



**CONESTOGA-ROVERS
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MEMORANDUM

TO: Peter Ramanauskas/EPA

REF. NO.: 017322

CC: Grant Trigger, RACER

Dave Favero/RACER

FROM: Thomas Kinney/MS/ds/18

DATE: January 29, 2013

RE: **Revised Scope of Work for Groundwater Monitoring
RACER PCC-Validation
Pontiac, Michigan**

INTRODUCTION

Conestoga-Rovers & Associates Inc. (CRA) has prepared this Scope of Work (SOW) for groundwater monitoring on behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust. The groundwater monitoring will be completed as required in Section VI-18e of the Administrative Order of Consent (AOC). The purpose of the groundwater monitoring is to confirm that any contaminated groundwater remains within the original area of contamination and results are consistent with historical results, the August 2012 Phase III Environmental Site Assessment (ESA), and the December 2012 Supplemental Phase III ESA.

SCOPE OF WORK FOR GROUNDWATER MONITORING

Based on results of the August 2012 Phase III ESA, December 2012 Supplemental Phase III ESA and previous investigations, the groundwater monitoring will consist of the following:

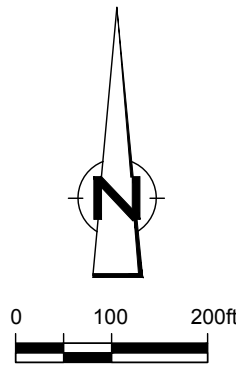
- A complete round of measuring water levels for new and historic monitoring wells
- 23 groundwater monitoring wells will be sampled for volatile organic compounds (VOCs)
- 20 groundwater monitoring wells will be sampled for semi-volatile organic compounds (SVOCs)
- 11 groundwater monitoring wells will be sampled for target analyte list (TAL) metals
- 1 groundwater monitoring well will be sampled for polychlorinated biphenyls (PCBs)

Groundwater sampling will follow methods and procedures (including sample handling, field documentation requirements, field and laboratory analytical methods and QA/QC procedures) outlined in the approved Sampling and Analysis Plan and Fundamental Quality Assurance Project Plan dated August 20, 2012. The monitoring well locations, rational and analytical parameters are identified in Table 1. Figure 1 provides a Site map with groundwater monitoring well locations to be sampled.

Based on verbal approval of this revised scope of work obtained from the US E.P.A. on January 28, 2013, the scope of work described above will be implemented. The groundwater monitoring is scheduled to be completed between January 30, 2013 and February 8, 2013.



No	Revision	Date	Initial



- LEGEND
- TP1-07 COMPLETED TEST PIT LOCATION
 - MW28-07 COMPLETED MONITORING WELL LOCATION
 - TMW71-08 COMPLETED TEMPORARY MONITORING WELL LOCATION
 - BH8-07 COMPLETED SOIL BORING LOCATION
 - HIGHLIGHTED WELLS TO BE SAMPLED
 - APPROXIMATE SITE BOUNDARY
 - EXISTING STRUCTURE
 - FORMER SITE STRUCTURE
 - M.H. MANHOLE
 - C.B. CATCH BASIN

DRAFT

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

SITE MAP
WITH SAMPLING LOCATIONS
PCC-VALIDATION
PONTIAC, MICHIGAN



CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: T.K.	Reviewed By: M.C.	Date: JANUARY 2013
Scale: 1:200	Project N°: 017322-T05	Report N°: MEMO018
		Drawing N°: 2

TABLE 1

SAMPLING AND ANALYSIS PLAN
PCC-VALIDATION PONTIAC, MICHIGAN

Location	Sampling Reason	Analytical Parameters
Off-Site wells MW80-12 and MW81-12, MW92S-13 and MW92I-13	Monitoring wells MW80-12 and MW81-12 were installed and sampled during the August 2012 Phase III ESA. Montioring wells MW92S-13 and MW92I-13 were installed on January 24, 2013 and will be sampled for the first time during this monitoring event. The four montioring wells will be sampled to delineate off-Site VOC impacts from MW2-07 and TMW2I-12 and metal impacts at MW80-12 and MW81-12.	VOCs and TAL Metals
On-Site wells MW2-07 and MW79-12	Monitoring well MW79-12 was installed and the two wells were sampled during the August 2012 Phase III ESA. They will be sampled based on VOC impacts in MW2-07.	VOCs
On-Site well MW37-07	The well was sampled during the August 2012 Phase III ESA. It will be sampled to confirm Phase III results.	SVOCs
On-Site well MW74-08	The well was sampled during the August 2012 Phase III ESA. It will be sampled based on historic VOC and SVOC impacts.	VOCs, SVOCs
On-Site wells MW82-12 and MW83-12	The wells were installed and sampled during the August 2012 Phase III ESA to assess storm sewers. The two wells will be sampled to confirm results.	VOCs, SVOCs, TAL Metals
On-Site wells MW85-12 and MW87-12, MW63-08, MW64-08 and MW68-08	MW85-12 and MW87-12 were installed during the August 2012 Phase III ESA. These two wells and MW63-08, MW64-08 and MW34-07 will be sampled to confirm delineation of potential dissolved LNAPL constituents in the groundwater.	VOCs, SVOCs, TAL Metals
On-Site well MW88-12	The well was installed and sampled during the December 2012 Supplemental Phase III ESA. It will be sampled to confirm PCBs and SVOCs results.	PCBs, SVOCs
On-Site well MW89-12	The well was installed and sampled during the December 2012 Supplemental Phase III ESA. The well will be sampled to confirm SVOC impacts are delineated to the south of MW88-12.	SVOCs
On-Site well MW90-12	The well was installed and sampled during the December 2012 Supplemental Phase III ESA. It will be sampled to confirm delineation of VOC and SVOC impacts in groundwater south of MW74-08 and east of MW88-12.	VOCs, SVOCs
On-Site well MW91-12	The well was installed and sampled during the December 2012 Supplemental Phase III ESA. It will be re-sampled to confirm delineation of VOC and SVOC impacts in groundwater east of MW74-08.	VOCs, SVOCs
On-Site wells MW10-07, MW 21-07, MW 33-07, MW38-07, MW48-07, MW78-08, MW04-07	Perimeter wells that have not been sampled since 2007/2008 and have only been sampled once.	VOCs, SVOCs

Notes:
See Figure 1 for monitoring well locations.
Quality Assurance/Quality Control samples will consist of one duplicate/ten samples/media and trip blanks (not included in number of samples).
Field parameters for groundwater to include turbidity, temperature, specific conductance, pH, D.O. and ORP
ESA - Environmental Site Assessment.
VOCs - Volitile organic compounds
SVOCs - Semi-volatile organic compounds.
TAL Metals - Target analyte list metals