

Screened interval:

7.00 to 22.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

5.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW33-26R

PROJECT NUMBER: 7097-08

DATE COMPLETED: September 5, 2007

CLIENT: ENCORE

DRILLING METHOD: 4-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	CONCRETE	0.50	CONCRETE	1HSA		100		2.2
4	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, low plasticity, firm, brown, moist - increase in sands at 3.5ft BGS - decrease in sands at 4.0ft BGS - dark brown at 5.5ft BGS - trace fine sands, no gravels, brown and gray, mottled at 6.5ft BGS	8.25	BENTONITE CHIPS 2" PVC WELL CASING 4-1/4" BOREHOLE					2.7
6				2HSA		100		6.9
8								5.8
10	ML-SILTS, trace clays, poorly graded, compact, no plasticity, gray, moist to very moist - increase in clays, slight plasticity at 10.5ft BGS - sand lens, fine grained, ~ 1/2" thick at 12.5ft BGS	14.00	2" PVC WELL SCREEN SAND PACK	3HSA		60		3.6
12								1.6
14	SP-SANDS, fine grained, with medium to coarse grained and fine to coarse gravels, poorly graded, loose, very moist - coarse gravels, trace cobbles at 14.5ft BGS - trace fine to coarse gravels, no cobbles at 16.0ft BGS	20.00		4HSA		25		7.7
16								2.3
18				5HSA		70		2.2
20	CH-CLAYS, with sands, medium grained, trace fine gravels, poorly graded, high plasticity, gray, very moist	22.00						2.1
22	SP-SANDS, medium to coarse grained, with fine sands and fine to coarse gravels, medium graded, loose, gray, saturated	22.25						0.7
24	CH-CLAYS, with sands, medium grained, trace fine gravels, poorly graded, high plasticity, gray, very moist - trace sand lens, 1" thick, medium to coarse grained, with fine to coarse gravels, saturated at 24.0ft BGS	25.00						0.0
26								0.7
28	END OF BOREHOLE @ 25.0ft BGS							
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
32								
34								

WELL DETAILS

Screened interval:

7.00 to 22.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

5.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW33-27R

PROJECT NUMBER: 7097-08

DATE COMPLETED: September 5, 2007

CLIENT: ENCORE

DRILLING METHOD: 4-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	CONCRETE		CONCRETE					-
2	SP-SANDS, fine grained, trace medium grained, poorly graded, loose, brown, moist	2.00	BENTONITE CHIPS	1HSA		40		2.6
4	CL-CLAYS, with sands, fine grained, trace coarse sands and fine gravels, poorly graded, low plasticity, firm, brown, moist	2.75	2" PVC WELL CASING					1.0
6			4-1/4" BOREHOLE	2HSA		70		1.5
8	CH-CLAYS, trace fine sands and coarse gravels, poorly graded, high plasticity, soft, brown, moist to very moist	8.00	2" PVC WELL SCREEN					0.5
10	- soft to firm at 9.0ft BGS		SAND PACK	3HSA		80		0.7
12	- with fine sands, soft, very moist at 10.0ft BGS							0.0
14	- no sands or coarse gravels, trace silts, firm to soft, green and gray, mottled, moist to very moist at 11.0ft BGS			4HSA		95		7.8
16	- soft at 12.5ft BGS	16.50						2.3
18	CL-CLAYS, trace silts and fine to coarse gravels, poorly graded, low plasticity, firm to stiff, gray, moist							2.5
20	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, firm to stiff, gray, moist	20.00		5HSA		100		2.1
22								0.2
24	- stiff at 23.5ft BGS							0.0
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

7.00 to 22.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

5.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: MW33-28R

DATE COMPLETED: September 5, 2007

DRILLING METHOD: 4-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.50	CONCRETE	0.50	CONCRETE					1.1
2.00	CL-CLAYS, with sands, trace fine gravels, fine grained, poorly graded, low plasticity, firm, brown, moist	2.00						
2.25	ASPHALT DEBRIS	2.25	BENTONITE CHIPS	1HSA		90		0.0
4.75	CL-CLAYS, with sands, trace fine gravels, fine grained, poorly graded, low plasticity, firm, brown, moist	4.75	2" PVC WELL CASING					0.5
6.00	SP-SANDS, with clays, fine grained, trace fine gravels, poorly graded, compact, brown, moist	6.00						
7.00	CL-CLAYS, with sands, trace fine gravels, fine grained, poorly graded, low plasticity, firm, brown, moist	7.00	4-1/4" BOREHOLE	2HSA		100		0.2
7.25		7.25						
8.50	SP-SANDS, fine grained, poorly graded, loose, brown, moist	8.50	2" PVC WELL SCREEN					2.1
	CL-CLAYS, trace silts, poorly graded, low plasticity, firm to stiff, brown and gray, moist, mottled							0.1
	SP-SANDS, fine grained, poorly graded, loose, brown, moist		SAND PACK	3HSA		50		0.0
13.50	- trace coarse sands, very moist at 11.0ft BGS	13.50						2.3
	CL-CLAYS, trace fine gravels, poorly graded, moderate plasticity, brown, moist							
	- increase in plasticity at 15.0ft BGS							1.4
	- with fine to medium sands, very moist at 17.0ft BGS			4HSA		100		2.0
	- no sands, moist at 18.0ft BGS							
21.00		21.00						2.9
22.00	SP-SANDS, medium to coarse grained, with fine grained, trace fine gravels, poorly graded, loose, gray, saturated	22.00		5HSA		30		1.3
	CL-CLAYS, trace fine sands and fine to coarse gravels, poorly graded, moderate plasticity, stiff, gray, moist							0.6
25.00		25.00						
	END OF BOREHOLE @ 25.0ft BGS							
	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							

WELL DETAILS

Screened interval:

8.00 to 23.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

6.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: MW33-30R

DATE COMPLETED: September 6, 2007

DRILLING METHOD: 4-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	SP-SANDS, fine grained, with fine gravels, poorly graded, loose, dark brown, moist	0.50	CONCRETE	1HSA		90		0.4
4	SC-CLAYEY SANDS, fine grained, trace silts and fine gravels, poorly graded, compact, brown, moist	4.25	BENTONITE CHIPS					0.3
6	SP-SANDS, fine grained, trace fine gravels, poorly graded, loose, brown, moist		2" PVC WELL CASING					1.2
8	- very moist at 9.0ft BGS		4-1/4" BOREHOLE	2HSA		65		0.6
10	CI-CLAYS, trace fine sands, silts and fine gravels, poorly graded, moderate plasticity, stiff, gray, moist to very moist	10.00						0.0
12	SP-SANDS, medium grained, with coarse sands and fine gravels, trace coarse gravels, poorly graded, loose, gray, very moist	12.00	2" PVC WELL SCREEN	3HSA		70		2.3
14	ML-SILTS, with sands, fine grained, poorly graded, compact, slight plasticity, gray, very moist	12.75						0.2
16	- very moist to saturated at 13.3ft BGS	14.25	SAND PACK					3.4
18	CI-CLAYS, trace fine sands and fine to coarse gravels, poorly graded, moderate plasticity, stiff to very stiff, gray, moist			4HSA		100		0.4
20								0.9
22								0.0
24				5HSA		100		0.0
26	END OF BOREHOLE @ 25.0ft BGS	25.00						0.6
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

8.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW33-32

PROJECT NUMBER: 7097-08

DATE COMPLETED: August 17, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409626.23 EASTING: 13420295.61	TOP OF CASING 935.10 GROUND SURFACE 932.28						
2	CONCRETE	931.78	CONCRETE	1AL				-
4	NO RECOVERY			2AL		0		-
6		926.28		3AL		0		-
8	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist to very moist - with clays at 6.5ft BGS	924.78	4" PVC WELL CASING	4AL		90		9.7
10	CL-CLAYS, with silts, trace fine sands, poorly graded, stiff, low plasticity, brown, moist, mottled - low to moderate plasticity at 8.0ft BGS - moderate plasticity at 10.0ft BGS	921.28	BENTONITE CHIPS	5AL		100		4.4
12	CH-CLAYS, trace fine sands, poorly graded, soft, high plasticity, gray, very moist	920.53	6-1/4" BOREHOLE	6AL		90		11.4
14	SP-SANDS, fine to medium grained, poorly graded, loose, gray, very moist, staining, slight petroleum-like odor	920.28	4" PVC WELL SCREEN	7AL		75		5.2
16	CH-CLAYS, trace fine to coarse sands, poorly graded, high plasticity, firm to soft, gray, very moist - trace fine gravels at 14.5ft BGS	916.28	SAND PACK	8AL		70		5.4
18	CI-CLAYS, with sands, fine to medium grained, trace coarse grained, poorly graded, medium plasticity, gray, moist to very moist			9AL		40		8.9
20	- trace silts at 20.0ft BGS			10AL		70		7.4
22		910.28		11AL		50		2.7
24	CH-CLAYS, with fine sands, trace coarse sands, poorly graded, high plasticity, soft to firm, gray, very moist - stiff at 24.0ft BGS			12AL		50		0.6
26	END OF BOREHOLE @ 26.0ft BGS	906.28		13AL		85		0.6
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.28 to 907.28ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.28 to 906.28ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW33-33

PROJECT NUMBER: 7097-08

DATE COMPLETED: August 17, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409628.66 EASTING: 13420265.74	TOP OF CASING 935.56 GROUND SURFACE 932.40						
2	CONCRETE	931.90	CONCRETE	1AL				-
4	CL-SANDY CLAYS, fine to medium grained, trace coarse grained and fine gravels, poorly graded, low plasticity, stiff, brown, moist, mottled		BENTONITE GROUT	2AL		75		7.1
6			4" PVC WELL CASING	3AL		80		5.9
8	CH-CLAYS, trace fine sands, poorly graded, soft, high plasticity, brown, moist, mottled	926.40	BENTONITE CHIPS	4AL		50		9.9
10			6-1/4" BOREHOLE	5AL		40		3.4
12	CI-SANDY CLAYS, fine to medium grained, with coarse sands, trace fine gravels, poorly graded, low to medium plasticity, soft, gray and brown, moist to very moist	922.65	4" PVC WELL SCREEN	6AL		85		7.0
14	- very moist at 14.0ft BGS		SAND PACK	7AL		80		7.8
16				8AL		30		7.3
18				9AL		45		4.0
20	CH-CLAYS, with sands, medium grained, trace coarse sands and fine gravels, poorly graded, high plasticity, stiff, brown, moist - firm to soft, gray, very moist at 19.0ft BGS	914.40 912.90 912.40		10AL		85		4.3
22	SP-SANDS, fine to medium grained, trace coarse grained and fine gravels, poorly graded, loose, gray, saturated			11AL		70		7.8
24	CH-CLAYS, with sands, trace coarse sands and fine gravels, poorly graded, high plasticity, stiff, gray, moist - no gravels at 23.0ft BGS - stiff to very stiff at 24.0ft BGS			12AL		100		6.1
26	END OF BOREHOLE @ 26.0ft BGS	906.40		13AL		65		3.2
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:
922.40 to 907.40ft bgs
10.00 to 25.00ft BGS

Length: 15ft
Diameter: 4in
Slot Size: 0.010
Material: PVC
Sand Pack:

924.40 to 906.40ft bgs
8.00 to 26.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW33-34

PROJECT NUMBER: 7097-08

DATE COMPLETED: September 5, 2007

CLIENT: ENCORE

DRILLING METHOD: 4-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	CONCRETE	0.50	CONCRETE					0.0
2	SC-CLAYEY SANDS, trace silts, fine grained, trace fine gravels, poorly graded, compact, brown, moist	2.00	BENTONITE CHIPS	1HSA		100		0.0
4	SP-SANDS, fine grained, poorly graded, loose, brown, moist	2.25	2" PVC WELL CASING					0.0
6	SC-CLAYEY SANDS, trace silts, fine grained, trace fine and coarse gravels, poorly graded, compact, brown, moist	5.50	4-1/4" BOREHOLE	2HSA		65		0.0
8	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, low plasticity, firm, brown, moist	8.00	2" PVC WELL SCREEN					0.0
10	CH-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, high plasticity, soft to firm, brown, very moist - firm to stiff, moist at 10.0ft BGS		SAND PACK	3HSA		100		0.0
12	- trace fine to coarse gravels, stiff at 11.5ft BGS							0.0
14	- trace fine gravels at 12.5ft BGS							0.0
16	SP-SANDS, fine grained, trace fine gravels, poorly graded, loose, gray, very moist	15.00		4HSA		70		0.0
18	CL-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, firm to stiff, gray, moist	15.25						0.0
20								0.0
22	CL-CLAYS AND SILTS, trace medium to coarse sands, poorly graded, low plasticity, firm, gray, moist	21.50		5HSA		100		0.0
24								0.0
26	END OF BOREHOLE @ 25.0ft BGS	25.00						0.0
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

7.00 to 22.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

5.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: MW33-35

DATE COMPLETED: November 20, 2007

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.50	ASPHALT	0.50	CONCRETE					0.7
2	CL-CLAYS, with sands, fine to coarse grained, trace fine gravels, poorly graded, low plasticity, firm, brown, moist	2.50	BENTONITE CHIPS	1HSA		80		1.1
4	SP-SANDS, fine grained, poorly graded, loose, brown, moist - trace clays, loose to compact, dark brown at 3.0ft BGS	3.50	2" PVC WELL CASING					1.2
6	CL-CLAYS, with sands, fine to coarse grained, trace fine gravels, poorly graded, low plasticity, firm, brown, moist, mottled		6-1/4" BOREHOLE					0.3
8			2" PVC WELL SCREEN	2HSA		50		0.4
10	SP-SANDS, fine grained, with medium grained, poorly graded, loose to compact, brown, very moist - trace clays at 9.5ft BGS	9.00						0.7
12	CL-CLAYS, with silts and fine sands, poorly graded, low plasticity, firm, gray, very moist	10.50	SAND PACK	3HSA		65		0.9
14	SP-SANDS, fine grained, with medium grained, trace fine to coarse gravels, poorly graded, compact, gray, very moist	11.00						0.9
16	CL-CLAYS, with sands, fine grained, with fine gravels, poorly graded, low plasticity, firm, gray, very moist - increase in sands at 17.0ft BGS	11.50		4HSA		85		0.2
18	- decrease in sands at 18.5ft BGS							1.2
20								0.7
22				5HSA		70		0.7
24								0.4
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

6.00 to 21.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

4.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW33-36

PROJECT NUMBER: 7097-08

DATE COMPLETED: October 3, 2007

CLIENT: ENCORE

DRILLING METHOD: 4-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.50	ASPHALT	0.50	CONCRETE					-
2	CL-SANDY CLAYS, fine grained, trace fine gravels, poorly graded, low plasticity, firm, brown, moist		BENTONITE CHIPS	1HSA		100		0.0
4	- trace silts at 2.5ft BGS		2" PVC WELL CASING					0.0
6	- increase in sands at 3.5ft BGS							0.0
8	- decrease in sands, increase in plasticity, soft, olive green and black, moist to very moist at 4.5ft BGS		4-1/4" BOREHOLE	2HSA		50		0.0
10	- low plasticity, olive green at 5.0ft BGS		2" PVC WELL SCREEN					0.0
12	CL-CLAYS, trace medium to coarse sands and fine gravels, poorly graded, low plasticity, firm to stiff, brown, moist	10.00	SAND PACK	3HSA		100		0.0
14	SP-SANDS, with clays, fine grained, with medium grained, poorly graded, loose to compact, brown, very moist to saturated	13.00		4HSA		60		0.0
16	- saturated at 13.5ft BGS	15.00		5HSA		85		0.0
18	CH-CLAYS, with silts, trace coarse sands and fine gravels, poorly graded, high plasticity, soft, brown, very moist			6HSA		70		0.0
20	- no gravels, soft to firm at 16.0ft BGS			7HSA		85		0.0
22	- firm at 21.0ft BGS			8HSA		60		0.0
24								0.0
26	END OF BOREHOLE @ 25.0ft BGS	25.00						0.0
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							0.0
30								0.0
32								0.0
34								0.0

WELL DETAILS

Screened interval:

8.00 to 23.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

6.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: MW33-37

PROJECT NUMBER: 7097-08

DATE COMPLETED: February 11, 2008

CLIENT: ENCORE

DRILLING METHOD: 4-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	SC-CLAYEY SANDS, fine grained, trace medium grained and fine to coarse gravels, poorly graded, loose, brown, moist		CONCRETE	1HSA		15		0.0
4			BENTONITE CHIPS					0.0
6			2" PVC WELL CASING					0.0
8	- decrease in clays at 8.3ft BGS	8.75		2HSA		60		0.0
10	CL-CLAYS, trace fine to medium sands and fine gravels, poorly graded, low plasticity, firm, brown, moist		4-1/4" BOREHOLE					0.0
12			2" PVC WELL SCREEN	3HSA		50		0.0
14		14.50	SAND PACK					0.0
16	SC-CLAYEY SANDS, fine grained, trace fine to coarse gravels, poorly graded, loose, brown, very moist			4HSA		10		0.0
18	- fine to medium grained with coarse grained and fine gravels at 15.3ft BGS							0.0
20	SP-SANDS, fine grained, poorly graded, loose to compact, brown, saturated	20.00						0.0
22	- trace silts at 20.5ft BGS			5HSA		85		0.0
24	CL-CLAYS, trace silts, poorly graded, low plasticity, firm, gray, moist to very moist	23.50						0.0
26	- with fine to coarse sands and fine gravels, no silts, moist at 24.0ft BGS	25.00						0.0
28	END OF BOREHOLE @ 25.0ft BGS							
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
32								
34								

