

Intended for

General Electric Company

Document type

Work Plan

Date

March 2022

Route 203 Site

Nassau, New York

Index No. CERCLA-02-2020-2008

OFF-PROPERTY RESIDENTIAL SUPPLY WELL ACTIVITIES WORK PLAN

OFF-PROPERTY RESIDENTIAL SUPPLY WELL ACTIVITIES WORK PLAN ROUTE 203 SITE

Project name **Route 203 Site**
Project no. **1940073458**
Recipient **General Electric Company**
Document type **Work Plan**
Date **March 23, 2022**

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ABBREVIATIONS AND ACRONYMS

AHAs	Activity Hazard Analyses
Settlement Agreement	Administrative Settlement Agreement and Order on Consent, Index No. CERCLA-02-2019-2014
AES	Adirondack Environmental Services, Inc.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
Culligan	Culligan of Troy
EDD	electronic data deliverables
ELLE	Eurofins Lancaster Laboratories Environmental, LLC
FIR	Final Investigation Report
GE	General Electric Company
GAC	granulated activated carbon
HASP	Health and Safety Plan
Loeffel Companies	Loeffel's Waste Oil and Removal Service Company, Inc., and Marcar Oil, Inc.
LNAPL	light non-aqueous phase liquid
MS/MSD	matrix spike/matrix spike duplicate
µg/L	micrograms per liter
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM&M	operation, maintenance and monitoring
OSC	On-Scene Coordinator
PCBs	polychlorinated biphenyls
POET	point-of-entry treatment
PPE	personal protective equipment
QC	quality control
Ramboll	Ramboll Americas Engineering Solutions, Inc. (formerly known as O'Brien & Gere Engineers, Inc.)
RSWP	Removal Sampling Work Plan
RCRA	Resource Conservation and Recovery Act
SVOC	semi volatile organic chemical
SSHC	Site Safety and Health Coordinator
SOPs	Standard Operating Procedures
TCL	Target Compound List

TOC
TCE

total organic carbon
trichloroethene

UV
UFP-QAPP
USEPA

Ultraviolet
Uniform Federal Policy Quality Assurance Project Plan
United States Environmental Protection Agency

VOCs

volatile organic compounds

Weston
Work Plan

Weston Solutions, Inc.
Off-Property Residential Supply Well Activities Work Plan

1. INTRODUCTION

1.1 Background

This Off-Property Residential Supply Well Activities Work Plan (Work Plan) has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of the General Electric Company (GE or Respondent) to describe proposed activities associated with residential supply wells located south and east of the Route 203 Site. Once approved these activities will be performed in accordance with the Administrative Settlement Agreement and Order on Consent for a Removal Action (Index No. CERCLA-02-2020-2008) (Settlement Agreement) between the United States Environmental Protection Agency (USEPA) and Respondent. This Work Plan is consistent with the scope described in a "Paragraph 46.g Proposal" (Ramboll, 2022a) that was submitted to USEPA pursuant to the Settlement Agreement and was approved by USEPA on February 23, 2022.

The Route 203 Site consisting of the Loeffel Property and two adjacent properties (collectively the "Site") is located in the Town of Nassau, Rensselaer County, New York (see **Figures 1-1 and 1-2**).¹ The Loeffel Property (Property P001), located at 5225-5239 Route 203, has been owned by different generations of the Loeffel family since 1955. Beginning in the mid-1950s, Richard Loeffel and then his son Dewey Loeffel, used the property for the storage of trucks used for the collection and storage of waste oil and industrial wastes, associated with the Loeffels' various companies, including Loeffel Refining Products, Inc., Loeffel's Waste Oil and Removal Service Company, Inc. and Marcar Oil, Inc. (the "Loeffel Companies"). The other two properties that are part of the Site are the Residential Property (Property P021) and the National Grid Property (Property P026). Information on the investigation activities that have been performed at the Site, beginning in October 2018, and their findings are presented in the Final Investigation Report (Ramboll 2021a) that was submitted to USEPA and approved on August 11, 2021.

In December 2018 and March 2019, USEPA conducted supply well sampling of 26 wells on 24 properties including the Site and residences to the east, south and west (**Figure 1-3**). More recently, in October and December 2021, USEPA performed additional residential supply well sampling, which included re-sampling the 26 supply wells on 24 properties that were previously sampled as well as sampling 50 supply wells at 49 additional properties. Most of the additional supply wells that were sampled were located between the Valatie Kill and Route 203 farther south from the supply wells that were previously sampled (**Figure 1-3**). Details of these supply well sampling events are described in **Section 2**. Based on the analytical results obtained by USEPA, trichloroethene (TCE) was detected above its federal and state drinking water standard, both being 5 micrograms per liter (µg/L), at one property (Property P031) located approximately 1,700 feet south of the Loeffel Property. TCE was not detected in 61 supply wells on 59 properties sampled by USEPA but was detected below the federal and state drinking water standard at 13 residential properties; 12 of the 13 properties are located in

¹ The Site is listed on USEPA's Superfund Enterprise Management System (NYN000203244) but is not on or proposed for the federal National Priorities List (NPL).

the same general area as Property P031 (i.e., south of the Route 203 Property), the remaining residential property is located immediately east of the Loeffel Property.

Pursuant to the USEPA-approved Paragraph 46.g Proposal, this Work Plan describes activities that will be performed by GE in response to the detections of TCE in some of the residential supply wells located south of the Site and the detection of TCE in one residential supply well located immediately east of the Loeffel property. As in the approved Paragraph 46.g Proposal, these activities are hereafter referred to in this Work Plan as the “off-property activities”.

1.2 Project Scope and Objectives

This Work Plan outlines the off-property activities to be performed in the “Investigation Area” shown on **Figure 1-4**, which includes residential properties located south of the Loeffel Property and one residential property located immediately east of the Loeffel Property. As described in the USEPA-approved Paragraph 46.g Proposal, the off-property activities are contingent upon the property owners granting access and consist of the following:

- Temporary provision of bottled water to residential properties where TCE was detected by USEPA in supply wells
- Re-sampling with analysis for volatile organic compounds (VOCs) and design-related parameters at the residential supply wells sampled by USEPA in October or December 2021 where TCE was detected, and initial sampling at the two residential wells located along/near Route 203 south of the Loeffel Property where USEPA has not yet performed sampling
- Operation, maintenance and monitoring (OM&M) of the existing point-of-entry treatment (POET) system installed by USEPA in January 2022 at the one residential supply well where TCE was detected by USEPA above the federal and state drinking water standard (i.e., Property P031)
- Installation and subsequent OM&M of POET systems at each of the other residences in the Investigation Area with supply wells in which TCE was detected by USEPA at concentrations below the drinking water standard
- Six rounds of sampling and analysis for VOCs at the residential supply wells in the Investigation Area where POET systems have been installed to mitigate any potential exposure
- Six rounds of sampling and analysis for VOCs at the residential supply wells in the Investigation Area where TCE has not been detected²
- Compilation of available residential well information for use in evaluating the occurrence and distribution of TCE detections.

² If TCE is detected during one of the six rounds of VOC sampling at a residential supply well without a POET system, then a POET system will be installed at that residence and OM&M will subsequently be performed unless otherwise agreed to by USEPA and GE.

The scope of activities described in this Work Plan was based on the USEPA-approved Paragraph 46.g Proposal, which was developed based on information obtained by USEPA during its residential well sampling performed in October and December 2021. Pursuant to the USEPA-approved Paragraph 46.g Proposal, the off-property activities in this Work Plan are being performed to address the TCE detected in the residential supply wells in the vicinity of the Site. Although no action is required for those wells with TCE detections below the federal and state drinking water standard of 5 µg/L, GE will supply bottled water and install POET systems to mitigate any potential exposure. Additional residential supply well sampling and groundwater investigation activities³ will be performed to develop a better understanding of the occurrence and distribution of TCE to the south of the Loeffel Property.

