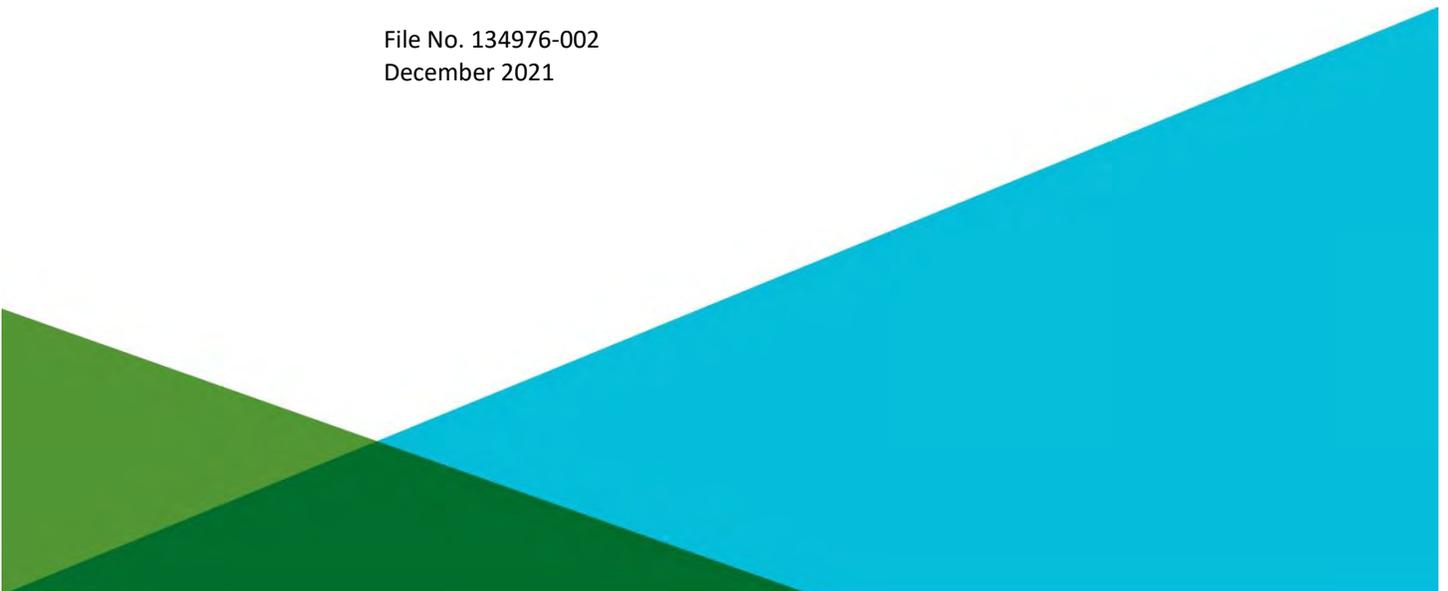


PERIODIC REVIEW REPORT FOR PERIOD ENDING 30 NOVEMBER 2021
TARRYTOWN FORMER MGP SITE
BROWNFIELD CLEANUP AGREEMENT NO. C3600064
TARRYTOWN, NEW YORK

by
Haley & Aldrich of New York
Rochester, New York

for
New York State Department of Environmental Conservation
Albany, New York

File No. 134976-002
December 2021





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21 December 2021
File No. 134976-002

New York State Department of Environmental Conservation
Division of Environmental Remediation
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Attention: Michael Squire
Project Manager

Subject: Tarrytown Former MGP Site
Periodic Review Report Period Ending 30 November 2021
Brownfield Cleanup Agreement No. C3600064

Ladies and Gentlemen:

On behalf of Ferry Landings, LLC, Haley & Aldrich has prepared this Site Management Periodic Review Report (PRR) for the period ending 30 November 2021. During the period for this PRR, the revised *Site Management Plan - Tarrytown Former MGP Site, Tarrytown, NY*, dated August 2010 and accepted by the NYSDEC on 26 August 2010, was in force.

Based on ongoing site monitoring data and inspections, the remedial action continues to perform and is effective.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK

Jonathan D. Babcock, P.E. (NY)
Senior Technical Specialist

Vincent Dick
Principal

Enclosures

C: NYSDEC; Attn: Amen Omorogbe
Ferry Landings, LLC, Attn: Carl Monheit
Con Edison: Attn: Yelena Skorobogatov

Executive Summary

This Site Management Periodic Review Report (PRR) for the period ending 30 November 2021 was prepared by Haley & Aldrich of New York on behalf of Ferry Landings, LLC. During the period covered by this PRR, the revised "Site Management Plan Tarrytown Former MGP Site, Tarrytown, NY," dated August 2010 and accepted by the NYSDEC on 26 August 2010 (the SMP), was in force.