WELL DETAILS

Screened interval:

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 2in

Slot Size: 0.010

Material: PVC

Sand Pack:

8.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-01

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 12, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409506.11 EASTING: 13420003.73 TOP OF CASING GROUND SURFACE	934.20 932.20						
	CONCRETE	931.45	CONCRETE	1AL		100		6.5
2	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist	931.20 930.70		2AL		80		3.9
4	CL-CLAYS, trace fine gravels, poorly graded, stiff, low plasticity, brown, moist		BENTONITE GROUT	3AL		85		11.9
6	SP-SANDS, with clays, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist		4" PVC WELL CASING	4AL		90		--
8	CH-CLAYS, trace fine sands and fine gravels, poorly graded, soft to firm, high plasticity, brown, moist	926.20	BENTONITE CHIPS	5AL		85		--
10	SP-SANDS, fine to medium grained, poorly graded, loose, brown to gray, moist	924.45	6-1/4" BOREHOLE	6AL		60		29.4
12	- petroleum-like odor, very moist to saturated at 12.0ft BGS		4" PVC WELL SCREEN	7AL		50		115.6
14			SAND PACK	8AL		85		261
16				9AL		75		824
18	- fine to coarse grained at 17.8ft BGS	914.20		10AL		50		10.2
20	CI-CLAYS, trace silts and fine to coarse gravels, poorly graded, stiff, moderate plasticity, gray, saturated, petroleum-like odor			11AL		80		7.3
22	- trace fine gravels, no odor, moist at 21.0ft BGS			12AL		80		10.9
24				13AL		85		1.7
26	END OF BOREHOLE @ 26.0ft BGS	906.20						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.20 to 907.20ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.20 to 906.20ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-02

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 12, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409503.85 EASTING: 13420103.09	TOP OF CASING GROUND SURFACE 934.78 932.78						
	CONCRETE	932.03	CONCRETE	1AL		100		0.0
2	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist - black at 1.3ft BGS			2AL		30		0.0
4	- brown at 4.0ft BGS		BENTONITE GROUT	3AL		75		0.0
6	- with clays at 5.5ft BGS - light brown, no clays at 6.0ft BGS - with clays at 6.5ft BGS		4" PVC WELL CASING	4AL		95		0.0
8	CL-CLAYS, trace silts and fine gravels, poorly graded, stiff, low plasticity, brown, moist, mottled	925.78	BENTONITE CHIPS	5AL		85		0.0
10	- trace sand lens, medium to coarse grained with fine gravels at 8.5ft BGS - slight increase in plasticity at 9.0ft BGS	922.78	6-1/4" BOREHOLE	6AL		85		3.1
12	CI-CLAYS, trace silts and fine gravels, poorly graded, medium plasticity, soft to stiff, brown to gray, moist	921.28	4" PVC WELL SCREEN	7AL		65		153.7
14	SP-SANDS, fine to medium grained, poorly graded, loose, brown to gray, very moist, slight petroleum-like odor	919.28 918.53	SAND PACK	8AL		80		7.3
16	CL-SILTY CLAYS, poorly graded, low plasticity, stiff, gray, moist			9AL		70		0.0
18	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, stiff, gray, moist - soft to stiff, increase in plasticity at 14.8ft BGS	915.28		10AL		65		0.0
20	- trace sand lenses 0.5" thick, fine to medium grained, trace fine gravels at 16.0ft BGS	913.78		11AL		85		0.0
22	SP-SANDS, medium to coarse grained, trace fine gravels, moderately graded, loose, gray, saturated			12AL		100		0.0
24	CI-CLAYS, trace fine gravels and silts, poorly graded, stiff, gray, medium plasticity, moist			13AL		95		0.0
26	END OF BOREHOLE @ 26.0ft BGS	906.78						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.78 to 907.78ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.78 to 906.78ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-03

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 29, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409546.37 EASTING: 13420121.15 TOP OF CASING GROUND SURFACE	934.29 932.29						
	CONCRETE	931.64	CONCRETE	1AL				--
2	SC-CLAYEY SANDS, fine grained, trace coarse sands, poorly graded, compact, brown, moist to very moist		BENTONITE GROUT	2AL		0		--
4				3AL		50		0.8
6				4AL		60		1.5
8				5AL		45		2.7
10				6AL		0		--
12	SP-SANDS, fine grained, trace fine gravels, poorly graded, loose, brown, saturated, petroleum-like odor, staining	918.79 918.29	4" PVC WELL SCREEN	7AL		10		22.4
14			SAND PACK	8AL		60		15.5
16	CH-CLAYS, with sands, fine grained, trace coarse grained and fine gravels, poorly graded, soft, brown, high plasticity, very moist	916.29		9AL		70		310
18	SP-SANDS, fine grained, trace medium grained, poorly graded, loose, black, saturated, slight petroleum-like odor	914.29		10AL		95		435
20	SP-SANDS, with silts, fine grained, poorly graded, loose to compact, gray, very moist - fine to medium grained, loose, saturated at 19.0ft BGS	912.79		11AL		85		0.4
22	CH-CLAYS, with sands, coarse grained, trace fine grained and fine gravels, poorly graded, high plasticity, soft to firm, gray, moist to very moist			12AL		90		0.7
24	- firm to stiff, moist at 22.0ft BGS - stiff at 24.0ft BGS			13AL		90		0.3
26	END OF BOREHOLE @ 26.0ft BGS	906.29						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.29 to 907.29ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.29 to 906.29ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-04

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 13, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409546.84 EASTING: 13420085.04	TOP OF CASING 934.35 GROUND SURFACE 932.35						
2	CONCRETE	931.85	CONCRETE	1AL				--
4	CL-CLAYS, trace silts and fine gravels, poorly graded, soft, low plasticity, brown, moist			2AL		60		2.7
6			BENTONITE GROUT	3AL		20		4.2
8			4" PVC WELL CASING	4AL		80		3.3
10	SC-SANDS, with clays, trace fine gravels, fine grained, poorly graded, loose to compact, brown, moist	924.35	BENTONITE CHIPS	5AL		85		--
12	CL-CLAYS, trace silts and fine gravels, poorly graded, soft, low plasticity, brown, moist	922.35	6-1/4" BOREHOLE	6AL		50		61
14	- slight petroleum-like odor at 12.0ft BGS		4" PVC WELL SCREEN	7AL		60		1611
16	SP-SANDS, medium to coarse grained, with fine gravels, trace fine sands, moderately graded, loose, brown, very moist, petroleum-like odor	919.35	SAND PACK	8AL		90		1621
18	- saturated at 13.5ft BGS	916.85		9AL		95		1808
20	- fine to medium grained, trace fine sands and fine gravels, poorly graded at 14.5ft BGS	916.10		10AL		95		6.1
22	ML-SILTS, with clays, poorly graded, low plasticity, compact, gray, saturated, petroleum-like odor, staining			11AL		25		5.9
24	CL-CLAYS, trace silts and fine gravels, poorly graded, stiff, low plasticity, gray, moist, slight petroleum-like odor	912.35		12AL		85		1.7
26	CH-CLAYS, trace fine gravels, poorly graded, soft to firm, high plasticity, gray, moist to very moist			13AL		90		0.9
28	END OF BOREHOLE @ 26.0ft BGS	906.35						
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
32								
34								

WELL DETAILS

Screened interval:

922.35 to 907.35ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.35 to 906.35ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-05

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 23, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409548.66 EASTING: 13420048.66	TOP OF CASING 934.32 GROUND SURFACE 932.32						
	CONCRETE	931.57	CONCRETE	1AL				-
2	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, firm, low plasticity, brown, moist			2AL		50		2.0
4			BENTONITE GROUT	3AL		40		4.5
6			4" PVC WELL CASING	4AL		95		22.5
8	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist, slight sweet solvent-like odor	925.32	BENTONITE CHIPS	5AL		100		73.9
10	CL-CLAYS, trace fine to coarse sands and fine gravels, poorly graded, stiff, low plasticity, brown, moist	924.07	6-1/4" BOREHOLE	6AL		100		368
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist, slight sweet solvent-like odor	922.57	4" PVC WELL SCREEN	7AL		70		1286
14	- slight petroleum-like odor at 11.0ft BGS - very moist at 11.8ft BGS - trace clays, saturated, petroleum-like odor at 12.0ft BGS		SAND PACK	8AL		85		1652
16	- staining at 15.5ft BGS	916.52		9AL		75		11.1
18	CI-CLAYS, trace fine sands and fine gravels, poorly graded, low to medium plasticity, stiff, brown, moist, slight petroleum-like odor			10AL		85		2.9
20	- trace silts and fine sands, medium to high plasticity, soft to firm, no odor at 19.0ft BGS - trace fine sands and fine gravels, stiff at 20.0ft BGS			11AL		100		1.4
22	- firm at 22.0ft BGS			12AL		100		2.0
24	- firm to stiff at 24.0ft BGS			13AL		65		1.7
26	END OF BOREHOLE @ 26.0ft BGS	906.32						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.32 to 907.32ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.32 to 906.32ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-06

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 15, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409549.64 EASTING: 13420015.47	TOP OF CASING GROUND SURFACE 934.30 932.30						
2	CONCRETE	931.80	CONCRETE	1AL				-
4	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, compact, brown, moist		BENTONITE GROUT	2AL		60		6.3
6			4" PVC WELL CASING	3AL		80		6.7
8	CI-CLAYS, with sands, fine to medium grained, trace fine gravels, poorly graded, medium plasticity, soft to firm, brown, moist	926.30	BENTONITE CHIPS	4AL		65		8.2
10	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist	923.55	6-1/4" BOREHOLE	5AL		85		82.5
12	- no gravels at 11.0ft BGS - very moist at 11.8ft BGS - saturated, petroleum-like odor at 12.0ft BGS		4" PVC WELL SCREEN	6AL		85		154
14			SAND PACK	7AL		70		400
16	- medium grained, trace fine and coarse grained at 15.8ft BGS - black, fine to medium grained, staining at 16.0ft BGS			8AL		70		1460
18	- medium grained, trace fine to coarse grained at 17.3ft BGS	914.80		9AL		80		572
20	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, soft to firm, gray, very moist, slight petroleum-like odor			10AL		80		17.0
22	- moist at 18.0ft BGS - stiff, no odor at 22.0ft BGS			11AL		85		15.5
24	- stiff to very stiff at 24.0ft BGS			12AL		90		0.0
26	END OF BOREHOLE @ 26.0ft BGS	906.30		13AL		90		0.0
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)		<u>WELL DETAILS</u> Screened interval: 922.30 to 907.30ft bgs 10.00 to 25.00ft BGS Length: 15ft Diameter: 4in Slot Size: 0.010 Material: PVC Sand Pack: 924.30 to 906.30ft bgs 8.00 to 26.00ft BGS Material: SAND					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-07

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 13, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409570.36 EASTING: 13419986.14	TOP OF CASING 934.22 GROUND SURFACE 932.22						
2	CONCRETE	931.22	CONCRETE	1AL				--
4	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, compact, brown, moist			2AL		90		2.4
6	CH-CLAYS, with sands, trace fine gravels, poorly graded, firm, high plasticity, brown, moist	927.22	BENTONITE GROUT	3AL		65		3.1
8	CL-CLAYS, trace silts and fine gravels, poorly graded, low plasticity, stiff, brown, moist - gray to green at 8.3ft BGS	926.22	4" PVC WELL CASING	4AL		60		0.0
10	- brown at 10.0ft BGS		BENTONITE CHIPS	5AL		80		1.3
12	SP-SANDS, medium to coarse grained, trace fine sands and fine to coarse gravels, poorly graded, loose, brown, moist, slight petroleum-like odor	920.97	6-1/4" BOREHOLE	6AL		75		44.2
14	- very moist, petroleum-like odor at 12.0ft BGS		4" PVC WELL SCREEN	7AL		50		290.0
16	- increase in fine and coarse gravels at 14.0ft BGS		SAND PACK	8AL		60		972.0
18	- fine grained, trace medium grained, saturated, visible sheen at 15.0ft BGS			9AL		85		6.6
20	CH-CLAYS, trace fine sands and fine gravels, poorly graded, soft, high plasticity, gray, very moist	912.72		10AL		40		15.1
22				11AL		40		4.0
24				12AL		65		1.1
26	SP-SANDS, fine grained, trace medium grained, poorly graded, loose, gray, moist	907.72		13AL		80		0.1
28	CL-CLAYS, trace fine sands and fine gravels, poorly graded, very stiff, low plasticity, gray, moist	907.22						
30	END OF BOREHOLE @ 26.0ft BGS	906.22						
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 8, 2015)							
34								

WELL DETAILS

Screened interval:

922.22 to 907.22ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.22 to 906.22ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-08

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 15, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409585.16 EASTING: 13420014.7 TOP OF CASING GROUND SURFACE	934.35 932.35						
	CONCRETE	931.85	CONCRETE	1AL				-
2	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose to compact, brown, moist			2AL		80		0.1
4	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, stiff, low plasticity, brown, moist	929.10	BENTONITE GROUT	3AL		50		0.0
6	SP-SANDS, medium to coarse grained, with fine gravels, trace fine grained, poorly graded, loose, brown, moist	927.35	4" PVC WELL CASING	4AL		75		21.9
8	- fine to medium grained, no gravels at 5.5ft BGS		BENTONITE CHIPS	5AL	8-10' -001	70		320
10	- trace fine gravels, sweet solvent-like odor at 7.3ft BGS		6-1/4" BOREHOLE	6AL		100		328
12	- no gravels at 10.0ft BGS		4" PVC WELL SCREEN	7AL		80		1511
14	- very moist, petroleum-like odor at 13.0ft BGS		SAND PACK	8AL		25		1257
16	- staining, saturated at 13.0ft BGS			9AL		85		11.2
18	- gray, strong petroleum-like odor at 15.5ft BGS	916.10		10AL		75		1.5
20	CH-CLAYS, trace fine sands and fine gravels, poorly graded, stiff, medium to high plasticity, moist			11AL		80		2.9
22	- slight increase in plasticity, moist to very moist at 20.8ft BGS			12AL		85		0.9
24	- decrease in plasticity, very stiff, moist at 24.5ft BGS			13AL		75		1.2
26	END OF BOREHOLE @ 26.0ft BGS	906.35						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.35 to 907.35ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.35 to 906.35ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-09

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 23, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409585.65 EASTING: 13420049.78	TOP OF CASING GROUND SURFACE 934.34 932.34						
	CONCRETE	931.59	CONCRETE	1AL				-
2	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, compact, brown, moist			2AL		40		6.4
4	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, low plasticity, stiff, brown, moist	928.09	BENTONITE GROUT	3AL		95		7.1
6			4" PVC WELL CASING	4AL		70		9.6
8	SP-SANDS, fine to medium grained, trace silts, poorly graded, loose to compact, brown, moist	925.34 924.59	BENTONITE CHIPS	5AL		70		25.1
10	CL-CLAYS, with silts, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, brown, very moist	923.59 923.09	6-1/4" BOREHOLE	6AL		70		>2000
12	SP-SANDS, fine to medium grained, trace silts, poorly graded, loose to compact, brown, moist	922.09	4" PVC WELL SCREEN	7AL		60		>2000
14	CL-CLAYS, with silts, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, brown, very moist		SAND PACK	8AL		60		>2000
16	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist - very moist, slight petroleum-like odor at 11.5ft BGS			9AL		65		>2000
18	- no gravels, saturated, petroleum-like odor, gray and black, staining at 12.0ft BGS - coarse sands and fine gravels, trace medium sands at 17.8ft BGS	914.34		10AL		60		45.9
20	CI-CLAYS, with sands, fine to medium grained, trace coarse sands and fine gravels, poorly graded, medium plasticity, stiff, gray	912.34		11AL		100		5.3
22	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, soft to firm, gray, moist			12AL		100		6.5
24	- firm at 22.0ft BGS - stiff at 24.0ft BGS			13AL		95		2.9
26	END OF BOREHOLE @ 26.0ft BGS	906.34						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.34 to 907.34ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.34 to 906.34ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-10

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 29, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409586.63 EASTING: 13420084.79	TOP OF CASING 934.31 GROUND SURFACE 932.31						
	CONCRETE	931.66	CONCRETE	1AL				-
2	CL-SANDY CLAYS, fine grained, poorly graded, firm, low plasticity, brown, moist			2AL		60		0.3
4	- with coarse sands, trace fine gravels at 4.0ft BGS		BENTONITE GROUT	3AL		80		1.2
6		926.31	4" PVC WELL CASING	4AL		85		0.8
8	SP-SANDS, fine grained, trace medium to coarse sands, poorly graded, loose, brown, moist		BENTONITE CHIPS	5AL		80		1.3
10	- fine grained, trace fine gravels at 8.5ft BGS		6-1/4" BOREHOLE	6AL		100		488
12	CL-CLAYS, with sands, fine grained, trace coarse grained, low plasticity, firm, brown, moist to very moist	922.31		7AL		90		1675
14	- increase in fine sands, very moist, slight petroleum-like odor at 11.0ft BGS	920.31	4" PVC WELL SCREEN	8AL		95		9.0
16	CH-CLAYS, with sands, fine grained, trace fine gravels and silts, poorly graded, soft, high plasticity, brown, very moist, petroleum-like odor	919.31 918.81 918.31	SAND PACK	9AL		40		10.6
18	CL-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, brown, moist			10AL		65		1679
20	SP-SANDS, fine to medium grained, trace coarse grained and clays, poorly graded, loose, brown, saturated, petroleum-like odor	914.31		11AL		95		9.6
22	CH-CLAYS, with sands, fine to coarse grained, trace fine gravels, poorly graded, high plasticity, soft, brown and gray, very moist	912.56		12AL		85		12.7
24	SP-SANDS, fine to medium grained, trace coarse grained, poorly graded, loose, gray, saturated, petroleum-like odor			13AL		30		3.3
26	CH-CLAYS, with sands, coarse grained, trace fine grained, poorly graded, high plasticity, soft, gray, very moist							
28	- moist, firm at 22.0ft BGS							
30	- trace fine gravels, stiff at 24.0ft BGS	906.31						
32	END OF BOREHOLE @ 26.0ft BGS							
34	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 8, 2015)							