³ Pursuant to the USEPA-approved Paragraph 46.g Proposal, a separate work plan for additional investigation activities at the Loeffel Property (i.e., Additional On-Property Groundwater Investigation Activities Work Plan) is being developed for USEPA review and approval under the Settlement Agreement.

2. SUMMARY OF SUPPLY WELL SAMPLING RESULTS

The initial investigations at the Site were completed by USEPA in October and December 2018 and March and May 2019. These investigations included soil, sediment and surface water samples collected at the Loeffel Property (P001), National Grid Property (P026) and Residential Property (P021) and groundwater samples collected from numerous private supply wells at residential properties (most located to the west of the Site) and on the Loeffel Property. The results of these initial investigations were summarized in the Removal Assessment Sampling Report (Weston Solutions Inc., 2019a) and the Final Removal Assessment Sampling Report, Properties P021 and P026 (Weston Solutions Inc., 2019b)

From May to November 2020, a removal investigation was conducted at the Site by GE in accordance with the USEPA-approved Removal Sampling Work Plan (RSWP, Ramboll, 2020a), Additional Removal Activities (Phase 2) (Ramboll, 2020b), Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP, Ramboll, 2020a), and Health and Safety Plan (HASP, Ramboll, 2020a). The results of the removal investigation are presented in the Final Investigation Report (FIR, Ramboll, 2021a), which was approved by USEPA on August 11, 2021. The removal investigation included re-sampling of the private supply well located in the southern portion of the Loeffel Property, which is used for commercial purposes.⁴ Similar to the results obtained by USEPA previously, TCE was detected in this supply well at a concentration below the federal and state drinking water standard.

The following sections summarize the results of the residential supply well samples collected by USEPA. The residential supply well locations referenced in the following sections are shown on **Figure 1-3**.

2.1 Summary of USEPA's Supply Well Sampling

2.1.1 December 2018 USEPA Sampling

On December 10, 2018, USEPA collected tap water samples (including a duplicate sample) from the two supply wells at the Loeffel Property. The southern well, which serves the commercial structures, is not used for potable purposes, and is reported to be 100 feet deep. The northern supply well serves the residence and the depth of this well is unknown. The tap water samples from the Loeffel Property were analyzed for Target Compound List (TCL) VOCs, semi-volatile organic compounds (SVOCs), pesticides/herbicides, and polychlorinated biphenyls (PCBs), and also for Resource Conservation and Recovery Act (RCRA) metals, nitrate and nitrite.

Methylene chloride (a common laboratory artifact) and TCE were the only VOCs detected in these tap water samples. TCE was detected in both samples (parent sample and duplicate) from the southern supply well at concentrations of 2.6 and 2.7 µg/L, below the federal and state drinking water standard. TCE was not detected in the sample from the northern supply well.

⁴ The supply well on the southern portion of the Loeffel Property is not used for potable purposes.

Aroclor 1260 was the only PCB detected in the samples from the southern supply well at the Loeffel Property. Aroclor 1260 was detected at estimated concentrations of 0.0426 and 0.0475 µg/L in these two samples, well below the federal and state drinking water standard of 0.5 µg/L for total PCBs. PCBs were not detected in the sample collected from the northern supply well on the Loeffel Property.

Arsenic, barium and chromium were detected in all three of the tap water samples collected from the two wells on the Loeffel Property. The concentrations of each metal were similar in the samples, suggesting the results may reflect background conditions, and all of the results were well below their respective federal and state drinking water standards. Lead was also detected in the sample from the northern supply well but was also well below the federal and state drinking water standard.

No SVOCs, pesticides or herbicides were detected in the three tap water samples collected by USEPA from the two wells on the Loeffel Property.

2.1.2 March 2019 USEPA Sampling

Between March 18 and 21, 2019 USEPA sampled 24 supply wells located on 23 residential properties to the east, south and west of the Loeffel Property. In addition, the two supply wells on the Loeffel Property were resampled. The samples were analyzed for TCL VOCs, TCL SVOCs and PCBs.

Methylene chloride (a common laboratory artifact), chloroform, and TCE were the only VOCs detected in the supply well samples collected in March 2019. TCE was detected in both the parent and duplicate samples from the southern well at the Loeffel Property at concentrations of 2.1 and 2.3 µg/L. TCE was also detected in the samples from residential supply wells at properties P022 and P023 at concentrations of 0.54 and 1.2 µg/L, respectively, well below the federal and state drinking water standard of 5 µg/L. The residential wells at properties P022 and P023 are located south of the Loeffel Property.

SVOCs and PCBs were not detected in the residential supply well samples collected by USEPA in March 2019.

2.1.3 October and December 2021 USEPA Sampling

In October and December 2021, USEPA conducted additional residential supply well sampling for VOCs. This sampling included the 26 supply wells that had been sampled in 2018 and 2019 as well as an additional 52 supply wells (see **Figures 1-3 and 1-4**). TCE was detected in the supply well samples from 14 residences, all located within the Investigation Area (see **Figure 1-4**). One of the TCE detections was in the supply well at the residence located immediately east of the Loeffel Property; the other TCE detections were in supply wells located south of the Loeffel Property. TCE was only detected above the federal and state drinking water standard in one residential supply well (located on Property P031); a TCE concentration of 9.5 µg/L was detected in this well.⁵

⁵ As discussed in Section 3.2. USEPA subsequently installed a POET system at this property.

3. RESIDENTIAL SUPPLY WELL ACTIVITIES

As discussed in this section, the additional activities to be conducted in the Investigation Area include:

- Provision of bottled water
- POET system design, installation and OM&M
- Additional residential well sampling
- Compilation of residential well information

A HASP was prepared for the removal investigation and is included as Appendix B of the approved RSWP (Ramboll, 2020a). Activity Hazard Analyses (AHAs) will be prepared prior to commencement of the activities described in this Work Plan for any tasks that are not already covered by the existing HASP, including, but not limited to, residential well sampling and POET maintenance. The AHA template is included in Appendix D of the existing HASP. AHAs will be reviewed by USEPA's On-Scene Coordinator (OSC), Ramboll Project Manager, and Site Safety and Health Coordinator (SSHC) prior to the start of work.

A UFP-QAPP was also prepared for the removal investigation and was included as Appendix A of the approved RSWP (Ramboll, 2020a). The residential well sampling activities performed under this Work Plan will be performed in accordance with the UFP-QAPP and the Standard Operating Procedures (SOPs) included in **Appendix A**, using the promulgated analytical methods and accredited laboratories specified in **Table 3-1**.

3.1 Provision of Bottled Water

At residences with detected concentrations of TCE in the associated supply well samples collected by USEPA, bottled water (i.e., 5-gallon dispensing unit and routine replenishment of full containers) will be provided as a temporary water supply, assuming approval is provided by the property owners (see **Table 3-1**). Bottled water will also be provided to any additional residences that are sampled (see **Section 3.3**) and have TCE detections. For each residence provided with a dispensing unit, the provision of bottled water (i.e., full containers for the dispensing unit) will continue until the installation and commissioning of a POET system at that residence and the receipt of the first OM&M sampling analytical data confirming the POET system is working as intended. Ramboll will subcontract Culligan of Troy (Culligan) to install the dispensing units and provide full containers on a regular schedule.

3.2 POET System Design, Installation and OM&M Activities

One residence (Property P031) currently has a POET system that was installed by USEPA in January 2022. TCE was detected above the federal and state drinking water standard in the supply well at this residence. OM&M of this POET system will transition from USEPA to GE (see **Table 3-1**).