This PRR provides a summary of the pre-remediation and post-remediation site conditions, and provides a synopsis of site activities conducted under the SMP during the reporting period, as follows:

- Based on site monitoring data and inspections performed during the reporting period, the remedial action remains functional and is effective as required by the SMP. Site monitoring and inspections should continue through the next PRR period per the SMP and the frequency for groundwater monitoring, underwater cap inspection, and DNAPL recovery events as recommended in the last period PRR, which was approved by NYSDEC on 7 January 2021.
- Engineering Controls and Institutional Controls for the site are in place and effective.

The current annual schedule for submitting the PRR itself is satisfactory. The next PRR required to be submitted to NYSDEC, covering the year between 1 December 2021 and 30 November 2022, will be submitted following closure of that period, and within the time frame required.

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1. Overview

This Periodic Review Summary Report (PRR) for the Tarrytown Former Manufactured Gas Plant (MGP) Site is for the period 1 December 2020 through 30 November 2021. The Periodic Review Report Form for this period is provided in Appendix A. This report provides:

- Summary of the site and nature of contamination prior to remedial actions;
- Summary of the remedial actions completed;
- Description of the ongoing operations, maintenance, and monitoring;
- Description of site activities during the reporting period;
- Statements regarding satisfactory compliance with the SMP and recommendations for continued future monitoring of site remedy elements; and,
- Comments about the information entered on the PRR form.

2. Introduction

This section presents a brief summary of site history, past and current conditions, remedial actions, and post-remediation operations, maintenance, and monitoring. For more detailed information, the following reports prepared by Haley & Aldrich of New York (Haley & Aldrich) and previously submitted to NYSDEC may be consulted:

- Final Engineering Report Tarrytown Former MGP Site, Tarrytown, NY, 2005.
- Final Engineering Report Addendum Tarrytown Former MGP Site, Tarrytown, NY, 2006.
- Site Management Plan Tarrytown Former MGP Site, Westchester County, NY, August 2010, by Haley & Aldrich of New York. Approved by NYSDEC 26 August 2010.
- Periodic Review Report Tarrytown Former MGP site, 31 August 2011.
- Periodic Review Report Tarrytown Former MGP site, 31 August 2014.
- Periodic Review Report Tarrytown Former MGP site, 31 August 2015.
- Periodic Review Report Tarrytown Former MGP site, 27 October 2016.
- Periodic Review Report Tarrytown Former MGP site, 27 November 2017.
- Periodic Review Report Tarrytown Former MGP site, 14 December 2018.
- Periodic Review Report Tarrytown Former MGP site, 15 January 2020¹.
- Periodic Review Report Tarrytown Former MGP site, 23 December 2020².

2.1 SUMMARY OF SITE, NATURE OF CONTAMINATION AND REMEDIAL ACTIONS

2.1.1 Site

A site locus showing the project location is provided as Figure 1 and site details (historic and current) are shown on plans provided in Figures 2 and 3. The site is located on the east side of the Hudson River north of the Governor Mario M. Cuomo (Tappan Zee) Bridge in the Village of Tarrytown, New York. The site is bound by Division and River Streets on the north, Railroad Avenue to the east, West Main Street on the south, and the Hudson River to the west. The site encompasses approximately 20 acres and was primarily used for industrial-commercial purposes prior to remediation. Remediation was performed between June 2004 and January 2005.

Prior to remediation, an asphalt plant was in the northwest portion of the site and a truck terminal and maintenance facility was located in the southeast portion of the site. The central portion of the site included a former manufactured gas plant (MGP), reportedly operated between 1873 and 1938. The MGP was last operated by the Westchester Lighting Company, which was succeeded in ownership by Con Edison.

¹ Note that this PRR report was for reporting period ending 30 November 2019 and the final PRR report was dated January 2020.

² Note that the PRR reporting periods have tracked the timeframes required by the NYSDEC in its tracking system and annual PRR reminder notice letters. Accordingly, each PRR may cover a different period of time from the prior PRR reporting period.

2.1.2 Nature of Contamination

This section presents a summary of the nature of contamination and objectives of the remedial actions performed for the contamination by area of interest, organized according to four areas of the site (Figure 2):

- Holder and Tar Well Area;
- Light Non-Aqueous Phase Liquid (LNAPL) Area;
- Northern Dense Non-Aqueous Phase Liquid (DNAPL) Area; and,
- Western DNAPL and Sediment Removal Area.

Remedial actions for these areas are described in Section 2.1.3.

2.1.2.1 Holder and Tar Well Area

During site investigations in 2003, some flowing MGP DNAPL was present in Holders A, B, and C, but not in Holder D. Soils in the “Tar Well Area”, located south of Holder A, contained zones with MGP DNAPL.

2.1.2.2 LNAPL Area

Measurements in 1998 and 1999 by Handex Group, Inc. identified a zone of free floating LNAPL (primarily diesel fuel) in an approximately triangular-shaped area defined by MW-2, MW-3, and MW-6. Additionally, residual contamination, due to historic LNAPL releases, was evident between the free-floating LNAPL and West Main Street. Investigations in 2003 confirmed previous data regarding residual contamination in that area. No petroleum-related contamination was observed in the top four feet of soil in this area.