WELL DETAILS

Screened interval:

922.31 to 907.31ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.31 to 906.31ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-11

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 29, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409586.01 EASTING: 13420122.71 TOP OF CASING GROUND SURFACE	934.31 932.31						
	CONCRETE	931.66	CONCRETE	1AL				-
2	CL-CLAYS, with sands, fine grained, trace coarse sands and fine gravels, poorly graded, firm, low plasticity, brown, moist			2AL		95		0.0
4			BENTONITE GROUT	3AL		60		0.0
6			4" PVC WELL CASING	4AL		65		0.0
8	- increase in fine sands at 8.0ft BGS		BENTONITE CHIPS	5AL		75		0.0
10	SP-SANDS, fine grained, poorly graded, loose, brown, very moist	923.31	6-1/4" BOREHOLE	6AL		65		0.0
12	CL-CLAYS, trace fine to medium sands and fine gravels, poorly graded, low plasticity, stiff, brown, moist	921.31	4" PVC WELL SCREEN	7AL		50		0.0
14	CH-CLAYS, trace fine sands, silts and fine gravels, poorly graded, soft, high plasticity, moist to very moist	920.31	SAND PACK	8AL		60		0.0
16				9AL		5		0.0
18				10AL		20		3.7
20				11AL		35		41.6
22	- gray, firm at 22.0ft BGS			12AL		85		0.0
24	- stiff at 24.0ft BGS			13AL		70		0.0
26	END OF BOREHOLE @ 26.0ft BGS	906.31						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 8, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.31 to 907.31ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.31 to 906.31ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-12

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 20, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409566.07 EASTING: 13420158.63 TOP OF CASING GROUND SURFACE	934.40 932.40						
	CONCRETE	931.65	CONCRETE	1AL				--
2	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, compact, brown, moist			2AL		70		4.4
4			BENTONITE GROUT	3AL		40		6.6
6	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, medium plasticity, soft to firm, brown, moist	926.90	4" PVC WELL CASING	4AL		60		7.9
8		924.40	BENTONITE CHIPS	5AL		75		7.7
10	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist	922.90	6-1/4" BOREHOLE	6AL		100		4.7
12	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, low plasticity, firm, brown, moist	920.40 919.90	4" PVC WELL SCREEN	7AL		100		3.8
14	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist		SAND PACK	8AL		0		--
16	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, low plasticity, firm, brown, moist - slight increase in plasticity at 13.0ft BGS - low plasticity, stiff at 16.0ft BGS			9AL		70		5.7
18				10AL		100		3.6
20	ML-SILTS, with clays, poorly graded, compact, gray, moist	912.40 911.90		11AL		90		3.7
22	CH-CLAYS, trace fine sands, silts and fine gravels, poorly graded, soft to firm, high plasticity, gray, moist to very moist - stiff at 22.0ft BGS - stiff to very stiff at 24.0ft BGS			12AL		45		5.7
24				13AL		75		--
26	END OF BOREHOLE @ 26.0ft BGS	906.40						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 8, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.40 to 907.40ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.40 to 906.40ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-13

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 19, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409598.2 EASTING: 13420158.42	TOP OF CASING 934.42 GROUND SURFACE 932.42						
	CONCRETE							
2	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, compact, brown, moist	931.67	CONCRETE	1AL				--
4			BENTONITE GROUT	2AL		75		2.0
6			4" PVC WELL CASING	3AL		60		2.0
8	SP-SANDS, fine to medium grained, poorly graded, loose, brown, very moist to saturated	925.17	BENTONITE CHIPS	4AL		70		3.5
10			6-1/4" BOREHOLE	5AL		30		3.4
12	CL-CLAYS, with sands, fine grained, trace coarse grained and fine gravels, poorly graded, stiff, low plasticity, brown, moist - with fine sands and fine gravels at 12.0ft BGS	922.17	4" PVC WELL SCREEN	6AL		95		2.9
14			SAND PACK	7AL		60		0.8
16	- trace fine sands and fine gravels, very stiff at 16.0ft BGS			8AL		0		--
18				9AL		75		1.6
20				10AL		90		1.9
22	CH-CLAYS, with sands, fine grained, trace coarse sands and fine gravels, poorly graded, high plasticity, soft to firm, gray, moist to very moist	912.42		11AL		100		1.6
24	- slight decrease in plasticity at 24.0ft BGS			12AL		100		0.4
26	END OF BOREHOLE @ 26.0ft BGS	906.42		13AL		100		1.6
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 8, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.42 to 907.42ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.42 to 906.42ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-15

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 29, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409615.89 EASTING: 13420086.44	TOP OF CASING GROUND SURFACE 934.34 932.34						
	CONCRETE	931.69	CONCRETE	1AL				-
2	CL-CLAYS, trace silts and fine sands, poorly graded, firm to stiff, low plasticity, brown, moist	929.34		2AL		80		0.5
4	SC-CLAYEY SANDS, fine grained, trace coarse sands, poorly graded, compact, brown, moist	926.34		3AL		75		0.6
6	SP-SANDS, fine to medium grained, trace coarse sands and fine gravels, poorly graded, loose, brown, moist	924.84 924.34		4AL		75		1.2
8	CL-CLAYS, trace fine and coarse sands, poorly graded, stiff, low plasticity, brown, moist	923.59		5AL		65		0.5
10	SP-SANDS, fine to medium grained, trace coarse grained, poorly graded, loose, brown, moist			6AL		80		17.6
12	CL-CLAYS, trace coarse sands, fine gravels, poorly graded, low plasticity, stiff, brown, moist	919.34		7AL		85		958
14	- with fine sands, trace coarse sands, low to medium plasticity, soft to stiff, very moist at 12.0ft BGS			8AL		70		1075
16	SP-SANDS, fine grained, trace clays, poorly graded, loose, brown, very moist to saturated, petroleum-like odor	915.34		9AL		65		1458
18	- gray, saturated at 14.0ft BGS - fine to medium grained, trace fine gravels at 16.5ft BGS			10AL		90		3.8
20	CL-CLAYS, with sands, fine grained, trace coarse grained and fine gravels, poorly graded, medium plasticity, stiff, brown and gray, moist, slight petroleum-like odor			11AL		50		0.8
22	- no gravels, no odor at 18.0ft BGS - increase in plasticity at 21.0ft BGS	910.34		12AL		90		0.6
24	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, firm, gray, moist			13AL		100		0.8
26	- soft to firm at 23.0ft BGS - stiff at 24.0ft BGS							
26	END OF BOREHOLE @ 26.0ft BGS	906.34						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.34 to 907.34ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.34 to 906.34ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-16

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 26, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409613.49 EASTING: 13420048.91	TOP OF CASING 934.46 GROUND SURFACE 932.46						
	CONCRETE	931.71	CONCRETE	1AL				-
2	SC-CLAYEY SANDS, fine to medium grained, trace coarse sands and fine gravels, poorly graded, compact, brown, moist			2AL		75		0.2
4			BENTONITE GROUT	3AL		80		1.4
6		926.46	4" PVC WELL CASING	4AL		80		2.5
8	SP-SANDS, fine to medium grained, trace coarse grained, poorly graded, loose, brown, moist	924.46	BENTONITE CHIPS	5AL		75		7.6
10	CI-CLAYS, trace fine sands and fine gravels, poorly graded, firm to stiff, low to medium plasticity, brown, moist		6-1/4" BOREHOLE	6AL		90		62.1
12				7AL		65		>2000
14	- increase in fine sands, very moist at 13.0ft BGS	919.21	4" PVC WELL SCREEN	8AL		70		>2000
16	SP-SANDS, fine to medium grained, with coarse sands, trace fine gravels, poorly graded, loose, brown, very moist to saturated, petroleum-like odor		SAND PACK	9AL		60		>2000
18	- medium to coarse grained, trace fine sands and fine gravels, saturated at 14.0ft BGS			10AL		85		648
20	- coarse grained, trace fine to medium sands, black at 18.0ft BGS	913.96		11AL		70		27.5
22	ML-SILTS, with sands, fine grained, poorly graded, compact, gray, very moist, petroleum-like odor	912.96 912.66		12AL		30		3.3
24	SP-SANDS, fine to medium grained, trace coarse grained, poorly graded, loose to compact, gray, saturated, petroleum-like odor			13AL				
26	CH-CLAYS, with sands, fine grained, trace coarse grained, poorly graded, soft to firm, gray, very moist							
28	- stiff, moist at 24.0ft BGS							
30	END OF BOREHOLE @ 26.0ft BGS	906.46						
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
34								

WELL DETAILS

Screened interval:

921.46 to 906.46ft bgs

11.00 to 26.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

923.46 to 906.46ft bgs

9.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-17

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 20, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409615.63 EASTING: 13420014.03	TOP OF CASING 934.31 GROUND SURFACE 932.31						
2	CONCRETE	931.56	CONCRETE	1AL				-
4	SP-SANDS, trace clays, fine to medium grained, poorly graded, loose, brown, moist			2AL		25		8.1
6	- black at 5.0ft BGS		BENTONITE GROUT	3AL		10		3.6
8	CI-SANDY CLAYS, trace fine gravels, fine to medium grained, poorly graded, low plasticity, brown, stiff, moist	926.31	4" PVC WELL CASING	4AL		90		229
10	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist, sweet solvent-like odor	925.06	BENTONITE CHIPS	5AL		100		714
12	- no gravels at 8.0ft BGS		6-1/4" BOREHOLE	6AL		90		432
14	- petroleum-like odor, compact at 12.0ft BGS		4" PVC WELL SCREEN	7AL		80		960
16	- very moist at 13.0ft BGS		SAND PACK	8AL		75		>2000
18	- loose to compact, saturated, strong petroleum-like odor, staining at 14.5ft BGS			9AL		90		1751
20	- trace silts at 15.0ft BGS			10AL		80		9.1
22	- medium to coarse grained, with fine gravels, trace fine sands and coarse gravels, loose at 17.5ft BGS	914.06		11AL		15		11.4
24	CH-CLAYS, with fine sands and fine gravels, poorly graded, high plasticity, soft to firm, gray, very moist			12AL		75		2.8
26	- trace coarse gravels at 23.0ft BGS			13AL		85		2.3
28	- no coarse gravels at 24.0ft BGS							
30	END OF BOREHOLE @ 26.0ft BGS	906.31						
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
34								

WELL DETAILS

Screened interval:
922.31 to 907.31ft bgs
10.00 to 25.00ft BGS

Length: 15ft
Diameter: 4in
Slot Size: 0.010
Material: PVC
Sand Pack:

924.31 to 906.31ft bgs
8.00 to 26.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-18

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 14, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409600.26 EASTING: 13419985.47 TOP OF CASING GROUND SURFACE	934.34 932.34						
	CONCRETE		CONCRETE	1AL				-
2	SC-CLAYEY SANDS, fine grained, trace fine gravels, poorly graded, compact, brown, moist	931.34		2AL		75		2.1
4	- black at 3.3ft BGS - brown at 4.0ft BGS		BENTONITE GROUT	3AL		75		5.3
6	CL-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, firm, brown, moist	926.84 926.34 925.84	4" PVC WELL CASING	4AL		85		4.6
8	SC-CLAYEY SANDS, fine grained, trace fine gravels, poorly graded, compact, brown, moist		BENTONITE CHIPS	5AL		100		13.2
10	SP-SANDS, fine to medium grained, poorly graded, loose to compact, brown, moist		6-1/4" BOREHOLE	6AL		95		54.1
12			4" PVC WELL SCREEN	7AL		80		130
14	- brown and gray, very moist, slight petroleum-like odor at 13.3ft BGS - strong petroleum-like odor at 14.0ft BGS	917.84	SAND PACK	8AL		75		622
16	CI-CLAYS, trace fine sands and fine gravels, poorly graded, stiff to very stiff, medium plasticity, gray, moist			9AL		85		4.9
18	- increase in plasticity at 18.5ft BGS			10AL		85		3.8
20	- decrease in plasticity at 20.0ft BGS			11AL		85		2.5
22				12AL		75		1.7
24	- medium to low plasticity at 24.0ft BGS			13AL		90		1.6
26	- trace sand lens 2" thick, fine to medium grained, trace fine gravels at 25.5ft BGS END OF BOREHOLE @ 26.0ft BGS	906.34						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.34 to 907.34ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.34 to 906.34ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-19

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 14, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409631.19 EASTING: 13419987.5	TOP OF CASING 934.40 GROUND SURFACE 932.40						
	CONCRETE							
2	SC-CLAYEY SANDS, fine grained, trace fine gravels, poorly graded, compact, brown, moist	931.40	CONCRETE	1AL				-
4	- fine to medium grained, decrease in clays, loose to compact at 3.0ft BGS			2AL		100		2.1
6	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist	928.40	BENTONITE GROUT	3AL		85		2.3
8	- trace fine to coarse gravels at 8.0ft BGS		4" PVC WELL CASING	4AL		75		22.5
10			BENTONITE CHIPS	5AL		40		19.4
12			6-1/4" BOREHOLE	6AL		70		14.6
14	- fine to medium grained, very moist, slight petroleum-like odor at 14.0ft BGS		4" PVC WELL SCREEN	7AL		80		22.0
16	- trace silts, saturated, strong petroleum-like odor, staining at 14.8ft BGS		SAND PACK	8AL		75		1430
18	- medium to coarse grained, with fine gravels, trace fine sands and coarse gravels at 16.0ft BGS	915.40		9AL		65		1233
20	CL-CLAYS, trace fine gravels, poorly graded, very stiff, low plasticity, gray, moist	913.40		10AL		70		28.8
22	CH-CLAYS, trace fine gravels, poorly graded, firm to soft, high plasticity, gray, moist			11AL		70		14.2
24	- with fine sands, stiff, low plasticity at 20.0ft BGS			12AL		95		4.7
26	- trace fine gravels, firm to soft, high plasticity at 21.0ft BGS			13AL		80		1.2
28	SP-SANDS, fine to medium grained, poorly graded, loose to compact, gray, very moist	908.40 907.90						
30	CH-CLAYS, trace fine gravels, poorly graded, firm to soft, high plasticity, gray, moist	906.40						
32	END OF BOREHOLE @ 26.0ft BGS							
34	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							

WELL DETAILS

Screened interval:

922.40 to 907.40ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.40 to 906.40ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-20

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 22, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409647.68 EASTING: 13420014.21	TOP OF CASING 934.35 GROUND SURFACE 932.35						
	CONCRETE	931.60	CONCRETE	1AL				-
2	SP-SANDS, medium to coarse grained, with fine gravels, poorly graded, loose, brown, moist			2AL		60		0.9
4	- fine to medium grained, trace fine gravels and clays at 4.0ft BGS		BENTONITE GROUT	3AL		100		1.8
6	- with fine gravels, no clays, loose to compact at 6.0ft BGS		4" PVC WELL CASING	4AL		70		2.5
8	- loose at 8.0ft BGS		BENTONITE CHIPS	5AL		70		2.5
10	CL-CLAYS, with silts, trace coarse sands and fine gravels, poorly graded, low plasticity, firm to stiff, brown, moist	923.85	6-1/4" BOREHOLE	6AL		65		2.3
	ML-SILTS, with clays, poorly graded, compact, brown, very moist	922.85		7AL		75		12.6
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist	920.60	4" PVC WELL SCREEN	8AL		70		1424
14	- very moist to saturated, petroleum-like odor at 14.0ft BGS		SAND PACK	9AL		80		>2000
16	- saturated at 15.0ft BGS			10AL		100		52.1
18	CL-CLAYS, with silts, trace fine sands and fine gravels, poorly graded, low plasticity, very stiff, gray, moist	914.10		11AL		100		7.1
20	- stiff, medium plasticity at 20.3ft BGS			12AL		100		10.8
22	- increase in sands at 22.0ft BGS			13AL		80		3.4
24	- stiff to very stiff at 24.0ft BGS							
26	END OF BOREHOLE @ 26.0ft BGS	906.35						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.35 to 907.35ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.35 to 906.35ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-21