GE will design, install and then maintain and monitor POET systems at the 13 residences with TCE detections at or below the federal and state drinking water standard as identified on **Table 3-1**. Supply well sampling will also continue at other residences with no detectable TCE concentration (see **Section 3.3** below), and if TCE is detected in any of these wells a POET system(s) may be designed and installed as discussed in **Sections 3.2.2, 3.2.3, and 3.2.4**.

3.2.1 Re-Sampling and Design-Related Sampling of Residential Supply Wells

With the exception of Property P031 (which already has a POET system), sampling will be performed at each of the residential supply wells in which there has been a previous detection of TCE to (a) augment the previous sampling results and (b) collect samples for laboratory analysis for pre-design purposes. The re-sampling for VOCs and concurrent pre-design sampling will be performed at the properties identified on **Table 3-1** in accordance with SOP-013 (Residential Supply Well Sampling) provided in **Appendix A**. Laboratory analyses will be performed per **Table 3-1** for VOCs to augment the prior results obtained by USEPA, and for total organic carbon (TOC), copper, iron, magnesium and total hardness to assist in the design of the POET systems. The samples will be sent to Eurofins Lancaster Laboratories Environmental, LLC (ELLE) for analysis under chain-of-custody procedures.

The sampling described in this section will be repeated if/when any additional residential supply well results show detectable TCE.

3.2.2 POET System Design

The design of the POET systems will be substantially based on the standard design used by the New York State Department of Environmental Conservation (NYSDEC) (**Attachment A**). In general, the POET systems will be installed between the pressure tank (if present) and the distribution piping. Each POET system is anticipated to consist of:

- Sediment filter
- Flow restrictor
- Flow meter
- Dual 12-inch-diameter by 54-inch-high granulated activated carbon (GAC) units (lead and lag units)
- Ultraviolet (UV) treatment unit
- Shutoff valves and sampling ports as required.⁶

The final design of each POET system will be dependent on the configuration of the existing plumbing at each residence and review of the VOC and pre-design sampling results.

⁶ Bypass valves will not be installed in order to prevent circumvention of the POET system.

3.2.3 POET System Installation

After completing the re-sampling for VOCs, the concurrent pre-design sampling, and the design for a given residence, the POET system will be installed. Ramboll will subcontract Culligan to perform the POET system installations. Culligan was used by USEPA to install the POET system at Property P031. It is assumed each installation will be completed in one day. The POET system installation will include the following tasks:

- Installation coordination with the resident(s)/owner(s)
- Mechanical and electrical installation of the new equipment
- Filling the new carbon vessels with virgin media
- Washing and activating the virgin media
- Documentation of pressure and leak testing of the newly installed equipment
- Photo-documentation of the new system
- System component labeling
- Review of the system operation with the resident(s)/owner(s).

3.2.4 POET System Operation, Maintenance and Monitoring

Following installation and commissioning of each POET system, OM&M will be performed by Ramboll for a minimum period of two years per **Table 3-1**. Ramboll will subcontract with Culligan to assist with the OM&M activities. OM&M of the POET systems will include carbon replacement as needed based on the monitoring results and manufacturer recommendations. The OM&M activities will include routine inspections during sampling events and also provide for on-call assistance.

3.2.4.1 POET System Sampling

After commissioning of the POET systems, a periodic sampling program will be implemented. As shown on **Table 3-1**, this sampling will include:

- Quarterly sampling for a period of one year (four events)
- Semi-annual sampling for a period of one additional year (two additional events)
- The frequency of POET system sampling will be evaluated after two years of monitoring and may be changed or eliminated depending on the VOC results.

The POET system monitoring will consist of the collection of samples for analysis of VOCs at the inlet (pre-carbon), mid-carbon (i.e., between lead and lag GAC vessels) and outlet (post-carbon) to document concentrations and monitor system performance. The outlet will also be sampled for analysis of total coliform. POET system sampling will be conducted in accordance with SOP-014 (Point-of-Entry Treatment System Sampling) provided in **Appendix A**. The POET system monitoring samples will be sent to ELLE for VOC analysis and to Adirondack Environmental Services, Inc. (AES)

for total coliform analysis under chain-of-custody procedures. Complete analytical data packages and electronic data deliverables (EDDs) will be obtained from ELLE for the VOC analyses, and standard analytical data packages will be obtained from AES for the total coliform analyses.

3.2.4.2 POET System Maintenance

During operation of the POET systems, the following routine maintenance will be performed as needed:

- Sediment filter replacement on regular intervals as recommended by the installer; if acceptable to the property owners, training will be provided and replacement filters will be kept at the residences for use by the property owners on an as-needed basis
- Carbon changes as required based on sampling results (i.e., when breakthrough of the lead vessel is observed based on the analytical data from the mid-carbon sampling location)
- UV bulb replacement as required or as recommended by the installer.

Any other required maintenance of the POET systems will be performed on an as-needed basis based on the results of the routine inspection events performed during POET system sampling. In addition, assistance and/or maintenance will be provided when needed based on property owner calls.

3.2.4.3 POET System Operation

In accordance with the USEPA-approved Paragraph 46.g Proposal, the POET system OM&M activities will be performed for a minimum period of two years. For any given supply well, if there are any TCE detections in the inlet equal to or above the federal and state drinking water standard of 5 µg/L, then OM&M of the POET system will continue beyond the minimum two-year period. For any such POET system, the minimum two-year OM&M period may be modified if agreed to by USEPA (in consultation with NYSDEC and the New York State Department of Health [NYSDOH]) and GE.

If, at the end of the two-year OM&M period, the TCE detections for the inlet remain below the federal and state drinking water standard, then OM&M of the POET system will be discontinued unless otherwise agreed to by USEPA (in consultation with NYSDEC and NYSDOH) and GE. If OM&M of any POET system is discontinued, the property owner(s) will have the opportunity to accept ownership of and continue operation of the POET system; alternatively, if desired by the property owner(s), the POET system will be removed by GE at no cost to the owner(s).

3.3 Additional Residential Well Sampling

Based on the analytical results for the residential supply well samples collected by USEPA in October and December 2021, additional residential well sampling will be performed in the Investigation Area (**Figure 1-4**) for supply wells that (a) have not yet been sampled and (b) have been sampled but with results showing no detectable TCE concentration. This sampling will be performed in conjunction with the re-sampling for VOCs and concurrent pre-design sampling of those supply wells that were sampled previously and had TCE detections.

The additional residential supply well sampling under this Work Plan will be performed per **Table 3-1** in accordance with SOP-013 (Residential Supply Well Sampling) provided in **Appendix A**. The additional supply well samples will be sent to ELLE for VOC analysis under chain-of-custody

procedures. Quality control (QC) samples will include blind duplicate samples, matrix spike/matrix spike duplicate (MS/MSD) sample pairs, and trip blanks. A trip blank sample will be included with each cooler containing VOC samples. The blind duplicate samples and MS/MSD sample pairs will be collected at a frequency of one for every 20 supply well samples. Complete analytical data packages and EDDs will be obtained from the laboratory, and, in conjunction with the QC samples, will allow for data validation in the future if warranted.

3.3.1 Initial Residential Supply Well Sampling

During the sampling efforts by USEPA in October and December 2021, two residential supply wells were not able to be sampled (Properties P039 and P054). Best efforts will continue to be made to obtain access from the property owners to collect residential supply well samples at these two residences for laboratory analysis of VOCs.

3.3.2 Periodic Residential Supply Well Sampling for Non-Detect Residences

After the initial residential supply well sampling at the two properties, (contingent on property owner access, per **Section 3.3.1**) and re-sampling of the residential supply wells at the 13 properties previously sampled by USEPA has been completed, a periodic sampling program will be implemented for these supply wells. This periodic sampling will be conducted in accordance with SOP-013 (Residential Supply Well Sampling) provided in **Appendix A**. As identified on **Table 3-1**, this routine sampling program will include:

- Quarterly sampling for a period of one year (four events)
- Semi-annual sampling for a period of one additional year (two events).