2.1.2.3 Northern DNAPL Area

The Northern DNAPL Area is located in the north-central portion of the site, partially underneath an existing office building (former County Asphalt office) and was observed at the time to be about 500 ft long (east-west) and 200 ft wide (north-south). The primary affected media in this area was observed to be soil containing discrete zones of MGP DNAPL (apparently derived from coal tar), as observed during site investigation prior to remediation. The subject zones are located 12 to 15 ft bgs on the west side of the building and 9 to 13 ft bgs on the east side. The zone was observed during site investigations to be at the bottom of a layer of fill and exhibits limited penetration into the underlying natural soil.

2.1.2.4 Western DNAPL and Sediment Removal Area

Western DNAPL and Sediment Removal Area is located in the west-central portion of the site. The Western DNAPL Area was observed at the time to be about 240 feet long (east-west) by 40 ft wide (north-south). The primary affected media in this area was observed to be soil containing discrete zones of DNAPL (apparently derived from coal tar). These soils are located 22 to 26 feet bgs. The zone was observed during site investigations to be at the bottom of the fill and exhibits limited penetration into the underlying natural soil. DNAPL-contaminated river sediment was also identified prior to remediation west of the Western DNAPL Area within the adjacent portion of the Hudson River. Contamination extended about 160 ft along the existing sea wall, and outward into the river varying

distances, up to about 120 ft. DNAPL contamination in the form of blebs and heavy sheens was also identified in river borings. The depth of the observed DNAPL ranged from one foot up to 8 feet below the top of sediment.

2.1.3 Remedial Actions

The following is a summary of the Remedial Actions performed at the site.

2.1.3.1 Holder and Tar Well Area

The remediation consisted of removing the contents, walls and floor of three former MGP holders and excavation of contaminated soils adjacent to the holders, including an area believed to be associated with the former MGP tar wells. Contaminated soil and debris were taken off site to a permitted facility for disposal and the excavations were backfilled with a combination of on-site and imported fill meeting quality standards established for the project.

2.1.3.2 LNAPL Area

The remediation consisted of two parts, excavation of contaminated soil and installation of a recovery trench and skimmer system for residual floating petroleum product. Contaminated soil was taken off site to a permitted facility for disposal and the excavation was backfilled with a combination of on-site and imported fill meeting quality standards established for the project. The LNAPL recovery system was operated April 2005 through September 2007. The monitoring results through August 2007 supported a request to NYSDEC for approval to discontinue operation and to dismantle the system. In response, the NYSDEC agreed with the recommendation to discontinue operation of the LNAPL recovery system in its letter dated 10 September 2007. The system was subsequently dismantled.

2.1.3.3 Northern DNAPL Area

The remediation consisted of installing a 360-foot long sheet pile barrier extending from about 3 feet below the ground surface, downward through the fill soils into the native clayey soils to a depth of about 22 feet bgs. The barrier prevents westward migration of residual DNAPL contained in a two to three-foot-thick zone generally found at the bottom of fill (9 to 15 feet bgs). Underlying clay soils impede downward migration of the DNAPL. The Northern DNAPL recovery trench is 360-ft long, located adjacent to the sheet pile barrier, and contains six DNAPL recovery wells. An observation well is located near each end of the recovery trench.

During remediation, contaminated soil at the south end of the barrier was excavated and taken off site for disposal. The excavation was backfilled with a combination of on-site and imported fill meeting quality standards established for the project.

The recovery trench allows removal of DNAPL to the extent it accumulates on the east (upgradient) side of the barrier.

As reported in the 2017 PRR, in conjunction with the construction of the Lighthouse Building and Garage, two of the six recovery wells (RW-4N and RW-5N) were closed per an NYSDEC approval letter dated 17 May 2017. Since the system began operation in 2005, DNAPL had not been observed in either well.

In addition, the well head for RW-6N was modified by adding lateral riser piping connected to a new offset well head located outside the Lighthouse Building perimeter to facilitate future extraction operations.

2.1.3.4 Western DNAPL and Sediment Removal Area

The remediation consisted of installing a 160-foot long sheet pile barrier extending from the river bottom at the face of the relieving platform down to bedrock. The barrier prevents westward migration of residual DNAPL contained in a two to three-foot-thick zone generally found at the bottom of fill (22 to 26 feet bgs).

The Western DNAPL recovery trench is 60-ft long, about 26 to 28 feet deep, is situated about 65 feet inland (east) from the sheet pile barrier and contains two DNAPL recovery wells. An observation well is located near each end of the recovery trench.

The Sediment Removal Area included the area beneath the relieving platform (about 160 feet by 20 feet by 4 feet deep) and an area of the river bottom along the sheet pile barrier and extending into the river, with a maximum extent of about 120 ft. Sediment was removed to depths ranging from about 3 to 8 feet below the river bottom.