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 26, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409647.19 EASTING: 13420048.37	TOP OF CASING 934.39 GROUND SURFACE 932.39						
	CONCRETE							
2	SC-CLAYEY SANDS, fine grained, trace coarse sands and fine gravels, poorly graded, compact to dense, brown, moist - compact, black at 2.8ft BGS	931.64 929.39	CONCRETE	1AL				-
4	SP-SANDS, fine to medium grained, with fine gravels, poorly graded, loose, black, moist - fine grained, with clays, brown at 4.3ft BGS		BENTONITE GROUT	2AL		75		4.8
6			4" PVC WELL CASING	3AL		75		4.7
8	CL-CLAYS, with sands, fine to medium grained, trace coarse grained and fine gravels, poorly graded, low plasticity, firm to stiff, brown, moist - mottled, brown and gray at 8.0ft BGS - not mottled at 9.5ft BGS - decrease in sands, gray, very moist at 10.0ft BGS	926.39	BENTONITE CHIPS	4AL		90		5.2
10			6-1/4" BOREHOLE	5AL		65		13.0
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, very moist, slight petroleum-like odor	920.64 919.89	4" PVC WELL SCREEN	6AL		85		1923
14	SM-SILTY SANDS, fine grained, poorly graded, loose to compact, brown, very moist, petroleum-like odor - gray at 13.0ft BGS		SAND PACK	7AL		75		>2000
16		917.14		8AL		70		>2000
18	ML-SILTS WITH CLAYS, poorly graded, compact, gray, very moist, petroleum-like odor - moist to very moist at 17.0ft BGS			9AL		55		>2000
20	CH-CLAYS, trace fine to coarse sands, poorly graded, high plasticity, stiff, gray, moist - soft to firm at 20.0ft BGS	914.39		10AL		55		42.7
22				11AL		65		16.6
24	- stiff, trace fine gravels at 22.0ft BGS			12AL		70		6.2
26	END OF BOREHOLE @ 26.0ft BGS	906.39		13AL		90		2.0
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.39 to 907.39ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.39 to 906.39ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-22

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 28, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409647.25 EASTING: 13420085.68	TOP OF CASING 934.32 GROUND SURFACE 932.32						
	CONCRETE	931.67	CONCRETE	1AL				-
2	CI-CLAYS, trace fine sands and fine gravels, poorly graded, firm, brown, medium plasticity, moist			2AL		60		3.1
4	SP-SANDS, fine to medium grained, with coarse grained, poorly graded, loose, black, moist	928.57 928.32	BENTONITE GROUT	3AL		100		2.9
6	CL-CLAYS, trace fine gravels, poorly graded, firm to stiff, low plasticity, brown, moist	926.32	4" PVC WELL CASING	4AL		70		1.9
8	SP-SANDS, fine to medium grained, with coarse grained, poorly graded, loose, brown, very moist - no coarse sands at 8.5ft BGS		BENTONITE CHIPS	5AL		60		2.0
10	CH-CLAYS, trace fine to coarse grained, poorly graded, medium to high plasticity, brown, moist	922.82 922.32	6-1/4" BOREHOLE	6AL		100		51.0
12	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, firm, low plasticity, brown, moist		4" PVC WELL SCREEN	7AL		90		1535
14	- fine to coarse grained, no gravels, firm to stiff at 12.0ft BGS - slight petroleum-like odor at 13.0ft BGS	918.57	SAND PACK	8AL		65		1916
16	SP-SANDS, medium grained, with fine and coarse grained, poorly graded, loose, brown, saturated, petroleum-like odor			9AL		65		1433
18	- fine to medium grained, loose to compact at 15.0ft BGS - medium grained, with fine and coarse grained at 15.5ft BGS	915.07		10AL		25		71.7
20	ML-SILTS, trace fine sands and clays, poorly graded, compact, gray, saturated, petroleum-like odor	912.32		11AL		90		1.0
22	- very moist at 19.0ft BGS			12AL		100		0.9
24	CH-CLAYS, with fine gravels, trace fine sands, poorly graded, firm to stiff, high plasticity, gray, moist to very moist			13AL				
26	- increase in plasticity, soft to firm at 22.0ft BGS - firm to stiff at 23.5ft BGS							
28	END OF BOREHOLE @ 26.0ft BGS	906.32						
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
32								
34								

WELL DETAILS

Screened interval:

922.32 to 907.32ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.32 to 906.32ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-23

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 28, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409645.76 EASTING: 13420122.79	TOP OF CASING 934.30 GROUND SURFACE 932.30						
	CONCRETE	931.65	CONCRETE	1AL				-
2	SC-CLAYEY SANDS, fine to medium grained, with coarse grained, trace fine gravels, poorly graded, loose to compact, brown, moist			2AL		60		3.5
4			BENTONITE GROUT	3AL		60		3.4
6			4" PVC WELL CASING	4AL		35		2.6
8	CL-CLAYS, with sands, fine to coarse grained, poorly graded, soft, low plasticity, brown, moist	924.80 924.30	BENTONITE CHIPS	5AL		45		6.5
10	SP-SANDS, fine to medium grained, trace clays, poorly graded, loose, brown, very moist		6-1/4" BOREHOLE	6AL		70		2.2
12	CH-CLAYS, trace fine to coarse sands, poorly graded, firm, medium to high plasticity, brown, moist	921.30	4" PVC WELL SCREEN	7AL		85		2.8
14	- trace fine gravels, soft, high plasticity, very moist at 12.5ft BGS		SAND PACK	8AL		50		8.8
16	CL-CLAYS, trace fine sands and fine gravels, poorly graded, firm to stiff, low plasticity, gray and brown, moist	916.30		9AL		90		1403
18	SP-SANDS, medium grained, with fine and coarse grained, poorly graded, loose, gray, saturated, petroleum-like odor	914.80 913.80		10AL		80		341
20	- trace coarse sands at 18.0ft BGS	912.30		11AL		90		13.4
22	ML-SILTS, with clays, poorly graded, compact, gray, saturated, petroleum-like odor			12AL		85		9.6
24	CH-CLAYS, trace fine to coarse sands, poorly graded, stiff, high plasticity, gray, moist, slight petroleum-like odor			13AL		100		3.9
26	- trace fine gravels, soft to firm, no odor at 22.0ft BGS							
28	- trace fine to coarse sands and fine gravels, firm, at 24.0ft BGS							
30	- soft to firm, increase in plasticity at 25.0ft BGS	906.30						
32	END OF BOREHOLE @ 26.0ft BGS							
34	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							

WELL DETAILS

Screened interval:

922.30 to 907.30ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.30 to 906.30ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-24

DATE COMPLETED: June 19, 2006

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409626.81 EASTING: 13420157.68	TOP OF CASING GROUND SURFACE 934.38 932.38						
	CONCRETE	931.63	CONCRETE	1AL				-
2	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist			2AL		65		0.8
4			BENTONITE GROUT	3AL		85		1.6
6	CH-CLAYS, with sands, fine to medium grained, trace coarse sands and fine gravels, poorly graded, soft, high plasticity, brown, moist to very moist	926.63	4" PVC WELL CASING	4AL		70		3.0
8		924.88 924.63 924.38	BENTONITE CHIPS	5AL		60		4.5
10	SP-SANDS, fine to medium grained, trace clays and coarse sands, poorly graded, loose, brown, very moist		6-1/4" BOREHOLE	6AL		70		4.6
12	CH-CLAYS, with sands, fine to medium grained, trace coarse sands and fine gravels, poorly graded, stiff, high plasticity, brown, moist to very moist	920.38	4" PVC WELL SCREEN	7AL		75		15.4
14	SP-SANDS, fine to medium grained, trace fine sands and fine gravels, poorly graded, loose, brown, very moist		SAND PACK	8AL		55		>2000
16	- medium to coarse grained, with fine gravels, trace fine sands and fine gravels at 10.0ft BGS	917.38		9AL		80		109
18	CL-CLAYS, with sands, fine grained, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, brown, moist	916.13		10AL		60		1577
20	SP-SANDS, medium to coarse grained, with fine gravels, poorly graded, loose, brown, saturated, petroleum-like odor	914.38 913.13 912.88 912.63		11AL		80		417
22	CL-CLAYS, with sands and fine gravels, fine grained, trace medium to coarse sands, poorly graded, low plasticity, stiff, brown, moist			12AL		85		10.2
24	SP-SANDS, medium to coarse grained, trace fine sands and gravels, poorly graded, loose, brown, saturated, petroleum-like odor			13AL		70		3.2
26	CL-CLAYS, with sands, fine grained, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, brown, moist, slight petroleum-like odor	906.38						
28	SP-SANDS, with fine gravels, medium to coarse grained, moderately graded, loose, brown, saturated, petroleum-like odor							
30	CL-CLAYS, with sands, fine grained, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, gray, moist, slight petroleum-like odor							
32	- slight increase in plasticity at 22.0ft BGS - stiff to very stiff at 24.0ft BGS							
34	END OF BOREHOLE @ 26.0ft BGS NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 8, 2015)							

WELL DETAILS

Screened interval:
922.38 to 907.38ft bgs
10.00 to 25.00ft BGS

Length: 15ft
Diameter: 4in
Slot Size: 0.010
Material: PVC

Sand Pack:
924.38 to 906.38ft bgs
8.00 to 26.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-25

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 28, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409659.95 EASTING: 13420166.03	TOP OF CASING GROUND SURFACE 934.37 932.37						
	CONCRETE	931.72	CONCRETE	1AL				-
2	SC-CLAYEY SANDS, fine grained, trace fine gravels, poorly graded, loose to compact, brown, moist			2AL		0		-
4			BENTONITE GROUT	3AL		45		0.7
6	CL-CLAYS, with sands, fine grained, trace coarse sands and fine gravels, poorly graded, soft to firm, brown, moist to very moist	926.37	4" PVC WELL CASING	4AL		65		1.0
8	SP-SANDS, fine grained, trace clays, poorly graded, loose, brown, very moist	924.37	BENTONITE CHIPS	5AL		75		2.0
10		922.37	6-1/4" BOREHOLE	6AL		75		2.3
12	CL-CLAYS, with sands, fine grained, trace coarse sands and fine gravels, poorly graded, firm, brown, moist to very moist		4" PVC WELL SCREEN	7AL		80		2.3
14	- increase in fine gravels, stiff, moist at 14.0ft BGS		SAND PACK	8AL		100		3.2
16	- gray at 16.0ft BGS			9AL		80		27.5
18	- slight petroleum-like odor at 17.5ft BGS			10AL		85		5.5
20	- trace sand lens 0.5", fine to medium grained, petroleum-like odor, saturated at 17.9ft BGS			11AL		90		3.5
22	- trace fine sands and fine gravels, slight increase in plasticity, stiff to very stiff, no odor at 18.0ft BGS	912.37		12AL		85		3.5
24	CH-CLAYS, trace fine to coarse sands and silts, poorly graded, high plasticity, stiff, gray, moist			13AL		75		0.7
26	- trace fine gravels at 24.0ft BGS							
28	END OF BOREHOLE @ 26.0ft BGS	906.37						
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							

WELL DETAILS

Screened interval:
922.37 to 907.37ft bgs
10.00 to 25.00ft BGS

Length: 15ft
Diameter: 4in
Slot Size: 0.010
Material: PVC
Sand Pack:

924.37 to 906.37ft bgs
8.00 to 26.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-26

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 27, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409683.46 EASTING: 13420121.2	TOP OF CASING 934.29 GROUND SURFACE 932.29						
	CONCRETE	931.64	CONCRETE	1AL				-
2	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, compact, brown, moist			2AL		50		2.9
4			BENTONITE GROUT	3AL		50		0.8
6			4" PVC WELL CASING	4AL		45		0.0
8	- loose to compact at 7.0ft BGS		BENTONITE CHIPS	5AL		60		0.0
10	CI-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, low plasticity, soft, brown, moist	924.29	6-1/4" BOREHOLE	6AL		70		1.5
12	SP-SANDS, fine grained, trace clays and fine gravels, poorly graded, loose, brown, very moist	922.04		7AL		90		0.9
14	CL-CLAYS, with sands, fine grained, trace coarse sands, poorly graded, low plasticity, brown, very stiff, moist	920.54	4" PVC WELL SCREEN	8AL		90		0.0
16	- trace fine sands and fine gravels, stiff at 14.0ft BGS		SAND PACK	9AL		100		0.4
18	- gray at 17.0ft BGS			10AL		95		0.0
20	- brown to gray at 18.0ft BGS			11AL		85		5.6
22	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, gray, saturated	912.29 912.04		12AL		90		0.0
24	ML-SILTS, with clays, poorly graded, compact, gray, very moist to saturated	910.29		13AL		100		0.3
26	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, stiff, gray, moist							
28	- soft to firm at 23.5ft BGS							
30	- stiff at 24.0ft BGS							
32	END OF BOREHOLE @ 26.0ft BGS	906.29						
34	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							

WELL DETAILS

Screened interval:

922.29 to 907.29ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.29 to 906.29ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-27

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 27, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409682.69 EASTING: 13420085.93 TOP OF CASING GROUND SURFACE	934.35 932.35						
	CONCRETE	931.70	CONCRETE	1AL				-
2	CL-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, brown, moist			2AL		60		4.6
4	- very stiff at 4.0ft BGS		BENTONITE GROUT	3AL		65		7.0
6		926.35	4" PVC WELL CASING	4AL		70		5.7
8	SP-SANDS, fine to medium grained, with coarse grained, trace fine gravels, poorly graded, loose, brown, moist		BENTONITE CHIPS	5AL		70		5.3
10	- very moist at 8.5ft BGS		6-1/4" BOREHOLE	6AL		75		3.5
12	CI-CLAYS, with fine sands, trace coarse sands and fine gravels, poorly graded, medium plasticity, firm to stiff, brown, moist	922.35	4" PVC WELL SCREEN	7AL		75		4.7
14	- gray at 12.0ft BGS		SAND PACK	8AL		75		318
16	SP-SANDS, medium grained, trace fine grained, poorly graded, loose, gray, very moist to saturated, petroleum-like odor	916.85		9AL		70		1208
18	- with coarse sands, trace fine gravels, saturated at 16.5ft BGS	915.10 914.85 914.35		10AL		90		62.9
20	- fine grained, with clays at 16.8ft BGS			11AL		85		3.7
22	CH-CLAYS, with silts, poorly graded, high plasticity, gray, stiff to very stiff, very moist, petroleum-like odor			12AL		80		5.6
24	SP-SANDS, fine to medium grained, poorly graded, loose, gray, saturated, petroleum-like odor			13AL		85		3.4
26	CH-CLAYS, trace fine to coarse sands, poorly graded, stiff, high plasticity, brown, moist, slight petroleum-like odor							
28	- trace fine gravels at 21.0ft BGS							
30	- stiff to very stiff at 22.0ft BGS	906.35						
32	END OF BOREHOLE @ 26.0ft BGS							
34	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							

WELL DETAILS

Screened interval:

922.35 to 907.35ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.35 to 906.35ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-28

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 27, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409683.05 EASTING: 13420047.73	TOP OF CASING GROUND SURFACE 934.35 932.35						
	CONCRETE	931.70	CONCRETE	1AL				--
2	CL-CLAYS, trace fine sands and fine gravels, poorly graded, very stiff, low plasticity, brown, moist			2AL		60		2.4
4			BENTONITE GROUT	3AL		50		3.1
6	SC-CLAYEY SANDS, fine grained, poorly graded, compact, brown, moist	927.35	4" PVC WELL CASING	4AL		60		3.8
8	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist - very moist at 7.8ft BGS	925.85	BENTONITE CHIPS	5AL		90		3.0
10	CI-CLAYS, with fine sands, trace coarse sands and fine gravels, poorly graded, medium plasticity, firm to stiff, brown, moist	923.60	6-1/4" BOREHOLE	6AL		90		--
12	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist	922.60	4" PVC WELL SCREEN	7AL		90		62.0
14	CL-CLAYS, trace fine to coarse sands and fine gravels, poorly graded, low plasticity, stiff, brown, moist - slight petroleum-like odor at 14.5ft BGS	922.35	SAND PACK	8AL		55		>2000
16	- gray at 15.8ft BGS	916.35		9AL		70		1394
18	SP-SANDS, fine to medium grained, with coarse sands and fine gravels, poorly graded, loose, gray, saturated, strong petroleum-like odor - fine to medium grained, trace clays at 16.5ft BGS	915.35		10AL		75		769
20	ML-SILTS, with clays, poorly graded, loose to compact, gray, saturated, petroleum-like odor	913.35 912.85 912.35		11AL		85		58.2
22	SP-SANDS, fine to medium grained, trace clays, poorly graded, loose, gray, very moist to saturated, petroleum-like odor			12AL		60		23.0
24	ML-SILTS, with clays, poorly graded, compact, gray, moist, petroleum-like odor			13AL		35		5.4
26	CH-CLAYS, with sands, fine to coarse grained, trace fine gravels, poorly graded, high plasticity, firm, gray, moist - soft to firm, very moist at 21.5ft BGS - firm, moist at 22.0ft BGS - stiff to very stiff at 24.0ft BGS	906.35						
28	END OF BOREHOLE @ 26.0ft BGS							
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
32								
34								

WELL DETAILS

Screened interval:

922.35 to 907.35ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.35 to 906.35ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-29

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 22, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409677.02 EASTING: 13420014.54	TOP OF CASING GROUND SURFACE 934.33 932.33						
	CONCRETE	931.58	CONCRETE	1AL				-
2	CL-CLAYS, trace fine sands and fine gravels, poorly graded, very stiff, brown, moist			2AL		60		1.8
4	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist - black at 4.8ft BGS - brown, loose to compact, trace fine gravels at 5.0ft BGS	928.73	BENTONITE GROUT	3AL		50		4.2
6			4" PVC WELL CASING	4AL		100		12.0
8	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, low plasticity, stiff, brown, moist	924.58	BENTONITE CHIPS	5AL		45		2.6
10			6-1/4" BOREHOLE	6AL		75		4.2
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist	921.33	4" PVC WELL SCREEN	7AL		75		10.1
14	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, soft, gray, very moist - decrease in plasticity, brown at 12.8ft BGS - slight petroleum-like odor at 14.0ft BGS	920.58	SAND PACK	8AL		80		93.0
16				9AL		65		1608
18	SP-SANDS, medium to coarse grained, with fine gravels, poorly graded, loose, brown, saturated, strong petroleum-like odor - fine grained, trace clays, gray at 17.5ft BGS	916.33		10AL		80		55.6
20				11AL		95		28.0
22	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, soft to firm, gray, very moist - soft at 23.0ft BGS - stiff at 24.0ft BGS	911.83		12AL		25		6.1
24				13AL				
26	END OF BOREHOLE @ 26.0ft BGS	906.33						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.33 to 907.33ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.33 to 906.33ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-30