The residential supply well sampling will be discontinued for any residential supply well that has not had a TCE detection by the end of the two-year period (i.e., six additional sampling events beyond USEPA's initial sampling event and the re-sampling event). Any supply well that has a TCE detection at any time during the two-year period will move out of the periodic residential well monitoring program described in this section and will proceed to re-sampling for VOCs with concurrent pre-design sampling in accordance with **Section 3.2** above.

3.4 Compilation of Residential Well Information

During performance of the off-property activities described in this Work Plan, information will be collected and compiled on the residential supply wells. To the extent possible and applicable, this information will include total well depth, flow rate and/or daily flow volume, stratigraphic unit, and depth to bedrock. This information will be used to evaluate the occurrence and distribution of TCE detections in the residential supply wells during implementation of the anticipated Remedial Investigation under NYSDEC oversight for the Route 203 Site.

3.5 Management of Waste

Waste will be generated during performance of the various off-property activities described in this Work Plan and will be managed by Ramboll and/or Culligan as non-hazardous waste at a permitted facility. The different types of waste include the following:

- Construction-related debris from POET system installation
- Spent carbon from maintenance of the POET systems
- Personal protective equipment (PPE) (e.g., nitrile gloves) and other debris (e.g., paper towels) from sampling.

4. REPORTING

This section describes the various reporting that will be performed during implementation of this Work Plan.

4.1 Weekly Conference Calls

During the field activities, Respondent will schedule weekly conference calls with USEPA to provide updates on progress, upcoming tasks, and any potential issues to be resolved.

4.2 Monthly Progress Reports

Monthly Progress Reports will be prepared and submitted to USEPA by the 15th day of each month following the initiation of field work and will cease with the submittal of the POET Systems Completion Report to USEPA. The Monthly Progress Reports will include the elements specified in the Settlement Agreement.

4.3 POET Systems Completion Report

A POET Systems Completion Report will be submitted to USEPA, NYSDEC and NYSDOH within 90 days of the installation of the last POET system (for the 13 supply wells discussed in **Section 3.2.3**), or such longer time as specified or agreed to by USEPA. This report will provide a summary of the work completed under the Paragraph 46.g Proposal and this Work Plan pursuant to the Settlement Agreement and provide an as-built record of each POET system. A similar report will be prepared and submitted to USEPA if any additional POET system needs to be installed based on the results of additional supply well sampling.

4.4 POET Systems OM&M Summaries

POET System OM&M Summaries will be prepared after each monitoring event and submitted to USEPA, NYSDEC and NYSDOH within 30 days of receipt of the analytical results, or such longer time as specified or agreed to by USEPA. Each summary will include a figure showing the location and identification of the POET systems, summary tables that provide the analytical results for the inlet, mid-carbon and outlet samples, and, if applicable, the date(s) of carbon change-out, UV bulb replacement and system repairs. The sampling results will also be provided to the respective property owner(s).

4.5 Residential Well Sampling Summaries

Residential Well Sampling Summaries will be submitted to USEPA, NYSDEC, and NYSDOH within 30 days of receipt of analytical results for the residential well sampling events, or such longer time as specified or agreed to by USEPA. Each summary will include a figure showing the location and identification of the supply wells sampled during the monitoring event, and a summary table that provides the analytical results for the supply wells. The supply well sampling results will also be provided to the respective property owner(s).

5. PROJECT SCHEDULE

A schedule for implementing this Work Plan is provided as **Figure 5-1**. The schedule begins with submittal of this Work Plan to USEPA and progresses through submittal of the final Residential Well Sampling Summary associated with the last sampling event within the two-year monitoring period.⁷ The figure includes the implementation sequence of the various field tasks. The additional access needed to perform the residential supply well activities in the Investigation Area is assumed to be obtained within 20 days of USEPA's approval of the Work Plan.

⁷ Refer to Section 3.2.4 and Section 3.3.2 for details on residential well sampling events.

6. REFERENCES

Ramboll 2020a. Removal Sampling Work Plan, Loeffel Route 203 Property. Prepared for the General Electric Company, February 21, 2020.

Ramboll 2020b. Additional Removal Investigation Activities (Phase 2), Loeffel Route 203 Property. Prepared for the General Electric Company, September 28, 2020.

Ramboll 2021a. Final Investigation Report, Route 203 Site, Nassau, New York. Prepared for the General Electric Company, June 30, 2021; Revised August 10, 2021.

Ramboll 2022a. Paragraph 46.g Proposal for Additional Activities, Route 203 Site, Nassau, NY. Prepared for the General Electric Company, February 23, 2022.

Weston Solutions, Inc., 2019a. Removal Assessment Sampling Report, Route 203 Site, Nassau, Rensselaer County, New York. Prepared for USEPA, Region II Superfund and Emergency Management Division, Edison, New Jersey, May 23, 2019.

Weston Solutions, Inc., 2019b. Final Removal Assessment Sampling Report, Properties P021 and P026 Sampling Event, Route 203 Site, Nassau, Rensselaer County, New York. Prepared for USEPA, Region II Superfund and Emergency Management Division, Edison, New Jersey, August 6, 2019.

TABLES

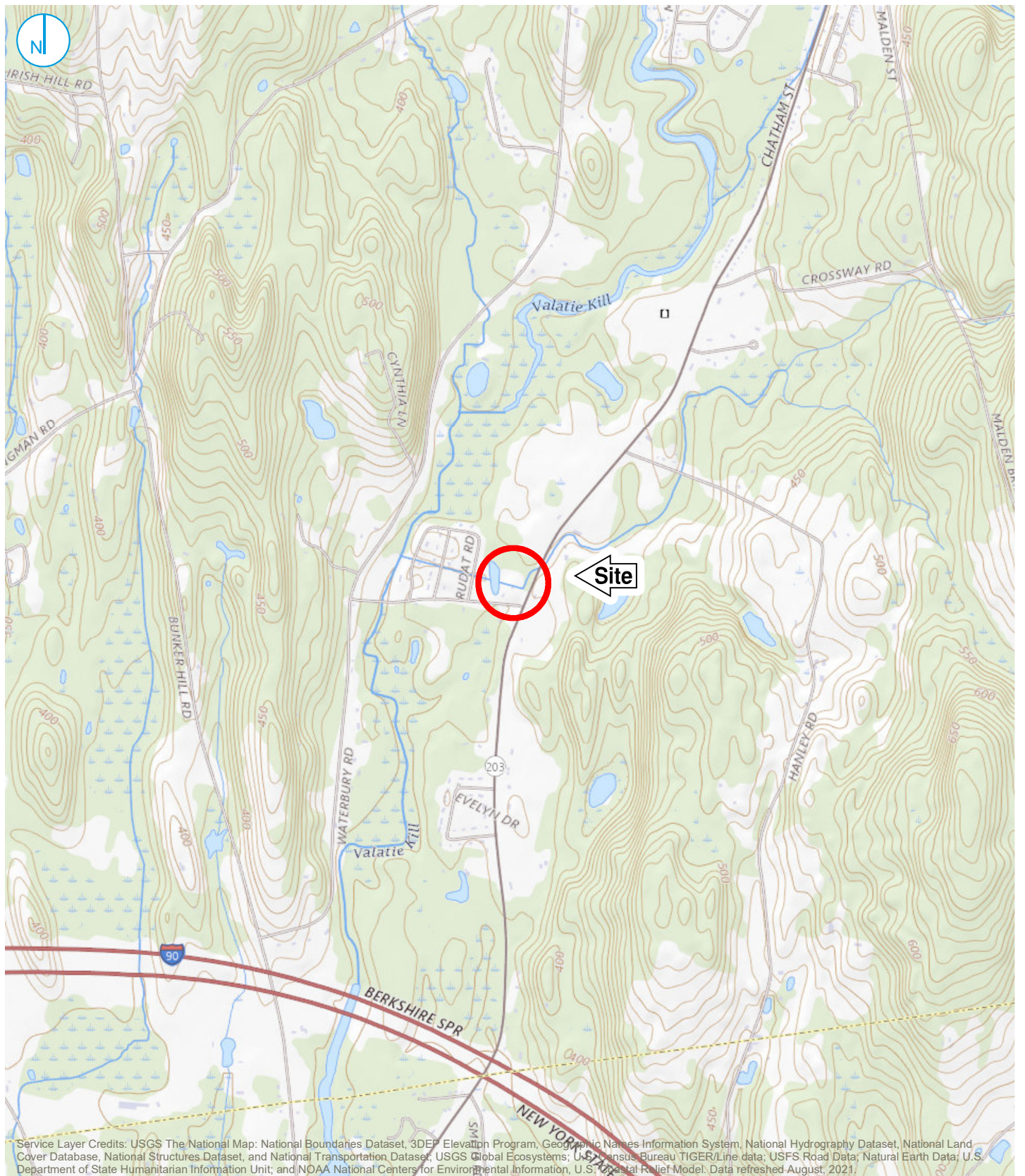
Table 3-1
Summary of Off-Property Activities Within the Investigation Area
Route 203 Site
Nassau, NY

