



**CONESTOGA-ROVERS
& ASSOCIATES**

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MEMORANDUM

TO: Peter Ramanauskas/EPA REF. NO.: 017322
CC: Dave Favero/RACER
FROM: Thomas Kinney/mc/13 DATE: July 13, 2012
RE: **Monitoring Well Inventory and Groundwater Level Monitoring
PCC-Validation
Pontiac, Michigan**

1.0 INTRODUCTION

As requested by Revitalizing Auto Communities Environmental Response (RACER) Trust, Conestoga-Rovers & Associates (CRA) is providing this memorandum to complete a monitoring well inventory and groundwater level monitoring at PCC-Validation (Site) located in Pontiac, Michigan. The services were requested by RACER during a July 10, 2012 conference call with CRA and the US Environmental Protection Agency (EPA). Additional details of each task are summarized below.

2.0 SCOPE OF WORK

CRA will locate, survey, inspect, and collect groundwater levels from 35 monitoring wells located on-Site. The inspection will entail visual observations to check for monitoring well integrity and measurement of total depth.

Groundwater levels will be measured and recorded at all 35 monitoring wells, assuming they are accessible. The water levels will be measured using an electronic depth to water meter. Recorded water levels will be utilized to complete an updated Site-wide groundwater contour map.

CRA will utilize a surveyor crew to locate and measure elevation at each monitoring well. The survey crew will assure swift and efficient locating of each well. Additionally, the well risers were last surveyed over 5 years ago and plant demolition activities may have impacted the elevations of some of the Site wells. See Table 1 for a list of monitoring wells and construction details.

3.0 COST ESTIMATE

CRA anticipates an estimated budget of **\$6,524** to complete the scope of work described in Section 2.0. Currently approved funding for the 2012 Annual Budget for PCC Validation, Phase III Environmental Site Assessment will be utilized to perform this scope of work. The Cost Detail Form is included as Attachment A.

4.0 PROPOSED SCHEDULE

CRA plans to implement this activity on July 18 and 19, 2012.

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS
PONTIAC VALIDATION CENTER
PONTIAC, MICHIGAN

Well ID	Date Installed	Ground Surface Elevation (ft AMSL)	Top of Riser Elevation (ft AMSL)	Total Depth of Soil Boring (ft bgs)	Screened Interval		Screened Interval	
					Top (ft bgs)	Bottom (ft bgs)	Top (ft AMSL)	Bottom (ft AMSL)
MW15-07	10/16/2007	960.77	960.42	30	9	14	951.77	946.77
MW17-07	10/16/2007	952.61	952.18	15	3	10	949.61	942.61
MW19-07	10/17/2007	959.94	959.68	30	8	13	951.94	946.94
MW21-07	12/4/2007	952.35	952.14	25	10.5	20.5	941.85	931.85
MW27-07	12/7/2007	946.92	946.51	25	3	13	943.92	933.92
MW28-07	10/18/2007	960.13	960.02	60	10	20	950.13	940.13
MW32-07	12/7/2007	953.64	953.40	25	9	19	944.64	934.64
MW33-07	12/4/2007	946.96	946.51	25	10.5	20.5	936.46	926.46
MW34-07	12/4/2007	951.24	950.88	20	11	16	940.24	935.24
MW35-07	12/4/2007	946.57	946.43	20	6	11	940.57	935.57
MW37-07	12/4/2007	947.16	946.85	30	12.5	25.5	934.66	921.66
MW38-07	12/4/2007	949.46	949.21	20	9.5	14.5	939.96	934.96
MW40-07	12/6/2007	948.73	948.42	20	11	16	937.73	932.73
MW43-07	12/6/2007	950.05	949.74	20	7	15	943.05	935.05
MW46-07 ⁽¹⁾	10/9/2007	--	--	15.5	5	15	--	--
MW48-07	10/9/2007	960.99	960.69	20	5	15	955.99	945.99
MW2-07	10/12/2007	936.97	936.95	30	12	25	924.97	911.97
MW4-07	10/11/2007	938.13	937.77	20	5.5	15.5	932.63	922.63
MW7-07	10/12/2007	938.04	937.67	38	10	15	928.04	923.04
MW10-07	10/15/2007	941.44	941.11	15	3.5	13.5	937.94	927.94
MW11-07	10/16/2007	954.67	954.27	40	7	12	947.67	942.67
MW13-07	10/18/2007	953.13	956.11	20	7	14	946.13	939.13
MW16-07	10/18/2007	956.08	955.89	60	6	16	950.08	940.08
MW20-07	10/17/2007	960.26	960.06	20	6.5	13	953.76	947.26
MW63-08	3/10/2008	947.78	947.39	20	9.5	15.5	938.28	932.28
MW64-08	3/10/2008	947.78	947.52	30	9.5	14.5	938.28	933.28
MW68-08	3/12/2008	956.94	956.58	25	9	19	947.94	937.94
MW69-08	3/13/2008	956.91	956.49	25	10	20	946.91	936.91
TMW70-08	3/5/2008	945.52	947.55	15	3	8	942.52	937.52
TMW71-08	3/6/2008	947.00	949.06	15	3	8	944.00	939.00
MW74-08	3/14/2008	956.96	956.76	20	8	16	948.96	940.96
MW78-08	3/11/2008	964.11	964.00	20	8	13	956.11	951.11
TMW80-08	3/5/2008	954.17	955.31	15	4	9	950.17	945.17
TMW81-08	3/5/2008	954.18	957.17	15	2	7	952.18	947.18
TMW87-08	3/6/2008	949.66	951.96	15	6	11	943.66	938.66

Notes:

(1) Monitoring well MW46-07 could not be located for surveying due to demolition debris over the well.

ft AMSL - Feet Above Mean Sea Level.

ft bgs - Feet below ground surface.

MW - Monitoring well.

TMW - Temporary monitoring well.

TASK 01

PHASE III INVESTIGATION

MONITORING WELL INVENTORY AND GROUNDWATER LEVEL MONITORING

This task includes a monitoring well inventory search w/ Surveyors and a groundwater level monitoring field event.

Description	Quantity	Item	2012 Contract Rate		Total Cost
Labor					
Project Director (Principal F1)	1	Hours	\$	148.59	\$ 149
Project Manager (Geo/Hydro E2)	4	Hours	\$	135.76	\$ 543
Project Engineer (Eng C3)	0	Hours	\$	114.37	\$ -
Project Coordinator (Geo B2)	6	Hours	\$	88.69	\$ 532
Waste Coordinator (Engineer B2)	0	Hours	\$	88.69	\$ -
Technician/Technologist B3	20	Hours	\$	67.30	\$ 1,346
Draft/CADD D1	4	Hours	\$	80.13	\$ 321
Secretary/Word Processing D1	4	Hours	\$	50.18	\$ 201
Expenses					
Travel	2	days	\$	125.00	\$ 250
Disbursements (10% of labor)	1	L.S.	--		\$ 32
Surveyor (includes 3% markup)	2	L.S.	\$	1,500.00	\$ 3,000
Field Equipment	1	L.S.	\$	150.00	\$ 150
Subtotal					\$ 6,524