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 15, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409668.63 EASTING: 13419988.9	TOP OF CASING GROUND SURFACE	934.35 932.35					
	CONCRETE	931.55	CONCRETE	1AL				-
2	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, compact, brown, moist - black at 3.0ft BGS			2AL		60		1.4
4	- brown at 3.3ft BGS	928.85	BENTONITE GROUT	3AL		60		2.9
6	SP-SANDS, fine to medium grained, trace fine gravels, poorly graded, loose, brown, moist	926.35	4" PVC WELL CASING	4AL		50		2.9
8	CL-CLAYS, trace fine sands and fine gravels, poorly graded, stiff, low plasticity, brown, moist	924.85 924.35	BENTONITE CHIPS	5AL		75		3.5
10	SP-SANDS, fine to medium grained, trace coarse grained and fine gravels, poorly graded, loose, brown, moist		6-1/4" BOREHOLE	6AL		80		36.0
12	CL-CLAYS, with sands, trace fine gravels, fine to medium grained, poorly graded, low plasticity, soft to firm, brown, very moist	921.10	4" PVC WELL SCREEN	7AL		75		46.1
14	SP-SANDS, trace clays and fine gravels, fine to medium grained, loose, brown, very moist	919.35		8AL		65		1027
16	ML-SILTS, with clays, poorly graded, compact, brown, very moist	918.35	SAND PACK	9AL		85		1856
18	SP-SANDS, medium to coarse grained, trace fine grained and fine to coarse gravels, poorly graded, loose, brown, saturated, petroleum-like odor - fine to medium grained, no gravels at 14.5ft BGS			10AL		70		20.1
20	- medium to coarse grained, with fine to coarse gravels, trace fine sands at 18.8ft BGS	912.85		11AL		65		5.0
22	CH-CLAYS, trace fine sands, silts and fine gravels, poorly graded, stiff, gray, moist to very moist - increase in plasticity at 22.0ft BGS - decrease in plasticity, moist at 23.0ft BGS			12AL		75		3.2
24	- stiff to very stiff at 24.5ft BGS			13AL		85		1.6
26	END OF BOREHOLE @ 26.0ft BGS	906.35						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.35 to 907.35ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.35 to 906.35ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-31

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 16, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409717.16 EASTING: 13420025.8	TOP OF CASING 934.34 GROUND SURFACE 932.34						
2	CONCRETE	931.99	CONCRETE	1AL				-
4	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, compact, brown, moist			2AL		40		4.9
6	SP-SANDS, fine to medium grained, with coarse grained, trace fine gravels, poorly graded, loose, brown, moist	927.84	BENTONITE GROUT	3AL		25		8.3
8	- very moist at 7.5ft BGS		4" PVC WELL CASING	4AL		85		7.3
10	CI-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, brown, very moist	923.34 922.84	BENTONITE CHIPS	5AL		75		10.8
12	SP-SANDS, medium to coarse grained, trace fine grained and fine gravels, poorly graded, loose, brown, very moist to saturated		6-1/4" BOREHOLE	6AL		75		4.5
14	CI-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, brown, very moist	919.34	4" PVC WELL SCREEN	7AL		75		71.1
16	SP-SANDS, medium to coarse grained, with fine gravels, trace fine sands and coarse gravels, moderately graded, loose, brown, saturated, petroleum-like odor	917.84	SAND PACK	8AL		65		1816
18				9AL		45		>2000
20	SM-SANDS, with silts, fine to medium grained, poorly graded, compact, gray, saturated, strong petroleum-like odor, staining	914.09		10AL		75		938
22	ML-SILTS, with clays, poorly graded, firm, gray, saturated, petroleum-like odor, staining	912.84 912.34		11AL		85		13.8
24	SM-SANDS, with silts, fine to medium grained, poorly graded, compact, gray, saturated, strong petroleum-like odor, staining	911.59		12AL		80		2.9
26	CH-CLAYS, trace fine to medium sands, poorly graded, stiff, high plasticity, gray, moist - trace fine gravels, very high plasticity at 22.5ft BGS - trace fine to medium sands, high plasticity at 24.0ft BGS	906.34		13AL		85		2.6
28	END OF BOREHOLE @ 26.0ft BGS							
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							

WELL DETAILS

Screened interval:
922.34 to 907.34ft bgs
10.00 to 25.00ft BGS

Length: 15ft
Diameter: 4in
Slot Size: 0.010
Material: PVC
Sand Pack:

924.34 to 906.34ft bgs
8.00 to 26.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-32

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 16, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409717.58 EASTING: 13420071.96 TOP OF CASING GROUND SURFACE	934.25 932.25						
	CONCRETE	931.75	CONCRETE	1AL				--
2	CL-CLAYS, trace fine to medium sands and fine gravels, poorly graded, stiff, low plasticity, brown, moist	929.75		2AL		30		17.5
4	SP-SANDS, fine to medium grained, trace fine gravels and clays, poorly graded, loose to compact, brown, moist		BENTONITE GROUT	3AL		45		6.7
6			4" PVC WELL CASING	4AL		80		11.3
8	CL-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, stiff, brown, moist	925.25	BENTONITE CHIPS	5AL		75		146
10	- gray at 9.8ft BGS	922.25	6-1/4" BOREHOLE	6AL		90		301
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, very moist, sweet solvent-like odor	920.25	4" PVC WELL SCREEN	7AL		100		1512
14	CL-SILTY CLAYS, poorly graded, stiff, low plasticity, brown and gray, moist	918.50 918.00	SAND PACK	8AL		75		1603
16	SP-SANDS, medium to coarse grained, trace fine grained and fine gravels, poorly graded, loose, brown and gray, saturated, strong petroleum-like odor			9AL		80		1302
18	CI-CLAYS, trace coarse sands to fine gravels, poorly graded, stiff to very stiff, medium plasticity, brown and gray, moist			10AL		100		--
20	- gray at 16.0ft BGS	913.25		11AL		90		12.0
22	- trace sand lens, fine to medium grained, trace fine gravels, very moist, petroleum-like odor at 17.3ft BGS			12AL		85		6.4
24	CH-CLAYS, trace fine to coarse sands and fine gravels, poorly graded, soft to firm, high plasticity, gray, moist to very moist			13AL		85		4.2
26	- firm to stiff, moist at 21.5ft BGS							
28	- stiff at 23.0ft BGS							
30	END OF BOREHOLE @ 26.0ft BGS	906.25						
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
34								

WELL DETAILS

Screened interval:

922.25 to 907.25ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.25 to 906.25ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-33

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 19, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409718.33 EASTING: 13420104.49 TOP OF CASING GROUND SURFACE	934.32 932.32						
	CONCRETE	931.57	CONCRETE	1AL				-
2	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, compact, brown, moist			2AL		25		1.8
4			BENTONITE GROUT	3AL		10		2.9
6			4" PVC WELL CASING	4AL		5		2.4
8			BENTONITE CHIPS	5AL		80		2.8
10	CL-CLAYS, trace medium to coarse sands and fine gravels, poorly graded, low plasticity, firm, brown, moist - with fine to medium sands and trace coarse sands, soft, very moist at 10.0ft BGS	923.32	6-1/4" BOREHOLE	6AL		90		8.2
12			4" PVC WELL SCREEN	7AL		40		6.3
14	- black at 13.5ft BGS - increase in sands at 14.0ft BGS		SAND PACK	8AL		70		7.8
16	SP-SANDS, medium grained, trace fine and coarse grained, poorly graded, loose, gray, very moist to saturated	916.82		9AL		75		2.9
18	- saturated at 16.0ft BGS			10AL		80		321
20	- medium to coarse grained with fine gravels and trace fine sands at 16.5ft BGS	914.32 913.57		11AL		80		15.4
22	- medium grained, trace fine and coarse grained at 17.0ft BGS	911.82 911.32		12AL		100		25.4
24	CL-CLAYS, with sands, medium to coarse grained, trace fine gravels, poorly graded, firm to stiff, low plasticity, brown, very moist	908.82		13AL		90		2.9
26	SP-SANDS, medium grained, trace fine and coarse grained, poorly graded, loose, brown, saturated, slight petroleum-like odor							
28	CL-CLAYS, with sands, medium to coarse grained, trace fine gravels, poorly graded, firm to stiff, low plasticity, brown, very moist	906.32						
30	SP-SANDS, medium grained, trace fine and coarse grained, poorly graded, loose, gray, saturated							
32	- fine grained at 21.5ft BGS - fine to medium grained with fine to coarse gravels, slight petroleum-like odor at 22.0ft BGS							
34	CL-CLAYS, with fine gravels, trace fine sands, poorly graded, stiff, low plasticity, gray, very moist - very stiff, moist at 24.0ft BGS END OF BOREHOLE @ 26.0ft BGS							
	NOTE: WELL ABANDONED VIA PRESSURE							

WELL DETAILS

Screened interval:

922.32 to 907.32ft bgs
10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.32 to 906.32ft bgs
8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-33

PROJECT NUMBER: 7097-08

DATE COMPLETED: June 19, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
36	GROUT (JUNE 11, 2015)							
38								
40								
42								
44								
46								
48								
50								
52								
54								
56								
58								
60								
62								
64								
66								
68								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-34

PROJECT NUMBER: 7097-08

DATE COMPLETED: August 16, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409767.74 EASTING: 13420072.11	TOP OF CASING 934.07 GROUND SURFACE 932.30						
	CONCRETE	931.65	CONCRETE	1AL				0.0
2	SC-CLAYEY SANDS, fine to medium grained, trace fine gravels, poorly graded, loose to compact, brown, moist		BENTONITE GROUT	2AL		80		0.0
4			4" PVC WELL CASING	3AL		75		0.0
6			BENTONITE CHIPS	4AL		10		0.0
8			6-1/4" BOREHOLE	5AL		50		0.0
10	ML-SILTS, with clays, poorly graded, loose to compact, brown, moist to very moist	924.30	4" PVC WELL SCREEN	6AL		60		0.0
12	SP-SANDS, with silts, fine grained, poorly graded, loose, brown, moist to very moist - very moist at 12.0ft BGS	921.30	SAND PACK	7AL		50		0.0
14				8AL		100		0.0
16	CL-CLAYS, with sands, fine to medium grained, trace coarse sands and fine gravels, poorly graded, firm, brown, medium to low plasticity, very moist to moist - stiff, moist at 17.0ft BGS - stiff to very stiff at 18.0ft BGS - no coarse sands, trace fine gravels at 19.0ft BGS	917.80		9AL		60		0.0
18				10AL		80		0.0
20				11AL		85		0.2
22				12AL		10		0.0
24	CL-CLAYS, poorly graded, stiff to very stiff, medium to low plasticity, gray, moist	912.80		13AL		100		0.0
26	END OF BOREHOLE @ 26.0ft BGS	906.30						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:
924.30 to 909.30ft bgs
8.00 to 23.00ft BGS

Length: 15ft
Diameter: 4in
Slot Size: 0.010
Material: PVC
Sand Pack:
926.30 to 906.30ft bgs
6.00 to 26.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-35

DATE COMPLETED: August 16, 2006

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409767.5 EASTING: 13420026.39	TOP OF CASING 935.45 GROUND SURFACE 932.29						
	CONCRETE	931.64	CONCRETE	1AL				-
2	CL-SANDY CLAYS, fine grained, trace medium to coarse grained, poorly graded, firm to stiff, low plasticity, brown, moist			2AL		90		-
4			BENTONITE GROUT	3AL		60		0.3
6	SP-SANDS, medium grained, trace fine and coarse grained and clays, poorly graded, loose, brown, moist	926.29	4" PVC WELL CASING	4AL		40		4.7
8			BENTONITE CHIPS	5AL		80		5.5
10	- increase in clays, moist to very moist at 10.0ft BGS		6-1/4" BOREHOLE	6AL		90		1.1
12			4" PVC WELL SCREEN	7AL		70		7.0
14	CH-CLAYS, with sands, fine to medium grained, trace coarse grained, poorly graded, high plasticity, brown, very moist	918.29	SAND PACK	8AL		60		16.9
16	CI-CLAYS, trace medium to coarse sands and fine gravels, poorly graded, firm, brown, medium plasticity, very moist	917.29		9AL		80		1700
18	SP-SANDS, medium grained, poorly graded, loose, gray, saturated, petroleum-like odor	914.54		10AL		50		1633
20	- coarse grained, with fine gravels and fine to medium sands, moderately graded at 18.0ft BGS	912.79		11AL		95		35.9
22	ML-SILTS, with clays, poorly graded, compact, gray, saturated, slight petroleum-like odor	912.29		12AL		85		3.0
24	CL-CLAYS, trace medium sands and fine gravels, poorly graded, stiff, low plasticity, gray, moist			13AL		100		2.1
26	- very stiff at 24.0ft BGS							
28	END OF BOREHOLE @ 26.0ft BGS	906.29						
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 10, 2015)							
32								
34								

WELL DETAILS

Screened interval:

922.29 to 907.29ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.29 to 906.29ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-36

DATE COMPLETED: August 17, 2006

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409631.1 EASTING: 13419956.61 TOP OF CASING GROUND SURFACE	935.24 932.27						
	ASPHALT	931.77	CONCRETE	1AL				-
2	SC-CLAYEY SANDS, fine to medium grained, trace coarse grained and fine gravels, poorly graded, loose to compact, brown, moist			2AL		25		-
4	- decrease in clays at 4.0ft BGS		BENTONITE GROUT	3AL		100		-
6	SP-SANDS, medium grained, with fine grained, trace coarse grained, poorly graded, loose, brown, moist	927.77	4" PVC WELL CASING	4AL		80		8.0
8	- with coarse grained and fine gravels at 6.8ft BGS		BENTONITE CHIPS	5AL		40		5.0
10	CH-CLAYS, trace medium sands and fine gravels, poorly graded, high plasticity, soft, brown, very moist	924.27	6-1/4" BOREHOLE	6AL		60		2.4
12	- with medium sands at 10.0ft BGS		4" PVC WELL SCREEN	7AL		60		9.0
14	SP-SANDS, medium grained, with coarse grained and fine gravels, poorly graded, loose, brown, moist	918.77	SAND PACK	8AL		70		7.9
16	- with fine grained, very moist at 14.5ft BGS			9AL		60		9.4
18	- decrease in fine sands, very moist to saturated at 17.5ft BGS			10AL		50		2.3
20	- with fine grained, saturated at 18.0ft BGS			11AL		70		5.6
22	- coarse grained with fine to medium sands and fine gravels, moderately graded at 19.0ft BGS	911.77		12AL		80		3.2
24	- medium grained, with coarse grained, trace fine sands and fine gravels at 20.0ft BGS			13AL		90		1.1
26	CH-CLAYS, trace medium to coarse sands, poorly graded, high plasticity, soft to firm, gray, very moist							
28	- trace medium to coarse sands and fine gravels, stiff at 22.5ft BGS							
30	- trace medium sands and fine gravels, stiff to very stiff, moist at 24.0ft BGS	906.27						
32	END OF BOREHOLE @ 26.0ft BGS							
34	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							

WELL DETAILS

Screened interval:

922.27 to 907.27ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.27 to 906.27ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-37

DATE COMPLETED: August 18, 2006

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409663.06 EASTING: 13420211.73 TOP OF CASING GROUND SURFACE	935.38 932.28						
	CONCRETE	931.78	CONCRETE	1AL				-
2	CL-SANDY CLAYS, fine to medium grained, with coarse grained, trace fine gravels, poorly graded, soft to firm, low plasticity, brown, moist			2AL		40		7.0
4			BENTONITE GROUT	3AL		80		6.0
6	CL-CLAYS, trace fine to coarse sands, poorly graded, low plasticity, stiff, brown, moist	926.28	4" PVC WELL CASING	4AL		50		3.7
8		924.28	BENTONITE CHIPS	5AL		80		2.0
10	CL-SANDY CLAYS, fine to medium grained, with coarse grained, trace fine gravels, poorly graded, soft to firm, low plasticity, greenish-brown, moist		6-1/4" BOREHOLE	6AL		85		3.6
12		920.28	4" PVC WELL SCREEN	7AL		60		5.5
14	CH-CLAYS, with sands, fine to medium grained, poorly graded, firm to soft, high plasticity, brown, moist		SAND PACK	8AL		50		4.8
16	- stiff at 15.0ft BGS	916.28		9AL		70		6.9
18	SP-SANDS, fine to medium grained, poorly graded, loose, gray, saturated			10AL		80		0.9
20	- fine to coarse grained, with fine gravels, trace clays, well graded at 17.0ft BGS - fine to medium grained, trace coarse grained at 18.0ft BGS - with coarse gravels at 19.0ft BGS	913.03		11AL		75		3.2
22	CI-CLAYS, with fine sands, trace coarse sands, poorly graded, medium plasticity, stiff, gray, moist			12AL		40		2.1
24	- medium to high plasticity at 23.0ft BGS			13AL		65		3.2
26	END OF BOREHOLE @ 26.0ft BGS	906.28						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.28 to 907.28ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.28 to 906.28ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-38