Location ID	Sample Location	Provision of Bottled Water	Point-of-entry treatment (POET) System Installation	Volatile Organic Compounds	Total Organic Carbon Total Hardness	Copper Iron Magnesium	Total Coliform
Monthly for a one-year period							
P031		✓					
OM&M - Quarterly monitoring for a one-year period, followed by semi-annual monitoring for a one-year period							
P031	Inlet			✓			
	Between carbon			✓			
	Outlet			✓			✓
Monthly up to the installation and commissioning of a POET system at a property							
P022, P023, P025, P032, P040, P042, P043, P044, P046, P047, P048, P053, P057		✓					
Re-sampling event / POET system design-related sampling							
P022, P023, P025, P032, P040, P042, P043, P044, P046, P047, P048, P053, P057				✓	✓	✓	
POET system							
P022, P023, P025, P032, P040, P042, P043, P044, P046, P047, P048, P053, P057			✓				
OM&M - Quarterly monitoring for a one-year period, followed by semi-annual monitoring for a one-year period							
P022, P023, P025, P032, P040, P042, P043, P044, P046, P047, P048, P053, P057	Inlet			✓			
	Between carbon			✓			
	Outlet			✓			✓
Quarterly monitoring for a one-year period, followed by semi-annual monitoring for a one-year period*							
P021, P024-TW002, P027, P028, P029, P030-TW001, P030-TW002, P033, P034, P035, P036, P037, P038, P041, P045, P050, P051, P052, P055, P056, P074				✓			
Residential supply well not previously sampled*							
Initial sampling event							
P039, P054				✓			

Notes:

- A specified activity is based on the property owner(s) granting access.
- Sample Analysis Methods and Laboratories:
Volatile Organic Compounds via USEPA Method 524.2 analyzed by Eurofins Laboratories Lancaster Environmental, LLC (ELLE)
Total Organic Carbon via Standard Method 5310C analyzed by ELLE
Total Hardness via Standard Method 2340B analyzed by ELLE
Copper, Iron and Magnesium via USEPA Method 200.7 analyzed by ELLE
Total Coliform via standard method (SM) 9223B-04 Colilert® analyzed by Adirondack Environmental Services, Inc
- "USEPA" designates United States Environmental Protection Agency.
- "DWS" designates drinking water standard which is 5 micrograms per liter (ug/L) for TCE.
- "OM&M" designates operation, maintenance and monitoring.
- "TCE" designates trichloroethene.
- For clarity, well locations are specified using the associated property ID (e.g., P021); for a well on a property with more than one well, the location ID includes the suffix "-TW00X" (e.g., P024-TW002).
- "+" indicates that if TCE is detected during either a) the initial sampling event; or b) one of the six rounds of VOC sampling at a residential supply well without a POET system, then a POET system will be installed at that residence and OM&M will subsequently be performed unless otherwise agreed to by USEPA and GE.
- "*" indicates that residential wells not previously sampled will be allocated to a sampling program depending on results of the initial sampling.

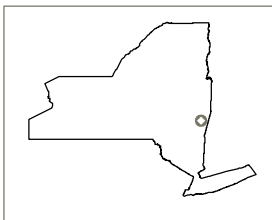
FIGURES



Map Scale: 1:30,000,000 | Map Center: 73°37'27"W 42°29'41"N

SITE LOCATION MAP

FIGURE 1-1



0 1,000 2,000 Feet

ROUTE 203 SITE
NASSAU, NEW YORK

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY





- LOEFFEL PROPERTY
- LOEFFEL PROPERTY SUPPLY WELL
- GROUNDWATER MONITORING WELL
- STAFF GAUGE
- CULVERT
- APPROXIMATE POND SHORELINE
- EPHEMERAL STREAM

