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MEMORANDUM

TO:	Peter Ramanauskas/EPA	REF. NO.:	017322
CC:	Dave Favero/RACER		
FROM:	Thomas Kinney/MC/ds/28	DATE:	July 25, 2014
RE:	**Sampling and Analysis Plan** **PCC-Validation** **Pontiac, Michigan**		

1.0 Introduction

Conestoga-Rovers & Associates (CRA) is providing this memorandum on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust to identify the existing monitoring wells (MW) to be utilized for monitoring or abandoned at the PCC-Validation (Site) located in Pontiac, Michigan. This plan has been modified to include United States Environmental Protection Agency (U.S. EPA) comments on a previous November 21, 2013 plan. The decision to conduct the first round of annual monitoring at the Site was discussed and agreed to by the U.S. EPA, RACER and CRA during a meeting at CRA's office on July 11, 2014. The Scope of Work below includes the MWs and rationale for sampling.

2.0 Scope of Work

MWs to be Sampled/Sampling and Analysis Plan (SAP) -
Annual Sampling (to be completed Week of July 28, 2014)

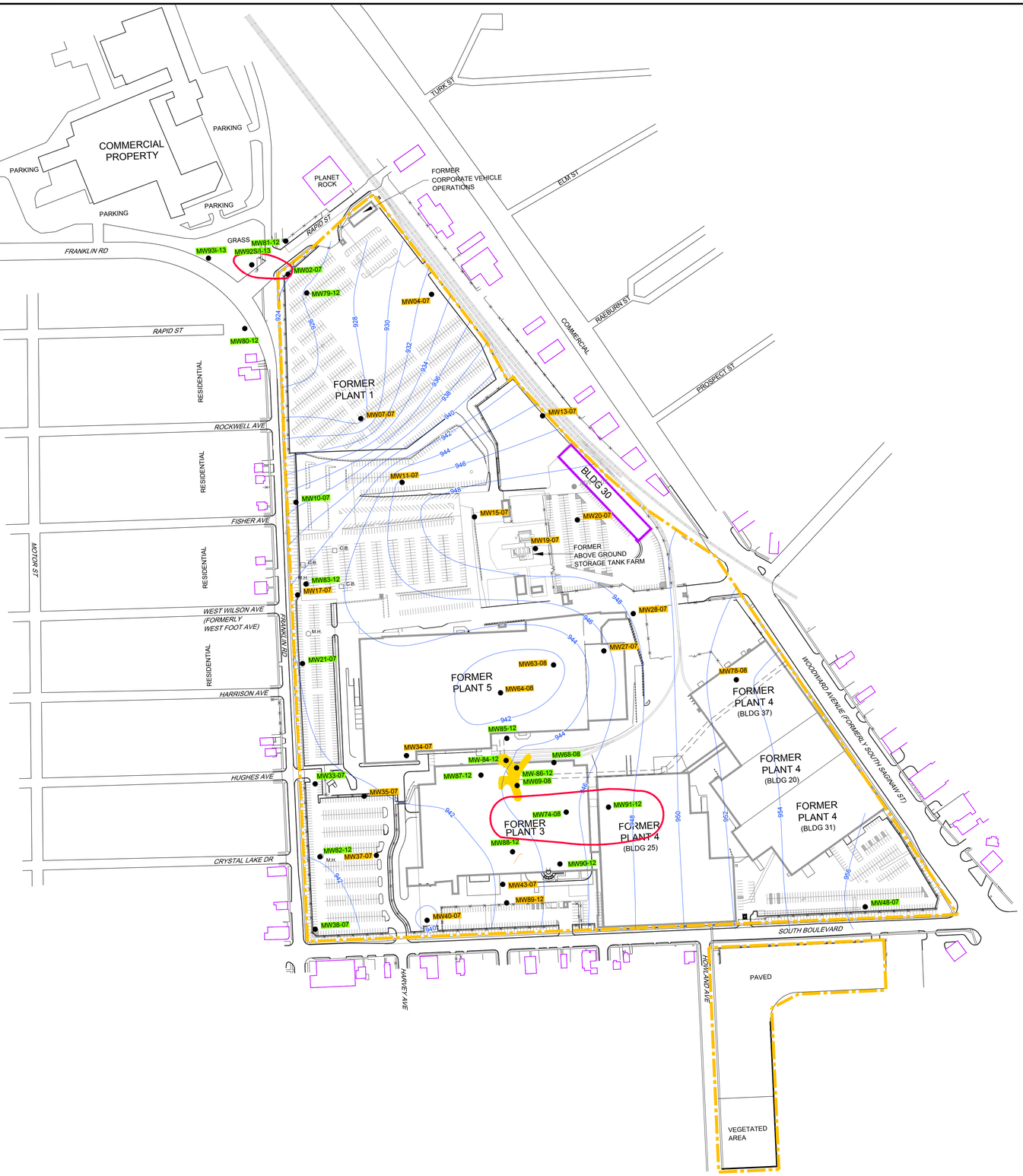
To continue monitoring the VOC/LNAPL areas, 24 MWs will be monitored following methods described in the approved SAP/QAPP. Several of the MWs are utilized for multiple reasons and are repeated in the bullets below. MWs to be retained for sampling and the parameters to be analyzed for each well are identified on Table 1 and monitoring well locations and whether the well be retained or abandoned are shown on Figure 1.