PROJECT NUMBER: 7097-08

DATE COMPLETED: August 18, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409621.35 EASTING: 13420205.16	TOP OF CASING GROUND SURFACE 935.46 932.33						
	CONCRETE	931.83	CONCRETE	1AL				-
2	CL-SANDY CLAYS, fine to medium grained, trace coarse grained, poorly graded, firm, low plasticity, brown, moist		BENTONITE GROUT	2AL		40		20.3
4			4" PVC WELL CASING	3AL		50		27.2
6		926.33	BENTONITE CHIPS	4AL		75		19.1
8	CI-CLAYS, with sands, fine to medium grained, poorly graded, medium plasticity, soft, brown, very moist		6-1/4" BOREHOLE	5AL		85		9.4
10	CL-SILTY CLAYS, trace fine sands, poorly graded, firm, low plasticity, brown, moist, mottled	923.83	4" PVC WELL SCREEN	6AL		60		15.8
12	CI-CLAYS, with sands, fine to medium grained, poorly graded, medium plasticity, firm, brown, moist	920.83	SAND PACK	7AL		50		11.2
14	SP-SANDS, fine to medium grained, trace coarse grained, poorly graded, loose, gray, saturated	919.33		8AL		50		125
16	- fine to coarse grained, with fine gravels, moderately graded at 13.8ft BGS	918.33		9AL		75		411
18	SP-GRAVELLY SANDS, fine to coarse sands and fine to coarse gravels, moderately graded, loose, gray, saturated, petroleum-like odor	917.33		10AL		80		35.4
20	SP-SANDS, fine to coarse grained, with fine gravels, poorly graded, loose, gray, saturated, petroleum-like odor, staining	915.08		11AL		15		20.9
22	- trace coarse gravels at 16.0ft BGS	912.58		12AL		25		11.7
24	CI-CLAYS, with sands, fine to medium grained, trace coarse grained, poorly graded, medium plasticity, stiff, gray, moist	910.33		13AL		75		4.1
26	CI-CLAYS, with silts, poorly graded, firm to stiff, medium plasticity, gray, moist							
28	CI-CLAYS, with sands, fine to medium grained, trace coarse grained and fine gravels, poorly graded, medium plasticity, stiff, gray, moist	906.33						
30	END OF BOREHOLE @ 26.0ft BGS							
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
34								

WELL DETAILS

Screened interval:

924.33 to 909.33ft bgs

8.00 to 23.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

926.33 to 906.33ft bgs

6.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-40

PROJECT NUMBER: 7097-08

DATE COMPLETED: August 21, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409475.77 EASTING: 13420009.31	TOP OF CASING GROUND SURFACE 930.88 930.88						
2	ASPHALT	930.38	CONCRETE	1AL				-
4	CL-CLAYS, with sands, fine to medium grained, trace fine gravels, poorly graded, low plasticity, stiff, brown, moist	927.13	BENTONITE GROUT	2AL		85		10.5
6	BENTONITE (from previous borehole)		4" PVC WELL CASING	3AL		100		41.3
8		922.88	BENTONITE CHIPS	4AL		100		28.5
10	CL-CLAYS, with sands, fine to medium grained, trace fine gravels, poorly graded, low plasticity, stiff, brown, moist	920.88	6-1/4" BOREHOLE	5AL		100		48.8
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist, slight petroleum-like odor		4" PVC WELL SCREEN	6AL		65		294
14	- very moist at 13.8ft BGS		SAND PACK	7AL		50		569
16				8AL		65		596
18	- saturated at 17.0ft BGS			9AL		70		457
20	CL-CLAYS, with silts, poorly graded, firm, gray, low plasticity, very moist	911.63 910.88		10AL		60		30.5
22	CI-CLAYS, with sands, fine to medium grained, trace coarse sands and fine gravels, poorly graded, low to medium plasticity, firm, gray, moist			11AL		50		0.9
24	- no gravels, medium plasticity, stiff at 22.0ft BGS			12AL		70		0.7
26	END OF BOREHOLE @ 26.0ft BGS	904.88		13AL		50		0.0
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)		WELL DETAILS Screened interval: 920.88 to 905.88ft bgs 10.00 to 25.00ft BGS Length: 15ft Diameter: 4in Slot Size: 0.010 Material: PVC Sand Pack: 922.88 to 904.88ft bgs 8.00 to 26.00ft BGS Material: SAND					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-41

DATE COMPLETED: August 21, 2006

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409473.73 EASTING: 13420078.21 TOP OF CASING GROUND SURFACE	931.08 931.08						
2	ASPHALT	930.58	CONCRETE	1AL				-
4	CL-CLAYS, with sands, fine to medium grained, trace coarse grained and fine gravels, poorly graded, firm, low plasticity, brown, moist		BENTONITE GROUT	2AL		75		0.0
6			4" PVC WELL CASING	3AL		50		0.0
8	- increase in sands, soft to firm at 7.8ft BGS		BENTONITE CHIPS	4AL		85		0.0
10			6-1/4" BOREHOLE	5AL		65		0.0
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist	920.08	4" PVC WELL SCREEN	6AL		75		61.6
14	- very moist, staining, slight petroleum-like odor at 13.0ft BGS		SAND PACK	7AL		80		54.8
16	- very moist to saturated, sheen visible at 15.5ft BGS			8AL		40		28.7
18	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, firm, gray, very moist to moist	914.83		9AL		100		12.5
20	- with fine gravels, trace fine to coarse sands, medium to high plasticity, firm to stiff, moist at 18.0ft BGS			10AL		85		4.3
22	- with coarse sands, trace fine to medium sands, stiff at 20.0ft BGS			11AL		95		7.2
24	- with fine gravels, trace fine to medium sands at 22.0ft BGS			12AL		75		4.4
26	- with fine to coarse sands, trace fine gravels, high plasticity at 24.5ft BGS			13AL		40		2.6
26	END OF BOREHOLE @ 26.0ft BGS	905.08						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

923.08 to 908.08ft bgs

8.00 to 23.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

925.08 to 905.08ft bgs

6.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-42

DATE COMPLETED: August 21, 2006

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409484.37 EASTING: 13420124.84 TOP OF CASING GROUND SURFACE	930.87 930.87						
2	ASPHALT	930.37	CONCRETE	1AL				--
4	CL-SANDY CLAYS, fine to medium grained, trace fine gravels, poorly graded, firm, low plasticity, brown, moist		BENTONITE GROUT	2AL		70		27.2
6			4" PVC WELL CASING	3AL		5		23.3
8			BENTONITE CHIPS	4AL		5		19.4
10	CL-CLAYS, trace fine to coarse sands, poorly graded, low plasticity, stiff, brown, moist	922.87	6-1/4" BOREHOLE	5AL		25		8.7
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist	920.87	4" PVC WELL SCREEN	6AL		80		12.5
14	ML-SILTS, with clays, poorly graded, compact, brown, very moist - decrease in clays at 11.5ft BGS	919.87 919.12 918.87	SAND PACK	7AL		70		28.2
16	SP-SANDS, fine to medium grained, poorly graded, loose, brown, very moist, slight petroleum-like odor			8AL		70		9.9
18	CH-CLAYS, trace fine to medium sands, poorly graded, high plasticity, firm to stiff, brown, moist to very moist - trace fine to coarse sands and fine gravels, slight increase in plasticity at 15.0ft BGS - gray and brown at 18.0ft BGS			9AL		80		28.8
20				10AL		70		0.0
22	- decrease in plasticity, moist at 22.0ft BGS			11AL		95		0.0
24				12AL		100		0.0
26	END OF BOREHOLE @ 26.0ft BGS	904.87		13AL		90		0.0
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)		<u>WELL DETAILS</u> Screened interval: 922.87 to 907.87ft bgs 8.00 to 23.00ft BGS Length: 15ft Diameter: 4in Slot Size: 0.010 Material: PVC Sand Pack: 924.87 to 904.87ft bgs 6.00 to 26.00ft BGS Material: SAND					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-43

PROJECT NUMBER: 7097-08

DATE COMPLETED: August 22, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409509.62 EASTING: 13420131.45	TOP OF CASING GROUND SURFACE 930.81 930.81						
	ASPHALT	930.31						
2	CL-CLAYS, with sands, fine to medium grained, poorly graded, firm, low plasticity, brown, moist, solvent like odor		CONCRETE	1AL				-
4	- increase in sands at 3.0ft BGS		BENTONITE GROUT	2AL		100		753
6	- trace coarse sands and fine gravels, mottled at 6.0ft BGS		4" PVC WELL CASING	3AL		40		1470
8	- increase in plasticity, soft to firm, moist to very moist, no odor at 8.0ft BGS		BENTONITE CHIPS	4AL		100		389
10	- low plasticity, firm, very moist at 10.0ft BGS		6-1/4" BOREHOLE	5AL		100		17.6
12		919.31	4" PVC WELL SCREEN	6AL		90		735
14	SP-SANDS, with clays, fine to medium grained, poorly graded, loose to compact, brown, very moist, petroleum-like odor	917.81	SAND PACK	7AL		60		41.2
16	CL-CLAYS, with sands, fine to coarse grained, poorly graded, low plasticity, firm, brown, very moist, petroleum-like odor	915.31		8AL		90		355
18	- increase in plasticity at 14.5ft BGS	914.81		9AL		90		2.5
20	- decrease in plasticity at 15.0ft BGS			10AL		70		0.0
22	SP-SANDS, fine to medium grained, poorly graded, loose, brown, very moist, petroleum-like odor			11AL		60		0.0
24	CH-CLAYS, with sands, fine to medium grained, trace coarse grained, poorly graded, firm, medium to high plasticity, brown, very moist	909.81		12AL		80		0.0
26	- high plasticity at 19.0ft BGS			13AL		70		0.0
28	CI-CLAYS, trace fine to coarse sands, poorly graded, firm, medium plasticity, gray, very moist							
30	- firm to stiff, moist at 22.0ft BGS							
32		904.81						
34	END OF BOREHOLE @ 26.0ft BGS							
	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							

WELL DETAILS

Screened interval:
922.81 to 907.81ft bgs
8.00 to 23.00ft BGS

Length: 15ft
Diameter: 4in
Slot Size: 0.010
Material: PVC
Sand Pack:

924.81 to 904.81ft bgs
6.00 to 26.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-44

PROJECT NUMBER: 7097-08

DATE COMPLETED: August 22, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409499.67 EASTING: 13419973.28	TOP OF CASING 935.04 GROUND SURFACE 931.89						
2	ASPHALT	931.39	CONCRETE	1AL				-
4	CL-SANDY CLAYS, fine to medium grained, poorly graded, firm, low plasticity, brown, moist		BENTONITE GROUT	2AL		70		10.1
6	- mottled at 4.0ft BGS		4" PVC WELL CASING	3AL		60		13.1
8	- trace coarse sands and fine gravels at 6.0ft BGS		BENTONITE CHIPS	4AL		25		11.8
10		923.39	6-1/4" BOREHOLE	5AL		70		237
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist, sweet solvent-like odor		4" PVC WELL SCREEN	6AL		80		301
14	- slight petroleum-like odor at 13.5ft BGS		SAND PACK	7AL		80		1051
16	- black staining, petroleum-like odor at 14.0ft BGS			8AL		90		460
18	- saturated at 15.0ft BGS	916.39		9AL		45		1990
20	ML-SILTS, with clays, poorly graded, compact, gray, saturated, petroleum-like odor	915.89		10AL		40		11.1
22	SP-SANDS, with clays, fine to medium grained, poorly graded, loose, black, saturated, petroleum-like odor	913.89		11AL		85		14.1
24	- increase in clays at 16.8ft BGS			12AL		100		4.7
26	- decrease in clays, trace fine gravels at 17.0ft BGS			13AL		85		2.0
28	CH-CLAYS, with sands, fine to medium grained, trace coarse grained, poorly graded, soft, high plasticity, brown, very moist							
30	- trace coarse grained and fine gravels, firm to soft at 20.0ft BGS							
32	- firm at 22.0ft BGS							
34	END OF BOREHOLE @ 26.0ft BGS	905.89						
	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							

WELL DETAILS

Screened interval:

923.89 to 908.89ft bgs

8.00 to 23.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

925.89 to 905.89ft bgs

6.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-45

DATE COMPLETED: August 22, 2006

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409733.04 EASTING: 13419963.06	TOP OF CASING GROUND SURFACE 933.79 931.43						
2	ASPHALT	930.93	CONCRETE	1AL				-
4	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist			2AL		70		10.0
6	- with coarse sands, trace fine gravels, very moist at 4.0ft BGS		BENTONITE GROUT	3AL		60		11.0
8	CH-CLAYS, with sands, fine to medium grained, trace coarse grained and fine gravels, poorly graded, medium to high plasticity, soft to firm, brown, very moist	924.93	4" PVC WELL CASING	4AL		100		10.3
10	- high plasticity at 8.0ft BGS		BENTONITE CHIPS	5AL		65		12.5
12	SP-SANDS, fine to medium grained, poorly graded, loose, brown, moist to very moist, slight petroleum-like odor	920.43	6-1/4" BOREHOLE	6AL		60		245
14	- with coarse sands and fine gravels at 13.8ft BGS		4" PVC WELL SCREEN	7AL		70		362
16	- fine to medium grained at 14.0ft BGS		SAND PACK	8AL		5		114
18	- medium grained with fine grained at 16.5ft BGS			9AL		50		1322
20	- fine to medium grained, some staining at 17.0ft BGS	913.43		10AL		40		<2000
22	SW-GRAVELLY SANDS, coarse sands and fine gravels, with fine to medium sands, trace coarse gravels, well graded, loose, black, saturated, petroleum-like odor	911.43 910.93		11AL		95		460
24	SP-SANDS, coarse grained, with fine to medium grained, poorly graded, loose, gray, saturated, petroleum-like odor			12AL		100		4.0
26	CH-CLAYS, fine to medium grained, trace coarse grained, poorly graded, high plasticity, soft to firm, gray, very moist			13AL		100		0.0
28	- firm at 23.0ft BGS							
30	END OF BOREHOLE @ 26.0ft BGS	905.43						
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
34								

WELL DETAILS

Screened interval:

921.43 to 906.43ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

923.43 to 905.43ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-46

PROJECT NUMBER: 7097-08

DATE COMPLETED: August 23, 2006

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft bgs	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	NORTHING: 409719.47 EASTING: 13420167.22	TOP OF CASING GROUND SURFACE 935.24 932.36						
	CONCRETE	931.86	CONCRETE	1AL				-
2	CL-CLAYS, with sands, fine to medium grained, trace coarse grained, poorly graded, low plasticity, brown, firm, moist	929.86		2AL		70		0.6
4	SP-SANDS, fine to medium grained, trace coarse grained, poorly graded, loose, brown		BENTONITE GROUT	3AL		55		1.2
6	- trace clays at 6.5ft BGS		4" PVC WELL CASING	4AL		100		1.0
8	CL-CLAYS, trace fine sands and silts, poorly graded, low plasticity, firm, moist	925.36	BENTONITE CHIPS	5AL		100		0.4
10	SP-SANDS, fine to medium grained, trace coarse grained, poorly graded, loose to compact, brown	923.61	6-1/4" BOREHOLE	6AL		95		0.2
	- very moist at 9.3ft BGS	922.61		7AL		80		0.0
12	CI-CLAYS, with sands, fine to medium grained, trace coarse grained and fine gravels, poorly graded, medium plasticity, firm, brown, moist		4" PVC WELL SCREEN	8AL		100		0.3
14			SAND PACK	9AL		0		-
16	NO RECOVERY	916.36		10AL		60		1400
18	CL-CLAYS, with silts, poorly graded, firm, low plasticity, gray, very moist	914.36		11AL		65		97.0
20	SP-SANDS, medium grained, with fine grained, poorly graded, loose, gray, saturated, petroleum-like odor	913.36		12AL		90		28.6
22	- with fine and coarse sands and fine gravels at 19.5ft BGS	912.36		13AL		95		6.2
24	CH-CLAYS, trace fine to medium sands and fine gravels, poorly graded, medium to high plasticity, stiff, brown, moist, slight petroleum-like odor							
26	END OF BOREHOLE @ 26.0ft BGS	906.36						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
30								
32								
34								

WELL DETAILS

Screened interval:

922.36 to 907.36ft bgs

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

924.36 to 906.36ft bgs

8.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-47

PROJECT NUMBER: 7097-08

DATE COMPLETED: September 4, 2007

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	CONCRETE	0.50	CONCRETE	1HSA				--
4	SP-SANDS AND SILTS, fine grained, poorly graded, loose to compact, brown, moist		BENTONITE CHIPS	2HSA		65		0.0
6	- with clays at 4.5ft BGS		4" PVC WELL CASING	3HSA		85		0.0
8	CL-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, soft, brown, moist	5.50	6-1/4" BOREHOLE	4HSA		75		0.0
10	- with fine sands, trace medium sands, moist to very moist at 8.0ft BGS		4" PVC WELL SCREEN	5HSA		80		0.0
12	- increase in plasticity, decrease in sands, brown, green, mottled at 11.0ft BGS		SAND PACK	6HSA		70		7.4
14	- trace fine sands and fine gravels, brown, moist at 11.3ft BGS			7HSA		90		36.2
16	- with fine to medium sands, trace fine gravels, very moist at 12.0ft BGS			8HSA		100		7.4
18	- with silts, moist at 14.5ft BGS			9HSA		85		0.9
20	- with fine sands, trace fine gravels, moist to very moist at 16.0ft BGS			10HSA		0		--
22				11HSA		95		0.0
24	- trace medium to coarse sands, increase in plasticity, gray at 20.0ft BGS			12HSA		0		--
26	END OF BOREHOLE @ 25.0ft BGS	25.00		13HSA		100		4.0
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
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WELL DETAILS