0 62.5 125
Feet

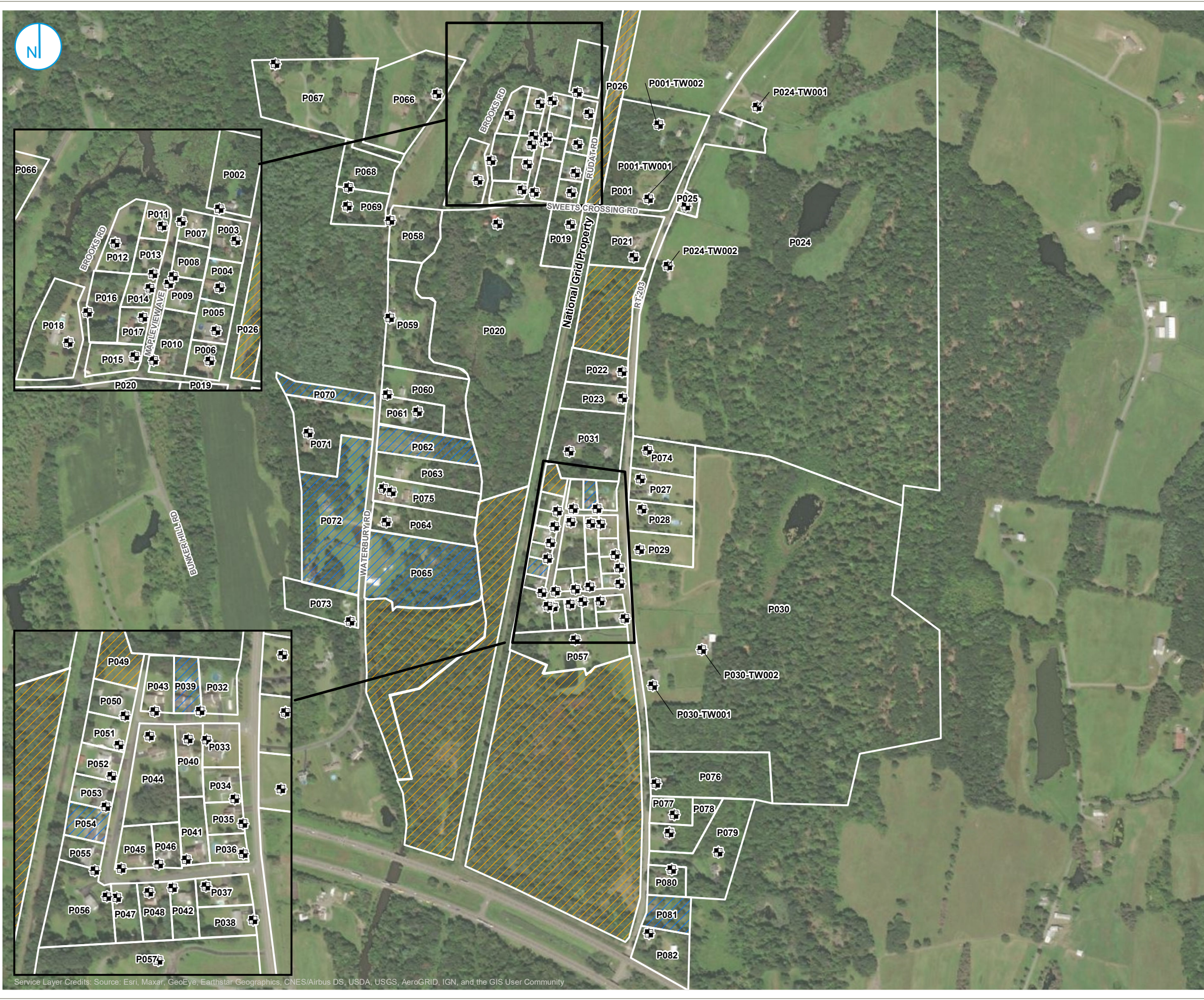
SITE MAP

ROUTE 203 SITE
NASSAU, NEW YORK

FIGURE 1-2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY





RESIDENTIAL SUPPLY WELL LOCATION

SAMPLING STATUS

NOT SAMPLED

VACANT PROPERTY

Notes:
Data and well locations obtained from USEPA.
Well locations are approximate.
Property borders shown in white and are approximate.