Containment of residual DNAPL was completed with the construction of a 4-foot thick, 20-foot wide underwater cap over the sediments found under the relieving platform. The underwater cap is located between the steel sheet pile barrier at the western side of the relieving platform and the timber retaining wall at the eastern side of the relieving platform.

2.1.3.5 Cover System

A clean soil cover was placed in areas that are not beneath structures, roads, paved walks, etc. The clean soil cover is a minimum two feet thick and was placed over a demarcation layer, consisting of an orange geotextile, or equivalent. The cover system was completed in December 2006. In its 9 January 2007 letter, NYSDEC said that it had performed a site inspection on 28 December 2006 and the letter stated, “the clean soil cover was installed as required in the approved Work Plan.” The cover system was disturbed between January 2010 and August 2014 for site development; cover was restored with the development by a new combination of cover elements (i.e., in places soil cover was replaced by new building and/or pavement and otherwise restored by replacement of the demarcation layer, soil cover and landscaping that meets cover thickness and material criteria). The cover system remained in place except for the minor cover disturbances for development activities between August 2014 and March 2016 and between April 2017 and July 2017. Those cover disturbances were restored as reported to NYSDEC in previous PRR Summary Reports.

During the current reporting period, the cover was not disturbed to the extent underlying soils were exposed – see Section 3 of this report for more information.

2.1.3.6 Sub-Slab Soil Vapor Intrusion Management Systems

Per the SMP, new buildings have been and will be constructed with passive sub-slab soil vapor intrusion management systems (VIMS) which are designed to be converted to active systems, if required by the NYSDEC or NYSDOH. Refer to Sections 6.3.4 and 6.3.5 for the summary of VIMS activities performed.

2.2 EFFECTIVENESS OF THE REMEDIAL PROGRAM

The remedial action, with the exception of periodically required replacement of site cover following construction activities, was completed in January 2005. Site cover placement was originally completed in October 2006. The 2005 Final Engineering Report and 2006 Final Engineering Report Addendum concluded that the remedial actions were performed in accordance with the Work Plans (and approved deviations). The Final Engineering Report was accepted by NYSDEC in its letter dated 25 May 2005 and the Final Engineering Report Addendum was accepted by NYSDEC in its letter dated 9 January 2007.

2.3 COMPLIANCE

The engineering controls are in place and effective.

2.4 RECOMMENDATIONS

The use of the SMP and Periodic Review Reports should continue. The SMP was revised during 2010; the August 2010 Revised SMP was accepted by the NYSDEC on 26 August 2010 and remains applicable to the site during the next reporting period. The next PRR reporting period will be 1 December 2021 through 30 November 2022.

3. Site Overview

3.1 SITE LOCATION AND SIGNIFICANT FEATURES

Refer to Section 2.1, above.

3.2 CHRONOLOGY, CLEANUP GOALS, AND MAIN FEATURES OF THE REMEDIAL PROGRAMS

For chronology of the remedial program, refer to Section 2.1, above. In terms of cleanup goals, as given in the August 2010 SMP, the criteria for soil to remain on site and be re-used (if excavated) below site cover are:

- Total benzene, toluene, ethylbenzene, and xylenes (BTEX) less than 10 ppm, and
- Total polycyclic aromatic hydrocarbons (PAH) less than 500 ppm.

Criteria for clean soil cover are presented in 6 NYCRR Part 375 Table 367-6.8(b) for Restricted Residential use.

The main features of the remedial program are provided in Section 2.1, above. The only change to the site remedy since the remedy was selected is the closure of the LNAPL recovery system. Refer to Section 2.1.3, above.

3.3 SITE ACTIVITIES DURING THE REPORTING PERIOD

During the reporting period:

- The DNAPL system was monitored and operated – see Section 6.3.2;
- Excess soils were transported and disposed off-site – see Section 6.3.6;
- Site cover impacted due to irrigation system water line break was repaired – see Section 5.3;
- Indoor air quality sampling was performed in the remainder of the completed buildings – see Section 6.3.4; and,
- Soil vapor sampling in the vicinity of the Northwest, Northeast, Southeast, and Southwest Carriage House and Townhouse 1, 3, and 4 was performed– see Section 6.3.5.

In September 2021, Haley & Aldrich observed the effects of a leaking irrigation system water line in the part of Pierson Park located on site. A small, eroded area of grass cover and soil, approximately five feet in diameter and no more than two and a half feet deep was observed at a location about 120 feet north of MW-20. The underlying demarcation layer was not exposed. The water line was repaired, and the site cover was restored thereafter. Haley & Aldrich inspected the cover during the 23 November 2021 annual site inspection and confirmed the site cover is in good condition. Photographs of the restored site cover area are presented in Appendix C.