Screened interval:

8.00 to 23.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

6.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-48

PROJECT NUMBER: 7097-08

DATE COMPLETED: October 1, 2007

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	CONCRETE	0.50	CONCRETE	1HSA		40		0.0
2	CL-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, firm, brown, moist	2.00	BENTONITE CHIPS	2HSA		60		0.0
4	SP-SANDS, trace silts, fine grained, poorly graded, loose, brown, moist	2.75	4" PVC WELL CASING	3HSA		100		0.0
6	CL/ML-CLAYS AND SILTS, poorly graded, low plasticity, firm, brown and gray, moist	6.00	6-1/4" BOREHOLE	4HSA		100		0.0
8	CL-CLAYS, trace fine sands and fine gravels, poorly graded, low plasticity, firm, brown, moist	7.90		5HSA		70		0.0
10	SP-SANDS, fine grained, trace clays, poorly graded, loose, brown, moist to very moist	9.75	4" PVC WELL SCREEN	6HSA		100		1.2
12	CH-CLAYS, trace fine to medium sands, poorly graded, high plasticity, firm to soft, brown, moist to very moist		SAND PACK	7HSA		85		1.7
14	- decrease in plasticity, firm at 13.5ft BGS			8HSA		55		0.0
16	- stiff at 16.0ft BGS			9HSA		85		0.0
18		18.00		10HSA		50		1.8
20	CL/ML-CLAYS AND SILTS, poorly graded, low plasticity, soft, brown, very moist to saturated	20.00		11HSA		50		15.2
22	CL-CLAYS, with gravels, coarse grained, with coarse sands, poorly graded, low plasticity, soft, gray, saturated, slight petroleum-like odor	20.20		12HSA		100		0.4
24	CL-CLAYS, trace fine sands and fine gravels, poorly graded, moderate plasticity, firm, gray, moist			13HSA		100		0.0
26	- increase in plasticity, stiff at 22.0ft BGS	25.00						
28	END OF BOREHOLE @ 25.0ft BGS							
30	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							
32								
34								

WELL DETAILS

Screened interval:

8.00 to 23.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

6.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-49

DATE COMPLETED: November 19, 2007

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	ASPHALT	0.50	CONCRETE	1HSA				--
4	CL-SANDY CLAYS, fine grained, trace fine gravels, poorly graded, low plasticity, firm, brown, moist	2.75 3.25	BENTONITE GROUT	2HSA		95		1.1
6	SP-SANDS, fine to medium grained, with coarse grained and fine gravels, trace coarse gravels, poorly graded, loose, brown, moist		4" PVC WELL CASING	3HSA		60		1.9
8	CL-CLAYS, with sands, fine grained, trace coarse grained, poorly graded, low plasticity, soft to firm, brown, moist			4HSA		100		4.6
10	- olive green, mottled at 4.0ft BGS	9.00	6-1/4" BOREHOLE	5HSA		65		3.1
12	- increase in fine sands, no coarse grained, brown at 8.7ft BGS		4" PVC WELL SCREEN	6HSA		85		8.9
14	SP-SANDS, fine grained, with coarse grained and fine gravels, trace clays, poorly graded, loose, brown, moist		SAND PACK	7HSA		30		9.6
16	- no clays at 9.5ft BGS			8HSA		30		30.9
18	- trace fine to coarse gravels at 11.0ft BGS			9HSA		90		11.9
20	- trace fine gravels at 13.5ft BGS			10HSA		60		1.6
22	- no coarse grained sands or gravels at 15.8ft BGS			11HSA		80		1.9
24	- very moist at 16.5ft BGS			12HSA		90		1.0
26	- with clays, saturated at 17.0ft BGS			13HSA		95		0.7
28	- fine to medium grained, with coarse grained and fine to coarse gravels, trace clays at 19.0ft BGS			14HSA		90		0.2
30	- fine to medium grained at 21.0ft BGS	27.50 28.00		15HSA		95		0.1
32	- trace coarse grained at 23.0ft BGS			16HSA		100		0.1
34	- trace fine gravels at 25.0ft BGS							
36	- fine to medium grained, with coarse grained and fine gravels at 25.9ft BGS							
38	CI-CLAYS, with silts, poorly graded, low to moderate plasticity, firm, gray, moist							
40	SP-SANDS, medium grained, with fine and coarse grained, trace fine gravels, poorly graded, loose, gray, very moist	30.50 32.00						
42	CL-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, low plasticity, firm, gray, moist							
44	END OF BOREHOLE @ 32.0ft BGS							
46	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
48								

WELL DETAILS

Screened interval:

10.00 to 25.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

8.00 to 32.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-50

PROJECT NUMBER: 7097-08

DATE COMPLETED: November 19, 2007

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	ASPHALT	0.50	CONCRETE	1HSA				--
	SP-SANDS, fine grained, with fine to coarse gravels, poorly graded, loose, brown, moist	3.00	BENTONITE GROUT	2HSA		100		0.0
4	CL-SANDY CLAYS, fine grained, trace coarse grained and fine gravels, poorly graded, low plasticity, firm, brown, moist	3.50	4" PVC WELL CASING	3HSA		60		0.0
6	ASPHALT	4.00		4HSA		80		0.2
8	CL-SANDY CLAYS, fine grained, trace coarse grained, poorly graded, low plasticity, soft, brown, moist			5HSA		75		0.5
10	- trace fine gravels, very moist, mottled at 7.0ft BGS			6HSA		75		0.1
12	- slight increase in plasticity at 8.0ft BGS		6-1/4" BOREHOLE	7HSA		60		0.2
14	- low plasticity, moist at 10.0ft BGS			8HSA		50		0.5
16	- with fine to coarse gravels, not mottled at 10.5ft BGS		4" PVC WELL SCREEN	9HSA		50		0.7
18	- fine to medium grained, trace coarse grained, no gravels at 11.0ft BGS	15.50	SAND PACK	10HSA		75		0.1
20	- fine grained, with fine gravels at 11.5ft BGS			11HSA		50		1.1
22	SP-SANDS, fine to medium grained, with coarse grained, trace fine gravels, poorly graded, loose, brown, moist			12HSA		85		0.4
24	- with fine to coarse gravels at 16.0ft BGS	23.00		13HSA		95		0.0
26	- saturated at 20.3ft BGS	24.00		14HSA		100		0.0
28	ML/SP-SILTS AND SANDS, fine grained, poorly graded, compact, brown, saturated			15HSA		100		0.0
30	SP-SANDS, fine grained, trace clays, poorly graded, loose, gray, saturated	27.00						
32	- decrease in clays, compact at 26.3ft BGS							
34	CH-CLAYS, with fine sands, trace coarse grained and fine gravels, poorly graded, high plasticity, soft to firm, gray, very moist	30.00						
36	- trace fine to coarse gravels, moist at 28.0ft BGS							
38	END OF BOREHOLE @ 30.0ft BGS							
40	NOTE:							
42	20-22' INTERVAL TESTED NEGATIVE FOR PRODUCT USING SUDAN IV JAR TEST							
44	WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
46								
48								

WELL DETAILS
Screened interval:
13.00 to 28.00ft BGS
Length: 15ft
Diameter: 4in
Slot Size: 0.010
Material: PVC
Sand Pack:
11.00 to 28.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA_CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-51

DATE COMPLETED: October 1, 2007

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.50	ASPHALT	0.50	CONCRETE	1HSA				-
2	SC-CLAYEY SANDS, fine grained, with fine to coarse gravels, poorly graded, compact, brown, moist		BENTONITE CHIPS	2HSA		90		0.0
4	SP-SANDS, trace coarse sands and fine gravels, poorly graded, loose, brown, moist	4.25	4" PVC WELL CASING	3HSA		100		0.0
6	CL-CLAYS, with sands, fine grained, trace medium to coarse grained and fine to coarse gravels, poorly graded, low plasticity, soft to firm, brown, moist	6.20		4HSA		100		0.0
8	- increase in sands at 6.8ft BGS	7.25		5HSA		75		0.0
10	SC-CLAYEY SANDS, fine to medium grained, with coarse grained, trace fine to coarse gravels, poorly graded, loose to compact, brown, moist	10.00		6HSA		75		0.0
12	- with fine to coarse gravels at 8.5ft BGS	11.50	6-1/4" BOREHOLE	7HSA		80		0.0
14	CONCRETE DEBRIS	12.75		8HSA		30		0.0
16	SC-CLAYEY SANDS, fine to medium grained, with coarse sands and fine to coarse gravels, loose to compact, brown, moist		4" PVC WELL SCREEN	9HSA		50		1.5
18	- brown, moist at 12.0ft BGS			10HSA		5		0.0
20	- with silts at 12.3ft BGS		SAND PACK	11HSA		50		0.0
22	- no silts at 12.5ft BGS			12HSA		100		0.0
24	SP-SANDS, medium grained, with fine to coarse grained and fine gravels, poorly graded, loose, brown, moist			13HSA		100		0.0
26	- with silts at 13.5ft BGS			14HSA		100		0.0
28	- with clays at 14.0ft BGS	20.00						
30	- very moist, slight petroleum-like odor at 17.5ft BGS							
32	CH-CLAYS, trace fine to coarse sands and coarse gravels, poorly graded, high plasticity, firm, gray, very moist							
34	- trace coarse sands and fine gravels, moist at 25.0ft BGS							
	END OF BOREHOLE @ 28.0ft BGS	28.00						
	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							

WELL DETAILS

Screened interval:

13.00 to 28.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

11.00 to 28.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-52

PROJECT NUMBER: 7097-08

DATE COMPLETED: November 20, 2007

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
	SP-SANDS, fine grained, trace fine gravels, poorly graded, loose, brown, moist	1.00	CONCRETE	1HSA		75		0.5
2	ASPHALT	1.50	BENTONITE CHIPS					0.8
4	SP-SANDS, fine grained, trace coarse grained and fine gravels, poorly graded, loose, brown, moist		4" PVC WELL CASING	2HSA		80		1.1
6	- moist to very moist at 5.0ft BGS		6-1/4" BOREHOLE					1.8
8	- trace clays at 7.0ft BGS		4" PVC WELL SCREEN					2.0
10			SAND PACK					0.8
12	- medium grained, with fine and coarse grained at 12.0ft BGS			2HSA		80		1.4
14	- medium to coarse grained, with fine gravels, trace coarse gravels at 12.7ft BGS							2.1
16	- fine grained, trace coarse grained, gray, saturated at 15.0ft BGS	16.00		3HSA		80		1.5
18	CH-CLAYS, trace fine sands and fine gravels, poorly graded, high plasticity, soft to firm, gray, moist							1.9
20	- with fine sands at 19.0ft BGS							0.6
22	- firm at 20.0ft BGS			5HSA		90		0.2
24								0.2
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28	NOTE:		<u>WELL DETAILS</u> Screened interval: 8.00 to 23.00ft BGS Length: 15ft Diameter: 4in Slot Size: 0.010 Material: PVC Sand Pack: 6.00 to 25.00ft BGS Material: SAND					
30	14-16' INTERVAL TESTED NEGATIVE FOR PRODUCT USING SUDAN IV JAR TEST							
32	WELL ABANDONED VIA PRESSURE GROUT (JUNE 9, 2015)							
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-54

DATE COMPLETED: October 2, 2007

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	CONCRETE	0.50	CONCRETE	1HSA				-
4	CL-CLAYS, trace fine sands, poorly graded, low plasticity, firm, brown, moist		BENTONITE CHIPS	2HSA		80		0.4
6	- trace fine gravels at 4.8ft BGS		4" PVC WELL CASING	3HSA		90		0.9
8			6-1/4" BOREHOLE	4HSA		100		0.9
10	SP-SANDS, fine grained, poorly graded, loose, brown, moist	7.80	4" PVC WELL SCREEN	5HSA		100		0.9
12	- with coarse sands and fine gravels at 8ft BGS			6HSA		85		3.1
14	- trace coarse sands and fine gravels at 8.8ft BGS		SAND PACK	7HSA		60		1.4
16	- with clays, no coarse sands and fine gravels, very moist at 9.3ft BGS			8HSA		75		0.0
18	- trace medium sands at 10.0ft BGS	14.00		9HSA		75		0.7
20	- decrease in clays, with fine gravels, trace coarse sands and coarse gravels at 13.3ft BGS			10HSA		60		0.2
22	CH-CLAYS, trace fine to medium sands, poorly graded, high plasticity, firm, brown, moist to very moist	19.00		11HSA		60		0.7
24	- trace fine gravels, moist at 16.0ft BGS			12HSA		80		0.0
26	- with fine sands, very moist at 17.5ft BGS	22.75		13HSA		50		0.0
28	CL/ML-CLAYS AND SILTS, poorly graded, firm, no plasticity, gray, saturated							
30	- trace fine sands at 20.0ft BGS	26.00						
32	CH-CLAYS, trace silts and fine sands, poorly graded, high plasticity, firm to soft, gray, very moist							
34	- firm at 24.0ft BGS							
	END OF BOREHOLE @ 26.0ft BGS							
	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							

WELL DETAILS

Screened interval:

8.00 to 23.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

6.00 to 26.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-55

PROJECT NUMBER: 7097-08

DATE COMPLETED: November 20, 2007

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	ASPHALT	1.00	CONCRETE	1HSA		0		-
4	GP-GRAVELS, fine grained, with fine sands, poorly graded, loose, moist		BENTONITE CHIPS					-
6			4" PVC WELL CASING	2HSA		50		0.3
8	CL-CLAYS, with sands, fine grained, trace coarse grained, poorly graded, low plasticity, soft, gray, very moist	7.00	6-1/4" BOREHOLE					0.6
10	SP-SANDS, fine grained, with fine gravels, poorly graded, compact, brown, moist to very moist	9.00	4" PVC WELL SCREEN					0.5
12	CL-CLAYS, with sands, coarse grained, trace fine gravels and silts, poorly graded, low plasticity, firm to stiff, brown, moist, mottled - soft to firm, gray, not mottled at 10.0ft BGS	9.30	SAND PACK					0.4
14	SP-SANDS, medium grained with fine and coarse grained and fine gravels, poorly graded, loose to compact, gray, moist	12.50		3HSA		70		0.7
16	CL-CLAYS, with sands, coarse grained, trace fine gravels and silts, poorly graded, low plasticity, firm, gray, not mottled	13.75						0.7
18				4HSA		70		0.4
20	- sand lens 2' thick, medium sands, with fine sands, saturated at 19.5ft BGS							0.7
22	- no sand lens, moist at 19.7ft BGS							0.5
24								0.6
26	END OF BOREHOLE @ 25.0ft BGS	25.00		5HSA		80		0.6
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							0.6
30								
32								
34								

WELL DETAILS

Screened interval:

6.00 to 21.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

4.00 to 25.00ft BGS

Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

HOLE DESIGNATION: RW33-56

PROJECT NUMBER: 7097-08

DATE COMPLETED: November 20, 2007

CLIENT: ENCORE

DRILLING METHOD: 6-1/4" HSA

LOCATION: PONTIAC, MI

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.50	ASPHALT	0.50	CONCRETE	1HSA		70		1.0
2	SP-SANDS, fine grained, poorly graded, loose, brown, moist		BENTONITE CHIPS					0.8
4			4" PVC WELL CASING					1.3
4.90	ASPHALT DEBRIS	4.90		2HSA		60		2.4
5.00	CL-SANDY CLAYS, fine grained, trace fine to coarse gravels, poorly graded, low plasticity, soft, brown, very moist							46.6
6								88.0
8			6-1/4" BOREHOLE					
10			4" PVC WELL SCREEN	3HSA		40		8.0
12	- firm, mottled at 13.0ft BGS							24.5
14	- soft, not mottled at 14.5ft BGS		SAND PACK					
16		16.00		4HSA		60		57.0
18	SP-SANDS, fine grained, trace medium to coarse grained and fine to coarse gravels, poorly graded, compact, brown, moist, slight petroleum-like odor							95.0
20	- medium to coarse grained, with fine sands and fine to coarse gravels, moderately graded, saturated, petroleum-like odor at 18.0ft BGS							156.0
22				5HSA		50		1556
24	- no odor at 24.0ft BGS							17.1
26	CH-CLAYS, with sands, fine grained, trace fine gravels, poorly graded, high plasticity, firm, gray, moist	25.50		6HSA		75		4.2
28								1.3
30	END OF BOREHOLE @ 30.0ft BGS	30.00						
32	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							
34								
36								

WELL DETAILS

Screened interval:
11.00 to 26.00ft BGS
Length: 15ft
Diameter: 4in
Slot Size: 0.010
Material: PVC
Sand Pack:
9.00 to 30.00ft BGS
Material: SAND

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA_CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-57