0 250 500
Feet

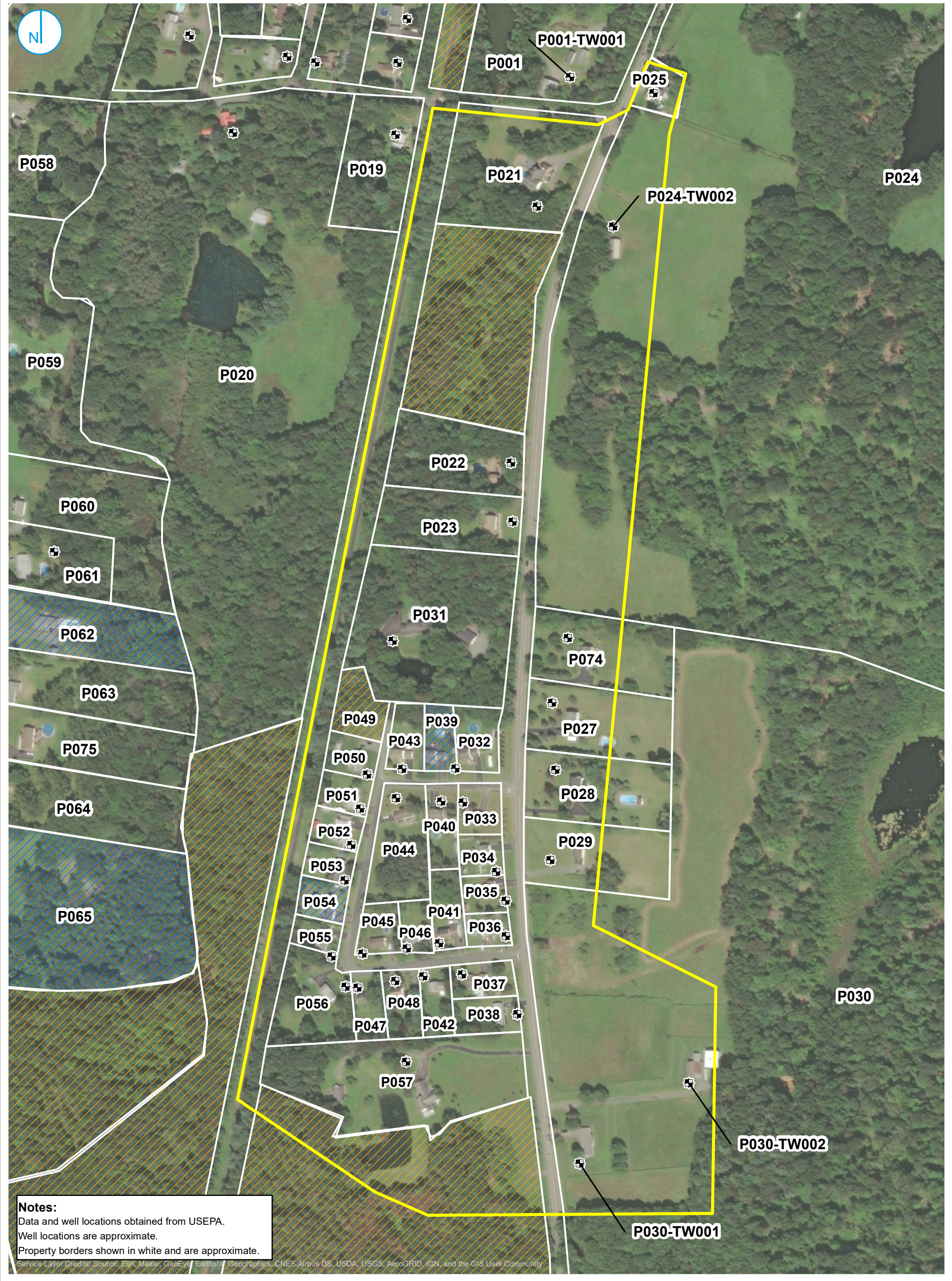
RESIDENTIAL SUPPLY WELL
LOCATION MAP

ROUTE 203 SITE
NASSAU, NEW YORK

FIGURE 1-3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY





INVESTIGATION AREA

RESIDENTIAL SUPPLY WELL LOCATION

SAMPLING STATUS

NOT SAMPLED

VACANT PROPERTY

RESIDENTIAL SUPPLY WELL
INVESTIGATION AREA

FIGURE 1-4

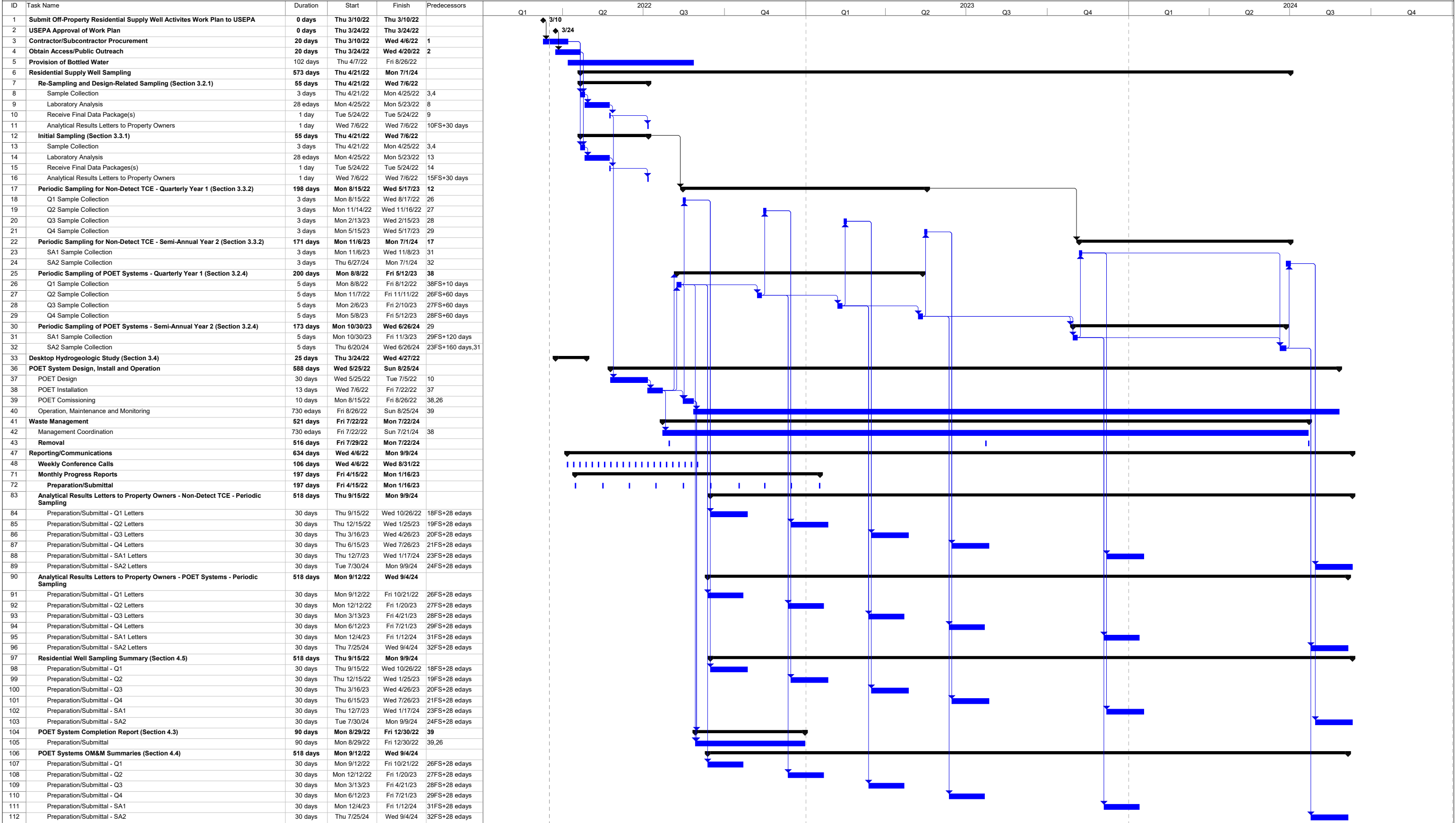


ROUTE 203 SITE
NASSAU, NEW YORK

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY



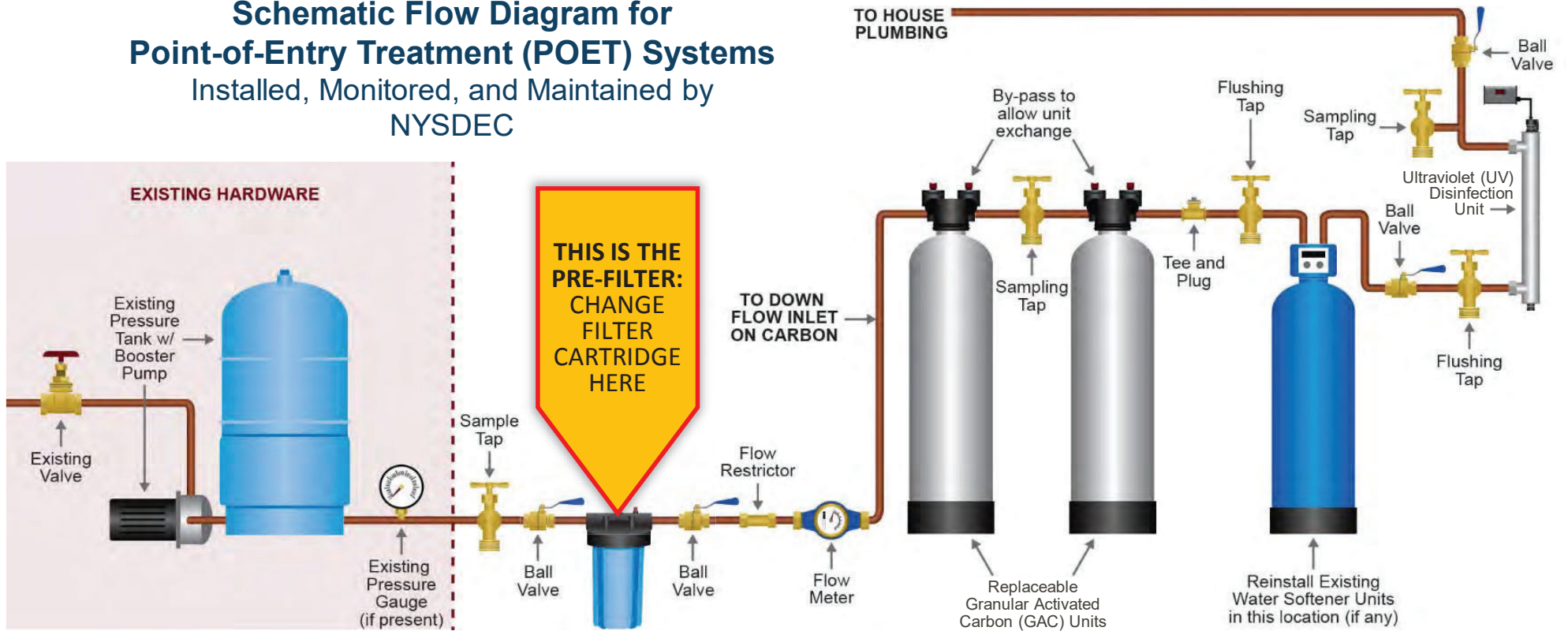
FIGURE 5-1
Off-Property Residential Supply Well Activities Work Plan Implementation Schedule
Route 203 Site
Nassau, Rensselaer County, New York



ATTACHMENT A
STANDARD NYSDEC POET SYSTEM CONFIGURATION

Schematic Flow Diagram for Point-of-Entry Treatment (POET) Systems

Installed, Monitored, and Maintained by
NYSDEC



APPENDIX A

STANDARD OPERATING PROCEDURES

STANDARD OPERATING PROCEDURE 013 RESIDENTIAL SUPPLY WELL SAMPLING

Project name **Loeffel Route 203 Property**
Project no. **1940073458**
Recipient **General Electric Company**
Document type **Final**
Version **1**
Date **March 10, 2022**
Prepared by **William Pierce**
Checked by **Jesse J. Vollick**
Approved by **Douglas M. Crawford**

CONTENTS

1. Scope and Application

This Standard Operating Procedure (SOP) provides guidance, material needs, and methodology for residential supply well sampling. Refer to the Off-Property Residential Supply Well Activities Work Plan, and the SOPs, Uniform Federal Policy (UFP) Quality Assurance Project Plan (QAPP), and Health and Safety Plan (HASP) included in the Removal Sampling Work Plan(RSWP), for sample preservation, chain-of-custody, sample handling, packing, shipping, or laboratory analysis, as appropriate.

2. Personnel Qualifications

Field sampling personnel involved with the collection of supply well samples will have completed a training course of at least 40 hours meeting the requirements of 29 CFR 1910.120(e) for health and safety at hazardous waste operations. If the course was completed more than 12 months before the date of the site work, completion of an approved 8-hr refresher course will be required. Field activities that involve the collection of supply well samples will be performed by a Ramboll Americas Engineering Solutions, Inc. (Ramboll) geologist, hydrogeologist, or field scientist. Field personnel will be familiar with this SOP and possess the required skills, training, field observation documentation and experience necessary to successfully complete field activities.

3. Materials

The following materials and supplies, as appropriate, are necessary for collection of supply well samples:

- Field log book;
- Field form(s);
- Field sampling personnel business cards;
- Client's community representative name and contact information (if applicable);
- Clean, non-slip disposable boot/shoe covers/booties;
- Supply well sampling database for the Site containing information from the prior sampling event(s);
- Indelible, blue or black ink pen;
- Chain-of-custody and security seal(s);
- Clean sample container(s) (with an extra set) including any preservatives, as required per the QAPP;
- Sample label(s);
- Sample cooler(s);
- Wet ice;
- Plastic bag(s) for ice and sample set(s);
- Paper towels;
- 5-gallon bucket(s);
- Garden hose (if applicable for outdoor taps)
- Nitrile gloves; and,
- Contractor bags.