4. Remedy Performance, Effectiveness, and Protectiveness

The remedy performance and effectiveness has been previously reported to NYSDEC in annual reports and Periodic Review Reports. The most recent prior PRR was for the Period Ending 30 November 2020. During the current reporting period, the remedy continued to perform effectively and be protective of human health and the environment. A synopsis of the remedy performance follows:

- The LNAPL system successfully removed practically-recoverable floating product. The system was dismantled, following NYSDEC approval on 10 September 2007.
- The DNAPL recovery systems continue to operate as intended. Thickness of DNAPL in the recovery wells continues to be monitored and recovery is ongoing. The thickness of DNAPL in recovery wells continued to decrease through the monitoring period, as described in Section 6.
- The underwater cap in the Hudson River was inspected in December 2019. The condition of the cap was satisfactory. Cap integrity has remained stable over the last ~15 years and three intervals of inspection.

Sub-slab Vapor Intrusion Management Systems (VIMS) are in place and functional, as reported in previous PRRs. The site VIMS may be summarized as follows:

- Lookout Building South – one VIMS with seven risers for the entire building.
- Lookout Building North – a separate VIMS for each of two ground floor residential units, and one VIMS with nine risers for the garage space occupying the rest of the ground floor.
- Carriage Houses South – a separate VIMS for each of 14 residential units.
- Carriage Houses North – a separate VIMS for each of 13 residential units.
- Clubhouse – one VIMS with four risers for the entire building.
- Lighthouse Building and Garage – a separate VIMS for each of 9 ground-level residential units and one VIMS with six risers for the area encompassed by the Garage and lobby of the Lighthouse Building.

Refer to Section 6 for a discussion of VIMS post-installation testing performed during this reporting period.

5. Institutional Controls/Engineering Controls Plan Compliance Report

5.1 INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS REQUIREMENTS AND COMPLIANCE

The ICs and ECs are listed and described in tabular format in Box 3 and Box 4 of the attached Institutional and Engineering Controls Certification Form (Appendix A).

5.2 INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS CERTIFICATION

Based on the data collected, the remedial actions are effective. Please refer to Section 6 for additional details.

5.3 COVER DISTURBANCE

NYSDEC will be notified of future construction which disturbs the site cover per the SMP.

6. Monitoring Plan Compliance Report

6.1 COMPONENTS OF THE MONITORING PLAN

Monitoring requirements under the SMP and NYSDEC-approved modifications include:

- Groundwater monitoring at intervals of every 3 years.
- Monitoring of DNAPL observation and recovery wells during DNAPL extraction events, currently at a frequency of 3 events a year.
- Inspection of the underwater cap at intervals of every 7 years.
- Annual site inspection.

The previous list incorporates modifications to the frequency for groundwater monitoring, underwater cap inspection, and DNAPL recovery events which were recommended in the PRR for the period ending 30 November 2020, which was approved by NYSDEC on 7 January 2021 (see Appendix B for pertinent correspondence).

6.2 SUMMARY OF MONITORING

Monitoring was performed per the SMP during the reporting period, as described below.

6.3 COMPARISON WITH REMEDIAL OBJECTIVES

6.3.1 Groundwater

Groundwater monitoring was performed in 2018 and 2020 in accordance with the previously implemented bi-annual schedule. The current frequency monitoring schedule would require the next round of groundwater monitoring to take place in 2023.

Results of the most recent groundwater monitoring are presented in the report: *Tarrytown Former MGP Site Post-Remediation Groundwater Monitoring 2020 Data Tarrytown, Site No. C360069 Brownfield Cleanup*, 15 December 2020. The report concluded that results over the period of monitoring were consistent with past monitoring, and the comparison of down-gradient versus up-gradient water quality also remained consistent, indicating the remedy continues to be effective. A summary of the report follows.

6.3.1.1 MW-29 (up-gradient)

Iron and manganese concentrations were greater than the comparison criteria; however, these concentrations were consistent with previous results. No volatile organic compound (VOC) or Polycyclic Aromatic Hydrocarbon (PAH) compounds were detected at concentrations greater than the comparison criteria.

6.3.1.2 MW-12 (up-gradient)

Iron concentration was greater than the comparison criteria; however, the concentration was consistent with previous results. Manganese was detected at a concentration less than the comparison criterion.

No VOC compounds were detected. Seven PAH compounds were detected at concentrations greater than the comparison criteria; these PAH concentrations were consistent with previous results.

6.3.1.3 *MW-20 (down-gradient)*

No VOC compounds were detected. Iron and manganese concentrations and six PAH compounds were detected greater than the comparison criteria; however, the concentration was consistent with previous results. Additionally, note that in comparison to upgradient well MW-12, these PAH compounds were also detected at the upgradient well. One PAH compound (Acenaphthene) was detected but at a concentration less than the comparison criteria.

