
REMEDIAL INVESTIGATION WORK PLAN ADDENDUM OPERABLE UNITS 1 (SITE 110) AND 2 (SITE 109) TONAWANDA COKE SITE

1.0 Introduction

On behalf of Honeywell, Parsons has prepared this Work Plan Addendum to complete supplemental groundwater sampling as part of the Remedial Investigation (RI) for Operable Units (OUs) 1 and 2 of the Tonawanda Coke Site, also known as Sites 110 and 109, respectively. Both sites are a portion of the former Tonawanda Coke Corporation (TCC) facility. Sites 109 and 110 are located at 3875 River Road in Tonawanda, Erie County, New York.

RI activities for Sites 109, and 110 are ongoing and were primarily carried out October through December 2020 and June through July 2021. RI activities have included test pit excavations, soil borings, soil logging and analytical sampling, groundwater monitoring well installation, and one round of groundwater sampling. RI activities are being performed in accordance with the Remedial Investigation Work Plan (RIWP) and associated attachments, submitted to and approved by the New York State Department of Environmental Conservation (NYSDEC) in July 2020 (Parsons 2020).

Historical data, as well as data from samples collected thus far during the RI, indicate impacts to groundwater from volatile organic contaminants (VOCs) and semi-volatile organic contaminants (SVOCs) at Site 110. Following collection and analysis of all RI data, a Feasibility Study (FS) will be prepared to develop and evaluate remedial alternatives. Monitored Natural Attenuation (MNA) is one alternative that may be evaluated to address organic contaminant impacts to groundwater. This Work Plan Addendum describes additional groundwater sampling to be conducted at Site 110 to collect data on parameters that may indicate natural biodecay of organic contaminants, which may be used to evaluate the potential effectiveness of MNA in the FS. This work plan also details supplemental groundwater sampling that will be completed at Sites 109 and 110 to enhance the existing groundwater dataset.

2.0 Supplemental Groundwater Sampling Scope of Work

The supplemental groundwater sampling will be conducted in accordance with NYSDEC's "DER-10 - Technical Guidance for Site Investigation and Remediation" and the previously approved project guidance documents including the project Field Sampling Plan (Parsons 2020 Appendix A), Quality Assurance Project Plan (Parsons 2020 Appendix B), and Health and Safety Plan (Parsons 2020 Appendix C).

As detailed in an email from Parsons on behalf of Honeywell to NYSDEC dated April 27, 2021, completion of a second round of sampling from all Site 109 and Site 110 monitoring wells will be completed. Samples will be analyzed for VOCs, SVOCs, metals and cyanide. The sample from monitoring well MW-2 on site 109 will also be analyzed for PCBs. Groundwater samples were unfiltered during the initial sampling event. During this second

round of sampling, analysis for SVOCs, metals and cyanide will be completed on both filtered and unfiltered samples. VOC analysis will be completed on unfiltered samples only due to the potential for loss of VOCs during filtering. Samples will be collected using low-flow groundwater sampling techniques. In accordance with the FSAP procedures for low-flow groundwater sampling, water quality parameters will be monitored and recorded at approximately five-minute intervals until parameters are considered stable, at which point the groundwater sample will be collected. Groundwater quality parameters to be monitored include temperature, pH, conductivity, oxidation reduction potential (ORP), dissolved oxygen (DO), and turbidity.

All groundwater samples will be analyzed for TCL total VOCs, SVOCs, TAL metals, and cyanide. Additionally, samples from each well will be field filtered and analyzed for dissolved metals, SVOCs and cyanide to determine if suspended solids may be contributing to elevated concentrations observed in data from the initial round of groundwater samples. A summary of analyses to be performed for each sample is included in Table 1.

Samples from a subset of monitoring wells (MW-04-2020, MW-05-2020, MW-06-2020 and MW-08-2020) will also be analyzed for the following MNA parameters: total nitrogen, nitrate, ferrous iron, sulfate, sulfide, methane, total organic carbon, fraction of organic carbon, chloride, and alkalinity. A summary of MNA parameters and proposed laboratory methods is included in Table 2. Manganese, total iron, and dissolved iron data, which will be collected at all sample locations during the second round of groundwater sampling may also be used to evaluate MNA during the FS. Field readings of pH, ORP, and DO collected using a flow through cell to avoid equilibration with atmospheric conditions using properly calibrated field instrumentation will also be collected for potential use in evaluating MNA.