4. Procedures

Prior planning and preparation tasks in advance of supply well sampling will include owner contact to arrange access and understand the sampling conditions.

If not already known based on the existing supply well sampling database for the Site, document the well configuration (i.e., depth, casings, construction date), pumping system (pump type, pump capacity, storage tank capacity), piping system (i.e., pipe type - copper, lead-joint construction), and presence of any treatment devices (softeners, filters, UV treatment, carbon treatment). A sketch or photograph(s) may be useful for this documentation. If well information is not available from resident/owner, drilling logs may be available from the drilling sub-contractor who installed the well, the New York State Department of Environmental Conservation (NYSDEC), New York State Department of Health (NYSDOH), or other appropriate agencies.

Document well proximity to site buildings and septic system using a field sketch and sampling notes, as necessary. The following procedures will be followed for collecting supply well samples:

1. Don required personal protective equipment (PPE) including clean nitrile gloves and a clean pair of non-slip disposable boot/shoe covers/booties over footwear immediately prior to entering the residence/house.
2. Whenever possible, the cold water tap closest to the well will be used for sampling. The tap should be upstream of any treatment system or storage/pressure tank. Often outdoor taps are not connected to the treatment or storage components. This should be verified with the owner prior to sample collection. Leaking taps that allow water to flow out from around the stem of the valve handle and down the outside of the lip are to be avoided as sampling locations. Aerator, strainer, and hose attachments on the tap must be removed before sampling.
3. Turn on the sampling location tap and allow the water to run for 10 minutes until the water temperature is cool to cold. If the tap drains to a sink, monitor the water level in the sink to prevent overflow. For outdoor taps, use a hose and/or bucket(s) to direct water away from the house and foundation.
4. Don a new pair of nitrile gloves and begin filling sample bottles for VOCs by USEPA SW-846 Method 524.2 with cool to cold supply well water. After filling the VOC sample bottles, fill any remaining sample containers.
5. After filling the sample containers, turn off the supply well water and wipe any excess water or moisture off the outside of the sample containers with clean paper towels. Re-secure any aerators, strainers, and hose attachments on the tap to the original condition prior to sample collection.
6. Complete sample labels per the QAPP and affix labels to the sample containers.
7. Ship the samples to the laboratory per project requirements following SOP 005 (Chain-of-Custody, Handling, Packing and Shipping).

8. Place any personal protective equipment (PPE) used for collecting the supply well samples in contractor bags and dispose of per the Off-Property Residential Supply Well Activities Work Plan and Waste Management section below.

5. Management of Waste

Waste generated during this sample collection task will be managed as non-hazardous waste at a permitted facility.

6. Quality Assurance

Specific details related to field quality assurance and quality control (QA/QC) samples are described in the QAPP. A brief overview of the collection of QA/QC samples is included here for reference.

6.1 Duplicate Samples

Duplicate samples are prepared by alternately filling the container for the "primary sample" for a particular parameter and then filling the container for the "duplicate sample" for that same parameter. Duplicate samples need to be included on the chain-of-custody.

6.2 Trip Blanks

Trip blanks are prepared in the laboratory and are shipped from the laboratory with the applicable sample collection containers for each project. The trip blank vials should be inspected for air bubbles upon receipt from the laboratory. The trip blanks are not opened in the field. A trip blank should be present in each shipping cooler containing samples to be analyzed for VOCs. Trip blanks need to be included on the chain-of-custody form.

6.3 Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicates (MS/MSDs) are collected in the same manner as a duplicate sample. MS/MSDs need to be included on the chain-of-custody form.

STANDARD OPERATING PROCEDURE 014 POINT-OF-ENTRY TREATMENT SYSTEM SAMPLING

Project name **Loeffel Route 203 Property**
Project no. **1940073458**
Recipient **General Electric Company**
Document type **Final**
Version **1**
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This Standard Operating Procedure (SOP) provides guidance, material needs, and methodology for point-of-entry treatment (POET) system sampling. Refer to the Off-Property Residential Supply Well Activities Work Plan, and the SOPs, Uniform Federal Policy (UFP) Quality Assurance Project Plan (QAPP), and Health and Safety Plan (HASP) included in the Removal Sampling Work Plan(RSWP), for sample preservation, chain-of-custody, sample handling, packing, shipping, or laboratory analysis, as appropriate.

2. Personnel Qualifications

Field sampling personnel involved with the collection of POET system samples will have completed a training course of at least 40 hours meeting the requirements of 29 CFR 1910.120(e) for health and safety at hazardous waste operations. If the course was completed more than 12 months before the date of the site work, completion of an approved 8-hr refresher course will be required. Field activities that involve the collection of supply well samples will be performed by a Ramboll Americas Engineering Solutions, Inc. (Ramboll) geologist, hydrogeologist, or field scientist. Field personnel will be familiar with this SOP and possess the required skills, training, field observation documentation and experience necessary to successfully complete field activities.

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- Client's community representative name and contact information (if applicable);
- Clean, non-slip disposable boot/shoe covers/booties;
- Supply well sampling database for the Site containing information from the prior sampling event(s);
- Indelible, blue or black ink pen;
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- Clean sample container(s) (with an extra set) including any preservatives, as required per the QAPP;
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- Sample cooler(s);
- Wet ice;
- Plastic bags for ice and sample set(s);
- Paper towels;
- 5-gallon bucket(s);
- Nitrile gloves; and,
- Contractor bags.

4. Procedures

Prior planning and preparation tasks in advance of supply well sampling will include owner contact to arrange access and understand the sampling conditions.

The following procedures will be followed for collecting POET system samples:

1. Don required personal protective equipment (PPE) including clean nitrile gloves and a clean pair of non-slip disposable boot/shoe covers/booties over footwear immediately prior to entering the residence/house.
2. Perform a visual inspection of the POET system and identify the three sampling port locations on each system: influent (raw, pre-carbon), intermediate (mid-carbon) and effluent (post-carbon and post-ultraviolet [UV] treatment unit). Check the water meter against the prior reading to confirm that the system has been in use and the water in the system is representative of the incoming well water.
3. Turn on a cold water tap with an associated drain located downstream of the POET system and allow the water to run for 10 minutes until the water temperature is cool to cold. Monitor the water level in the sink to prevent overflow. Turn off the cold water tap.
4. Place an empty bucket below the effluent sampling port to collect and contain any drips. Don a new pair of nitrile gloves, and turn on the sampling port and begin filling effluent sample bottles for VOCs by USEPA SW-846 Method 524.2 and coliform bacteria analysis with cool to cold supply well water.
5. After filling the sample containers, turn off the sampling port to cease the flow of supply well water and wipe any excess water or moisture off the outside of the sample containers with clean paper towels.
6. Complete sample labels per the QAPP and affix labels to the sample containers.
7. Repeat steps 4-6 for the intermediate sample followed by the influent sample for VOCs by USEPA SW-846 Method 524.2.
8. Ship the samples to the laboratory per project requirements following SOP 005 (Chain-of-Custody, Handling, Packing and Shipping).
9. Place any PPE used for collecting the supply well samples in contractor bags and dispose of per the Off-Property Residential Supply Well Activities Work Plan and Management of Waste section below.

5. Management of Waste

Waste generated during this sample collection task will be managed as non-hazardous waste at a permitted facility.

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Specific details related to field quality assurance and quality control (QA/QC) samples are described in the QAPP. A brief overview of the collection of QA/QC samples is included here for reference.

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APPENDIX B
CONFIDENTIAL INFORMATION

**APPENDIX REDACTED DUE TO CLAIM OF CONFIDENTIALITY –
CONFIDENTIAL – NOT SUBJECT TO PUBLIC DISCLOSURE**