6.3.1.4 *MW-21 (down-gradient)*

Iron and manganese were detected at concentrations greater than the comparison criterion; however, the concentrations are consistent with previous results. No VOC compounds were detected at concentrations greater than the comparison criteria. One PAH compound (Benz(a)anthracene) concentration was detected at a concentration greater than the comparison criteria; however, the PAH concentration was consistent with previous results. Three other PAH compounds were detected at a concentration less than the comparison criteria.

6.3.1.5 *MW-24 (down-gradient)*

Iron and manganese were detected at a concentration slightly greater than the comparison criteria; their concentrations are consistent with previous results. No VOCs compounds were detected at concentrations greater than the comparison criteria, which is consistent with previous results. Six PAH compounds were detected at concentrations greater than the comparison criteria, however, note that in comparison to upgradient well MW-12, these PAH compounds were also detected. The detections of the PAH compounds and the levels measured for Iron and Manganese appear to be greater than historically measured. This could be attributed to a higher turbidity in the sample than historically observed.

6.3.1.6 *COMPARISON OF UP-GRADIENT TO DOWN-GRADIENT WELLS*

In general, concentrations of parameters in the down-gradient wells were less than or equal to the up-gradient concentrations, specifically:

- BTEX compound concentrations were not detected in up-gradient nor down-gradient wells.
- Concentrations of detected PAH compounds in up-gradient wells were equivalent to down-gradient wells for all locations except MW-24 which is believed to have had greater turbidity than past sampling events.
- Iron and Manganese concentrations in up-gradient wells were greater than or equivalent to down gradient wells.

6.3.1.7 *GROUNDWATER DATA SUMMARY*

Based on the results, while there were some exceedances of groundwater standards and guidance values in the sample data, the consistency of results over the period of monitoring and consistency of

down-gradient versus up-gradient water quality indicate the remedy continues to be effective. There continues to be no groundwater use at the Site. Given the monitoring results to date, and without the potential exposure pathway of groundwater use, the remedy at the site remains protective of human health with respect to groundwater quality. Groundwater monitoring at this site has now accumulated a database spanning 14 years and results in both upgradient and downgradient wells have remained consistent over that period.

6.3.2 DNAPL

6.3.2.1 DNAPL System Operation

Vacuum Enhanced Fluid Recovery (VEFR) is used to remove DNAPL from wells in the Northern and Western DNAPL Recovery Systems. During DNAPL extraction, some water is also removed; however, based on visual observation, the majority of the volume removed is DNAPL. During the reporting period, a total of 886 gallons of DNAPL and water was extracted by Enviro Waste Oil Recovery, LLC and transported to their facility in Mahopac, New York. DNAPL monitoring and extraction forms and copies of the non-hazardous waste manifests are provided in Appendix D.

The following table presents the amounts (gallons) extracted per well and per event. DNAPL was not observed in the other DNAPL wells at the site. These results are consistent with past observations and extraction activities.

Area	Well ID	2/23/21	9/30/21	11/23/21
Western Wells	OW-1	39	99	49
	RW-1	46	58	49
	RW-2	38	67	71
Northern Wells	RW-3N	56	76	37
	RW-6N	66	65	69
TOTALS	Gallons	245	365	275

Figures showing DNAPL thickness and fluid recovery volume over time are provided in Appendix D. Least-squares linear regression was used to determine the trend lines for the DNAPL thickness over time. The trend lines show DNAPL thickness continues to decrease over time. Trend lines may not, on their own, predict future DNAPL thickness.

6.3.2.2 DNAPL DATA SUMMARY

System operation is summarized as follows:

- The thickness of DNAPL in wells RW-1 and RW-2 in the Western DNAPL System shows a consistent decreasing trend since system inception of operation (2005) to the present.
- The thickness of DNAPL in wells RW-3N and RW-6N in the Northern DNAPL System shows a consistent decreasing trend since system inception of operation (2005) to the present.
- Data continues to show that DNAPL is not migrating around the DNAPL barriers.

- The DNAPL systems are being operated in general accordance with the approved SMP, continue to be effective in containing DNAPL, and the systems remain protective of human health and the environment.

6.3.3 Underwater Cap

Past underwater cap inspections were in 2007, 2014, and 2019. The current frequency of monitoring is 7 years, which would require the next underwater cap inspection to take place in 2026.

Results of the most recent underwater cap inspection are presented in the *Periodic Review Report Tarrytown Former MGP site, 15 January 2020*. The report concluded the cap was found to be in satisfactory condition and performing its intended function and has done so over the 14 years represented by the three inspections to date.

6.3.4 Indoor Air Quality and Sub-slab Vapor Sampling

Sub-slab soil vapor (SS), and indoor air (IA) quality sampling and analysis was performed in February 2021 per the NYSDEC letter dated 22 July 2019. The results of the 2021 SS and IA sampling were previously reported to NYSDEC in Haley & Aldrich of New York, "Vapor Intrusion Management (VIMS), NYSDEC No. C360064, Tarrytown Former MGP, Tarrytown, NY," 8 April 2021 (presented in Appendix E).