- MWs (MW2-07, MW79-12, MW80-12, MW81-12, MW92S/I-13 and MW93I-13) are located in the northwest corner of the Site or northwest of the Site. The MWs will be retained to confirm off-Site impacts of volatile organic compounds (VOCs) are stable and not migrating.
- MWs (MW74-08 and MW91-12) are located in the southern half of the Site and will be retained to monitor VOC concentrations within the southern VOC plume.
- MWs (MW33-07, MW38-07, MW48-07, MW68-08, MW82-12, MW87-12, MW88-12 and MW90-12) are located in the southern half of the Site and will be retained to document the southern VOC plume is stable and not migrating.

- MWs (MW10-07, MW21-07, MW33-07, MW38-07, MW82-12 and MW83-12) are located along the western property boundary of the Site and will be retained to document impacted groundwater is not migrating off Site via storm sewer corridors.
- MWs (MW69-08, MW84-12, and MW86-12) are located within the LNAPL area located in the northern portion of Former Plant 3. The MWs will be retained to monitor LNAPL levels.
- MWs (MW68-08, MW74-08, MW85-12, MW87-12 and MW88-12) are located around the LNAPL area located in the northern portion of Former Plant 3. The MWs will be retained to document the LNAPL is stable and not migrating. The wells are also being monitored to assess the southern VOC plume as described previously.

3.0 Proposed Schedule

Task:	***Approximate Timeline:***
Annual Groundwater Monitoring	Week of July 28th, 2014
Annual Groundwater Monitoring	July 2015



No	Revision	Date	Initial

N

0 100 200ft

LEGEND

- MW28-07 — COMPLETED MONITORING WELL LOCATION
- APPROXIMATE SITE BOUNDARY
- EXISTING STRUCTURE
- FORMER SITE STRUCTURE
- M.H. — MANHOLE
- C.B. — CATCH BASIN
- 945 — GROUNDWATER CONTOUR
- IDENTIFIES EXTENT OF ON-SITE AND OFF-SITE EXCEEDANCES
- PROPOSED MONITORING WELL LOCATION TO ABANDON
- PROPOSED MONITORING WELL LOCATION TO USE IN SAMPLING PLAN AND/OR LNAPL MONITORING

NOTE: GROUNDWATER CONTOURS REPRESENT UPPER WATER BEARING UNIT, BASED ON WELLS MEASURED OCTOBER, 2012

DRAFT

SCALE VERIFICATION

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

Approved

DRAWING STATUS

Status	Date	Initial

PROPOSED WELLS FOR MONITORING AND/OR ABANDONMENT

PCC-VALIDATION

PONTIAC, MICHIGAN

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:	
T.K.	M.C.	MAY 2014	
Scale: 1:200	Project No: 017322-T02	Report No: PRES010	Drawing No: 1