DATE COMPLETED: November 19, 2007

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	SP-SANDS, fine to medium grained, with fine to coarse gravels, poorly graded, loose, brown, moist		CONCRETE	1HSA				-
			BENTONITE CHIPS	2HSA		100		0.2
4	CL-SANDY CLAYS, fine grained, trace fine gravels, poorly graded, low plasticity, soft, brown, very moist	3.00	4" PVC WELL CASING	3HSA		60		0.5
6	SP-SANDS, fine grained, poorly graded, loose, brown, moist	5.50 6.00	6-1/4" BOREHOLE	4HSA		100		0.4
8	CL-SANDY CLAYS, fine grained, trace fine gravels, poorly graded, low plasticity, soft, brown, very moist	7.25		5HSA		70		0.6
10	SP-SANDS, fine grained, with coarse grained, trace fine to coarse gravels, poorly graded, loose, brown, moist - no coarse gravels at 8.0ft BGS - trace clays at 9.0ft BGS	9.50	4" PVC WELL SCREEN	6HSA		80		0.9
12	CH-CLAYS, with sands, fine grained, trace coarse grained, poorly graded, high plasticity, soft, brown, very moist	11.50 12.00	SAND	7HSA		90		1.8
14	SW/GW-SANDS AND GRAVELS, medium to coarse sands, fine to coarse gravels, with fine sands, medium to well graded, loose, brown, moist	13.00		8HSA		70		8.0
16	CH-CLAYS, with sands, fine grained, trace coarse grained, poorly graded, high plasticity, soft, brown, very moist	15.75		9HSA		90		0.1
18	SW/GW-SANDS AND GRAVELS, medium to coarse sands, fine to coarse gravels, with fine sands, medium to well graded, loose, brown, moist - gray at 15.5ft BGS	19.00		10HSA		100		0.1
20	SP-SANDS, fine grained, trace clays, poorly graded, loose to compact, gray, saturated - with clays at 16.0ft BGS			11HSA		75		0.4
22	CH-CLAYS, with sands, fine grained, trace coarse grained and fine gravels, poorly graded, moderate plasticity, firm, gray, moist to very moist - high plasticity at 19.8ft BGS - moist at 23.0ft BGS	26.00		12HSA		95		0.3
24	END OF BOREHOLE @ 26.0ft BGS			13HSA		40		0.1
26	NOTE: 14-16' INTERVAL TESTED NEGATIVE FOR PRODUCT USING SUDAN IV JAR TEST WELL ABANDONED VIA PRESSURE GROUT (JUNE 11, 2015)							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: BUILDING 33 IM INVESTIGATION

PROJECT NUMBER: 7097-08

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: RW33-58

DATE COMPLETED: February 7, 2008

DRILLING METHOD: 6-1/4" HSA

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.25	ASPHALT	0.25	CONCRETE					0.0
2	SP-SANDS, with gravels, fine sands, fine to coarse gravels, trace medium to coarse sands and clays, poorly graded, loose, brown, moist	3.00	BENTONITE CHIPS	1HSA		85		0.0
4	- moderately graded at 2.0ft BGS		4" PVC WELL CASING					0.0
6	CL-CLAYS, with sands, fine grained, trace fine to coarse gravels, poorly graded, low plasticity, firm, brown, moist	6.00		2HSA		90		0.0
8	- gray at 4.0ft BGS							0.0
10	SC-CLAYEY SANDS, fine grained, trace coarse gravels, poorly graded, loose to compact, brown, moist	8.50		3HSA		100		0.0
12	- very moist at 8.0ft BGS							0.0
14	CL-CLAYS, trace fine sands and fine to coarse gravels, poorly graded, low plasticity, firm, brown, moist		6-1/4" BOREHOLE	4HSA		75		0.0
16	- mottled at 9.5ft BGS		4" PVC WELL SCREEN					0.0
18	- trace fine to medium sands, slight increase in plasticity, not mottled at 12.0ft BGS	18.50		5HSA		60		0.0
20	- slight increase in gravels at 14.0ft BGS		SAND	6HSA		70		0.0
22	- no gravels, soft, moist to very moist at 15.0ft BGS			7HSA		90		0.0
24	SP-SANDS, fine grained, poorly graded, loose to compact, brown, moist	30.00		8HSA		100		0.0
26	- fine to medium grained, with coarse grained and fine to coarse gravels at 20.0ft BGS							0.0
28	- very moist at 23.5ft BGS							0.0
30	- increase in gravels, saturated at 24.0ft BGS							0.0
32	- with coarse grained and fine gravels at 25.0ft BGS							0.0
34	- fine grained, with medium grained and fine gravels at 26.0ft BGS	34.00						0.0
36	SP-SANDS, with silts, fine grained, poorly graded, compact, gray, saturated	34.80						0.0
38	SW-SANDS AND GRAVELS, medium to coarse sands, fine to coarse gravels, with fine sands, well graded, loose, gray, saturated	37.00						0.0
40	CH-CLAYS, trace fine to medium sands and fine gravels, poorly graded, high plasticity, soft, gray, moist to very moist							0.0
42	END OF BOREHOLE @ 37.0ft BGS							0.0
44	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 15, 2015)							0.0

WELL DETAILS

Screened interval:

14.00 to 29.00ft BGS

Length: 15ft

Diameter: 4in

Slot Size: 0.010

Material: PVC

Sand Pack:

12.00 to 37.00ft BGS

Material: SANDS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097.GPJ CRA_CORP.GDT 8/6/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: CENTERPOINT

PROJECT NUMBER: 7097-10

CLIENT: ENCORE

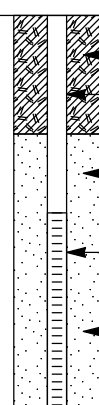
LOCATION: PONTIAC, MI

HOLE DESIGNATION: MW-1

DATE COMPLETED: February 8, 2007

DRILLING METHOD: GEOPROBE/ DIRECT PUSH

FIELD PERSONNEL: C. BONDY

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE					
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)	
2	SC-CLAYEY SANDS, fine grained, with fine gravels, poorly graded, loose to compact, brown, moist - trace fine gravels at 3.0ft BGS			0-2'-004	1GP	100		0.0	
4				2-4'-005				0.0	
6	CH-CLAYS, with fine sands, trace fine gravels, poorly graded, high plasticity, firm to soft - slightly mottled, stiff to firm at 7.0ft BGS - stiff at 9.0ft BGS	6.00		4-6'-006	2GP	100		0.0	
8				2" PVC WELL SCREEN				0.0	
10	END OF BOREHOLE @ 10.0ft BGS	10.00		SAND PACK	3GP	100		0.0	
12	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 2015)		<u>WELL DETAILS</u> Screened interval: 5.00 to 10.00ft BGS Length: 5ft Diameter: 2in Slot Size: 0.010 Material: PVC Sand Pack: 3.00 to 10.00ft BGS Material: SANDS						
14									
16									
18									
20									
22									
24									
26									
28									
30									
32									
34									

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS



OVERBURDEN LOG 7097-10-WIN.GPJ CRA_CORP.GDT 6/24/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: CENTERPOINT BURN PILE

HOLE DESIGNATION: MW-113

PROJECT NUMBER: 7097-10

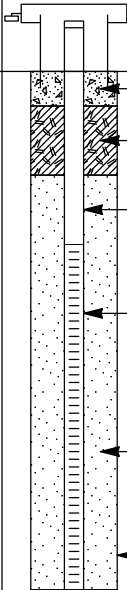
DATE COMPLETED: June 22, 2006

CLIENT: ENCORE

DRILLING METHOD: GEOPROBE

LOCATION: PONTIAC, MI

FIELD PERSONNEL: E. VARNAS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	CL-CLAY, trace fine gravel, trace medium grained sand, firm, low plasticity, brown, very moist - stiff, moist, dark brown at 1.0ft BGS - brown at 1.5ft BGS - stiff at 3.5ft BGS		 CONCRETE BENTONITE CHIPS 1" WELL CASING 1" WELL SCREEN SAND PACK 3-1/4" BOREHOLE	1GP		100		0
4								
6				2GP		100		0
8								
10	- wet at 10.0ft BGS							
12	SP-SANDS w/silt, trace fine gravel, loose to compact, medium to coarse grained, poorly graded, brown to gray, wet	11.00		3GP		70		0
14	CL-CLAY, trace fine gravel, trace medium grained sand, firm, medium plasticity, brown, wet	12.50						
16	END OF BOREHOLE @ 15.0ft BGS	15.00						
18	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 2015)							
20								
22								
24								
26								
28								
30								
32								
34								
36								
38								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-10.TSFRD TO B FUCHS WLOO.GPJ CRA_CORP.GDT 6/24/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: CENTERPOINT BURN PILE

HOLE DESIGNATION: MW-114

PROJECT NUMBER: 7097-10

DATE COMPLETED: June 22, 2006

CLIENT: ENCORE

DRILLING METHOD: GEOPROBE

LOCATION: PONTIAC, MI

FIELD PERSONNEL: E. VARNAS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	SP-SANDS w/ fine gravel, trace vegetation, loose to compact, medium to fine and coarse grained, poorly graded, black, moist	1.50	CONCRETE BENTONITE CHIPS 1" WELL CASING	1GP		60		0
4	CL-CLAY, trace medium grained sand, trace fine gravel, soft, low to medium plasticity, black, moist - brown at 2.0ft BGS		1" WELL SCREEN	2GP		70		0
6			SAND PACK	3GP		100		0
8	- firm at 7.5ft BGS - low plasticity at 8.0ft BGS		3-1/4" BOREHOLE	4GP		80		0
10								
12								
14								
16								
18	- grayish black at 19.0ft BGS							
20	END OF BOREHOLE @ 20.0ft BGS	20.00						
22	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 2015)							
24								
26								
28								
30								
32								
34								
36								
38								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-10.TSFRD TO B FUCHS WLOO.GPJ CRA_CORP.GDT 6/24/15

WELL DETAILS
Screened interval:
3.00 to 13.00ft BGS
Length: 10ft
Diameter: 1in
Slot Size: 0.010
Material: PVC
Sand Pack:
1.00 to 20.00ft BGS
Material: Global Filter Pack #5



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: CENTERPOINT BURN PILE

HOLE DESIGNATION: MW-115

PROJECT NUMBER: 7097-10

DATE COMPLETED: June 22, 2006

CLIENT: ENCORE

DRILLING METHOD: GEOPROBE

LOCATION: PONTIAC, MI

FIELD PERSONNEL: E. VARNAS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
2	CL-CLAY, trace fine gravel, trace fine to medium grained sands, firm, low to medium plasticity, brown, moist - less gravel at 1.0ft BGS		CONCRETE BENTONITE CHIPS 1" WELL CASING 1" WELL SCREEN SAND PACK BENTONITE CHIPS SAND PACK 4-1/4" BOREHOLE	1GP		80		0
4	- black at 3.5ft BGS - transitioning to brown at 4.0ft BGS							
6	SM-SILTY SANDS (SEAM), trace fine gravel, loose to compact, medium grained, poorly graded, brown, very moist	6.00		2GP		70		0
8	CL-CLAY, trace fine gravel, trace medium grained sands, firm, low to medium plasticity, brown, moist	8.00						
10	SM-SILTY SANDS (SEAM), trace fine gravel, loose to compact, medium grained, poorly graded, brown, very moist	10.00						
12	CL-CLAY, trace medium grained, firm, medium to high plasticity, mottled gray & brown, moist	11.50		3GP		60		0
14								
16	- more gray, stiff at 17.0ft BGS			4GP		80		0
18								
20	END OF BOREHOLE @ 20.0ft BGS	20.00						
22	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 2015)		<u>WELL DETAILS</u> Screened interval: 3.00 to 13.00ft BGS Length: 10ft Diameter: 1in Slot Size: 0.010 Material: PVC Sand Pack: 1.00 to 20.00ft BGS Material: Global Filter Pack #5					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-10.TSFRD TO B FUCHS WLOO.GPJ CRA_CORP.GDT 6/24/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

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PROJECT NAME: CENTERPOINT BURN PILE

HOLE DESIGNATION: MW-116

PROJECT NUMBER: 7097-10

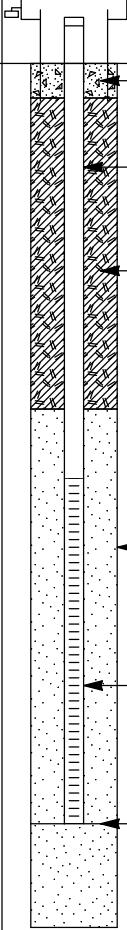
DATE COMPLETED: June 29, 2006

CLIENT: ENCORE

DRILLING METHOD: GEOPROBE

LOCATION: PONTIAC, MI

FIELD PERSONNEL: S. HOEVE MEYER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
								
0.33	mulch	0.33	CONCRETE					
2	SC/CL-SANDY/SILTY CLAY, moist to dry, brown/gray, trace to little gravel			1SS				0.0
4	- more sand at 2.0ft BGS		1" WELL CASING					
6	- more silt at 4.0ft BGS							
7.00	SANDY CLAY, trace silt, brown, moist to wet, trace gravel	7.00	BENTONITE CHIPS	2SS				0.0
8.00	SM-SILTY SANDS, little clay, trace gravel, moist to wet, brown/gray, tinted orange	8.00						
10.00	CL-SILTY CLAY, little sand, dry to moist, trace to little gravel, brown/gray mottling	10.00		3SS				0.0
12								
14	- more silt, trace sand at 14.0ft BGS		3" BOREHOLE					
16	- more clay at 16.0ft BGS			4SS				0.0
18			1" WELL SCREEN					
20.00	sand seam, little to some gravel, wet, fine to medium grained	20.00						
21.00	CL/CI-SILTY CLAY, trace sand, gray, moist, trace gravel	21.00	SAND PACK	5SS				0.0
22								
24								
25.00	END OF BOREHOLE @ 25.0ft BGS	25.00						
26	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 2015)		WELL DETAILS Screened interval: 12.00 to 22.00ft BGS Length: 10ft Diameter: 1in Slot Size: 0.010 Material: PVC Sand Pack: 10.00 to 25.00ft BGS					
28								
30								
32								
34								
36								
38								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-10.TSFRD TO B FLUCHS WLOO.GPJ CRA_CORP.GDT 6/24/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: CENTERPOINT BURN PILE

PROJECT NUMBER: 7097-10

CLIENT: ENCORE

LOCATION: PONTIAC, MI

HOLE DESIGNATION: MW-117

DATE COMPLETED: June 29, 2006

DRILLING METHOD: GEOPROBE

FIELD PERSONNEL: S. HOEVE MEYER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (ppm)
0.33	mulch	0.33	CONCRETE					
2	SC/CL-SANDY/SILTY CLAY (FILL), dry to moist, trace gravel, fine to medium grained, brown		1" WELL CASING	1SS				0.0
4								
6	wet seam of more silty clay, trace sand, brown/gray, trace gravel	6.00	BENTONITE CHIPS					
8	SC-SANDY CLAY, little silt, fine to medium grained, trace gravel, brown, moist	7.00		2SS				0.0
10								
12			SAND PACK					
14	sand & gravel, seam, moist, medium to coarse gravel to 1", brown	13.00		3SS				0.0
16	SM-SILTY SANDS, little clay, trace gravel, moist to wet, brown/gray	14.00	3" BOREHOLE					
18	CL-SILTY CLAY, gray, moist, trace gravel & sand, fairly stiff, low to medium plasticity	17.00		4SS				0.0
20	SM-SILTY SAND, little clay, moist, brown, some gravel	19.00	1" WELL SCREEN					
22	CL/CI-SILTY CLAY, gray, fine gravel, moist	21.00		5SS				0.0
24								
26	END OF BOREHOLE @ 25.0ft BGS	25.00						
28	NOTE: WELL ABANDONED VIA PRESSURE GROUT (JUNE 2015)							
30								
32								
34								
36								
38								

WELL DETAILS

Screened interval:

13.00 to 23.00ft BGS

Length: 10ft

Diameter: 1in

Slot Size: 0.010

Material: PVC

Sand Pack:

11.00 to 25.00ft BGS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-10.TSFRD TO B FUCHS WLOO.GPJ CRA_CORP.GDT 6/24/15



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

Page 1 of 1

PROJECT NAME: CENTERPOINT BURN PILE

HOLE DESIGNATION: MW-119

PROJECT NUMBER: 7097-10

DATE COMPLETED: June 29, 2006

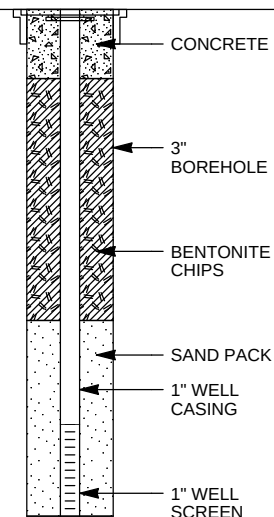
CLIENT: ENCORE

DRILLING METHOD: GEOPROBE

LOCATION: PONTIAC, MI

FIELD PERSONNEL: S. HOEVE MEYER

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	MONITORING WELL	SAMPLE				
				NUMBER	INTERVAL	REC (%)	'N' VALUE	
0.50	grass/sod							
2	sands, little clay, silt and gravel (various depending on depth), dry to moist, brown							
4								
6								
7.33	END OF BOREHOLE @ 7.3ft BGS							
8	NOTES: AIR KNIFE WITH CUTTINGS DIRECTLY INTO DRUM. WATER MAIN IS APPROX. FROM 74" 86" BGS WELL ABANDONED VIA PRESSURE GROUT (JUNE 2015)							
10								
12								
14								
16								
18								



WELL DETAILS

Screened interval:

6.00 to 7.33ft BGS

Length: 1.33ft

Diameter: 1in

Slot Size: 0.010

Material: PVC

Sand Pack:

4.50 to 7.33ft BGS

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 7097-10.TSFRD TO B FUCHS WLOO.GPJ CRA_CORP.GDT 6/24/15