Most of the required SS and IA sampling and analysis was performed in 2020, as reported in the *Periodic Review Report Tarrytown Former MGP site, 23 December 2020*. Due to accessibility issues in 2020, some of the required SS and IA sampling and analysis was postponed from 2020 to 2021, as approved by NYSDEC and documented in the 2020 PRR. The following buildings were assessed during the February 2021 sampling event:

- Townhouses 1, 3, and 4
- Carriage Houses (Northeast, Northwest, Southeast, and Southwest)

Based on the data resulting from the indoor air quality and sub-slab soil vapor sampling, the 8 April 2021 report concluded:

- Soil vapor sampling and analysis for compounds required by New York State Department of Health (NYSDOH) vapor intrusion guidance indicated most target compounds were not detected in the soil vapor samples. Where chemical concentrations for target compounds were detected, the resulting concentrations are uniformly less than the NYSDOH vapor intrusion comparison criteria that would require further action or monitoring. Therefore, based on NYSDOH criteria and guidance, no further monitoring or action is required.
- Indoor air quality analyses conducted concurrently with the sub-slab soil vapor sampling indicate indoor air has not been compromised by the compounds of concern for the site. A limited set of compounds were detected in indoor air with results above EPA national survey 75th-percentile data for indoor air quality. We concluded these detections are not present due to the site conditions and instead appear to be related to common commercial cleaner products, personal care products, or building materials/building finishes.

6.3.5 VIMS

Vapor Intrusion Management Systems (VIMS) have been installed for all newly constructed buildings on the site, as summarized in Section 4. With the completion of the SS and IAQ testing described previously, all post-installation testing required by the SMP for the VIMS on the site is complete and has been reported to NYSDEC and NYSDOH.

No new VIMS construction was performed during this reporting period.

6.3.6 Soil Management

On 9 March 2021, one load with approximately 15 cubic yards of stockpiled soil was removed from the Site. The excess soil was generated during a sewer manhole installation. Haley & Aldrich performed soil handling and disposal oversight and community air monitoring plan (CAMP) monitoring for dust and VOCs. The soil was accepted and disposed at City of Albany Landfill in accordance with applicable local and state regulations. The soil disposal records and results of community air monitoring are presented in Appendix F.

6.3.7 Site Inspection

Overall annual inspection was completed and documented (see Appendix C). As a result of the inspection and other site documentation reviewed and provided herein, we have determined that the Engineering Controls and Site Controls are in place and operating as intended. We recommend that site inspections continue on an annual basis.

6.4 MONITORING DEFICIENCIES

No deficiencies in the monitoring program were identified during the reporting period.

6.5 CONCLUSIONS AND RECOMMENDATIONS FOR CHANGES

Based on the data collected, the remedial actions are effective and site monitoring data of selected media (groundwater) and controls (DNAPL system, underwater cap) appear to be maintaining integrity over several years of accumulated data, therefore no changes in the monitoring program are recommended.

7. Operation and Maintenance Plan Compliance Report

With the closure of the LNAPL recovery system, there are no mechanical systems operated or maintained at the site. Recovery of DNAPL is performed using a vacuum truck.

8. Overall PRR Conclusions and Recommendations

8.1 COMPLIANCE WITH THE SMP

Site Engineering and Institutional controls are in place and effective, as described in this report. Site monitoring and construction activities have been performed in conformance with the SMP.

8.2 PERFORMANCE AND EFFECTIVENESS OF THE REMEDY

Based on site monitoring data and our annual inspection, the remedial action continues to perform and is effective as required by the SMP.

8.3 FUTURE PRR SUBMITTALS

The current annual schedule for submitting the PRR is satisfactory. The next PRR will cover the year between 1 December 2021 and 30 November 2022, assuming the same PRR ending date is maintained by NYSDEC.

9. Commentary for the Periodic Review Report Form

The PRR Form is contained in Appendix A to this report. The following commentary is organized according to the PRR Form.

9.1 BOX 1 SITE DETAILS

1. The site information is correct, however the Reporting Period should be December 1, 2020 to November 30, 2021. This reporting period adjustment was confirmed via email with NYSDEC (see correspondence in Appendix B).
2. Property ownership for the subject site did not change during the reporting period.
3. There was no change of use during the reporting period.

9.2 BOX 2

1. The site use (residential, commercial, and park) is consistent with restricted residential, commercial, and industrial uses.
2. All of the ICs and ECs are in place.

9.3 BOX 2A

1. The validity of the Qualitative Exposure Assessment remains uncompromised.
2. All assumptions in the Qualitative Exposure Assessment are valid.

9.4 BOX 3 DESCRIPTION OF INSTITUTIONAL CONTROLS

The Institutional Controls each of the seven parcels in Box 3 are all in place.

9.5 BOX 4 DESCRIPTION OF ENGINEERING CONTROLS.

A summary of the status of the Engineering Controls at the site is presented in this report and below. Note that for Parcel 1-P-20, the LNAPL Recovery System was dismantled with NYSDEC approval in 2007 (see Section 4 of this report).