017322-T02(PRES010)GN-DE001 JUN 19/2014

TABLE 1

MONITORING WELLS TO BE SAMPLED
PCC VALIDATION CENTER
PONTIAC, MICHIGAN

Well ID	Date Installed	Screened Top (ft bgs)	Screened Bottom (ft bgs)	Sampling Parameters	Rationale for Continuing Use
MW2-07	10/12/2007	12	25	VOCs	Delineation well to confirm off-Site VOCs northwest of the Site are stable and not migrating.
MW10-07	10/15/2007	3.5	13.5	VOCs	Monitoring well will monitor the western property boundary.
MW21-07	12/4/2007	10.5	20.5	VOCs	Monitoring well will monitor the western property boundary.
MW33-07	12/4/2007	10.5	20.5	VOCs	Delineation well to confirm VOCs in the southern portion of the Site are stable and not migrating.
MW38-07	12/4/2007	9.5	14.5	VOCs	Delineation well to confirm VOCs in the southern portion of the Site are stable and not migrating.
MW48-07	10/9/2007	5	15	VOCs	Up-gradient VOC delineation Well.
MW68-08	3/12/2008	9	19	VOCs	Delineation well to confirm VOCs in the southern portion of the Site are stable and not migrating. Also, will confirm LNAPL in the southern portion of the Site is stable and not migrating.
MW69-08	3/13/2008	10	20	None if LNAPL present	Measure LNAPL thickness (if LNAPL present)
MW74-08	3/14/2008	8	16	VOCs	Delineation well to confirm VOCs in the southern portion of the Site are stable and not migrating. Also, will confirm LNAPL in the southern portion of the Site is stable and not migrating.
MW79-12	8/22/2012	25	30	VOCs	Up-gradient VOC delineation Well.
MW80-12	8/28/2012	7	12	VOCs	Delineation well to confirm off-Site VOCs northwest of the Site are stable and not migrating.
MW81-12	8/28/2012	14	19	VOCs	Delineation well to confirm off-Site VOCs northwest of the Site are stable and not migrating.
MW82-12	8/23/2012	2.5	7.5	VOCs	Delineation well to confirm VOCs in the southern portion of the Site are stable and not migrating. Also, will monitor the storm sewer and GSI at the property boundary.
MW83-12	8/23/2012	6	11	VOCs	Monitoring well will monitor the storm sewer and GSI at the property boundary.
MW84-12	8/28/2012	5	20	None if LNAPL present	Measure LNAPL thickness (if LNAPL present)
MW85-12	8/23/2012	5	10	VOCs	Delineation well to confirm VOCs in the southern portion of the Site are stable and not migrating. Also, will confirm LNAPL in the southern portion of the Site is stable and not migrating.
MW86-12	8/24/2012	8	18	None if LNAPL present	Measure LNAPL thickness (if LNAPL present)
MW87-12	8/23/2012	4	9	VOCs	Delineation well to confirm VOCs in the southern portion of the Site are stable and not migrating. Also, will confirm LNAPL in the southern portion of the Site is stable and not migrating.
MW88-12	8/20/2012	15.5	20.5	VOCs	Delineation well to confirm VOCs in the southern portion of the Site are stable and not migrating. Also, will confirm LNAPL in the southern portion of the Site is stable and not migrating.
MW90-12	12/3/2012	10	15	VOCs	Delineation well to confirm VOCs in the southern portion of the Site are stable and not migrating.
MW91-12	12/3/2012	16.5	21.5	VOCs	Confirm VOC concentrations in southern portion of the Site
MW92S-13	1/24/2013	4.8	9.8	VOCs	Delineation well to confirm off-Site VOCs northwest of the Site are stable and not migrating
MW92I-13	1/24/2013	12	17	VOCs	Delineation well to confirm off-Site VOCs northwest of the Site are stable and not migrating
MW93I-13	7/26/2013	12	17	VOCs	Delineation well to confirm off-Site VOCs northwest of the Site are stable and not migrating

Notes:
ft AMSL - Feet Above Mean Sea Level.
ft bgs - Feet below ground surface.
MW - Monitoring well.