3.0 Investigation Derived Waste Management Plan

Liquid investigation derived waste (IDW) including monitoring well purge water and equipment decontamination water from sample locations on Riverview Innovation and Technology Campus (RITC) property will be containerized and discharged to the Town of Tonawanda POTW under RITC's Industrial Sewer Connection Permit No. 331 which allows for up to 2,000 gallons per day for equipment decontamination water from investigations on the property (NYSDEC 2017). Sample locations located on RITC property include all wells at Sites 108 and 109 as well as MW-04 through MW-07 at Site 110. The Town of Tonawanda pre-treatment coordinator will be contacted prior to discharge to the publically owned treatment works (POTW) to ensure that discharge of the investigation derived waste water is consistent with the Riverview Innovation & Technology Campus' permit with the Town.

MW-08-2020 and MW-14-2021 at Site 110 are not located on RITC property, therefore, IDW water from these locations will not be disposed of under RITC's permit. Water from these wells will be containerized in labeled Department of Transportation (DOT)-compliant 55-gallon open-topped steel drums and stored in the IDW Storage Location. Waste characterization samples will be collected and water will be disposed of in accordance with the applicable NYSDEC regulations.

Solid IDW, including disposable sampling equipment and PPE will be disposed of according to the procedures described in the previously approved Work Plans (Parsons 2020).

4.0 References

NYSDEC, 2010. *DER-10/Technical Guidance for Site Investigation and Remediation*. May 3.

NYSDEC, 2017. *State Pollutant Discharge Elimination System Permit (SPDES)*, Issued to Tonawanda Coke Corporation. Expires May 31, 2022, Issued June 1.

Parsons. 2020. *Final Work Plan, Focused Remedial Investigation and Feasibility Study for Operable Units 1 (Site 110) and 2 (Site 109), Tonawanda Coke Site*. July.

TABLES

TABLE 1 SUPPLEMENTAL GROUNDWATER INVESTIGATION SAMPLING PLAN

Sample ID	Media	TCL total VOCs	TCL total SVOCs	TCL Field Filtered SVOCs	TAL total Metals	TAL Field Filtered Metals	Total Cyanide	Field Filtered Cyanide	MNA Parameters ¹
Site 109									
MW-1-2020	Groundwater	X	X	X	X	X	X	X	
MW-2-2020	Groundwater	X	X	X	X	X	X	X	
MW-3-2020	Groundwater	X	X	X	X	X	X	X	
MW-17-89	Groundwater	X	X	X	X	X	X	X	
Site 110									
MW-4-2020	Groundwater	X	X	X	X	X	X	X	X
MW-5-2020	Groundwater	X	X	X	X	X	X	X	X
MW-6-2020	Groundwater	X	X	X	X	X	X	X	X
MW-7-2020	Groundwater	X	X	X	X	X	X	X	
MW-8-2020	Groundwater	X	X	X	X	X	X	X	X
MW-14-2020	Groundwater	X	X	X	X	X	X	X	

¹MNA Parameters to include: pH, ORP, DO, total nitrogen, nitrate, ferrous iron, sulfate, sulfide, methane, total organic carbon, fraction of organic carbon, chloride, and alkalinity.

TABLE 2 MNA PARAMATERS AND PROPOSED ANALYTICAL METHODS

Parameter	Analytical Method
Total Nitrogen	EPA Method 351.2 and 351.4
Nitrate	EPA Method 353.2
Ferrous Iron	EPA Method SM-3500-FE-B
Sulfate	EPA Method 300.0
Sulfide	EPA Method 9030B
Methane	EPA Method RSK-175
Total Organic Carbon	EPA Method 9060A
Fraction of Organic Carbon	EPA Method 9060A
Chloride	EPA Method 300.0
Alkalinity	EPA Method 310.2