9.6 ENGINEERING CONTROL – COVER SYSTEM

Site cover, as required by the SMP, is currently in place.

9.7 ENGINEERING CONTROL – VAPOR MITIGATION

This Engineering Control refers to the soil vapor intrusion management systems (VIMS) for buildings required in the SMP. All buildings constructed on this site under the SMP have VIMS installed.

9.8 ENGINEERING CONTROL – “LEACHATE COLLECTION”

For parcels 1-P-22, 1-P-23, and 1-P-24, “Leachate Collection” refers to the Northern DNAPL Recovery System. For parcel 1-P-21, “Leachate Collection” refers to the Western DNAPL Recovery System. Both of these systems are in place and functioning per the SMP.

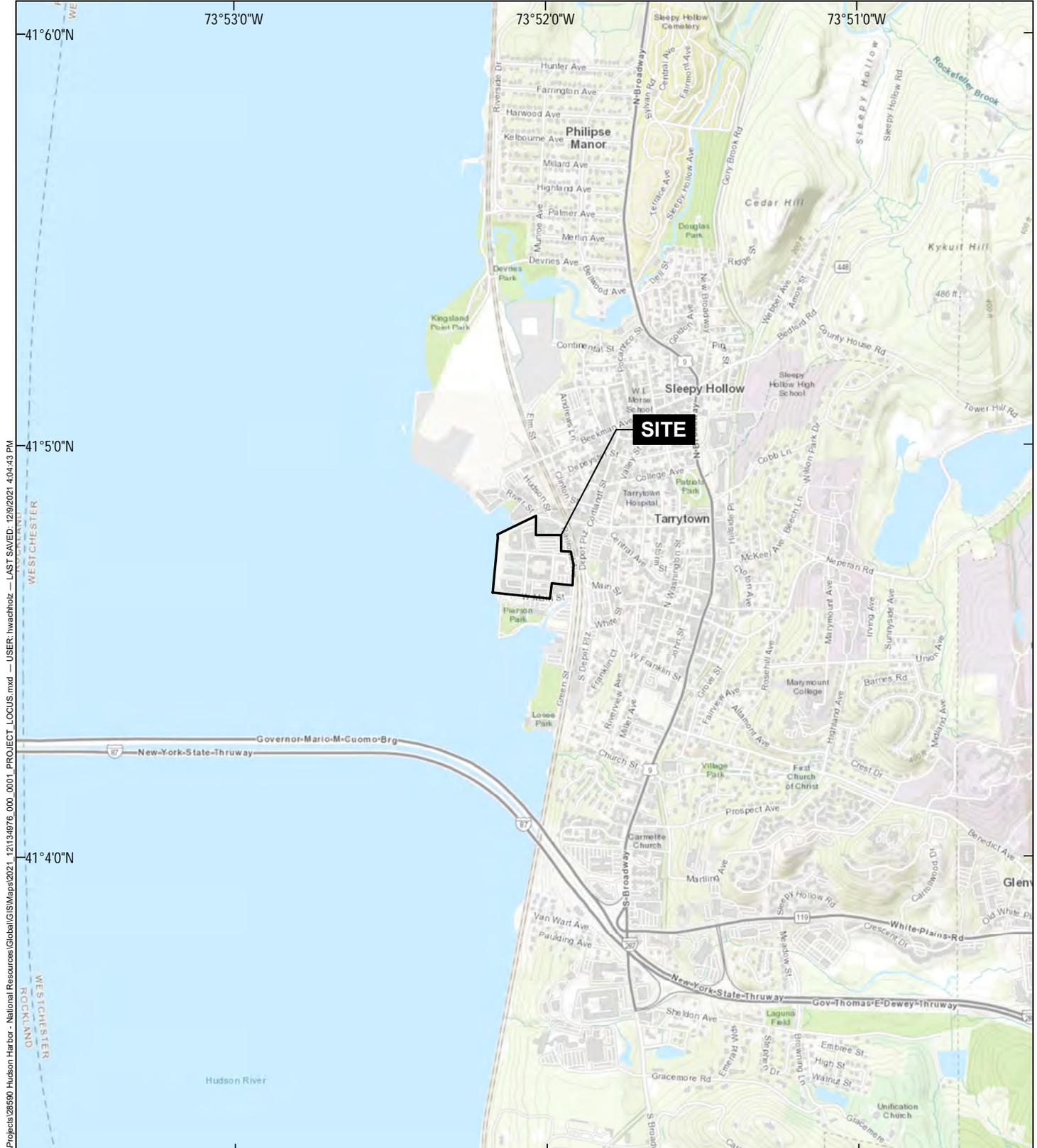
9.9 BOX 5 PERIODIC REVIEW REPORT (PRR) CERTIFICATION STATEMENTS

1. The response is “Yes.” Both statements are true.
2. The response is “Yes.” Statement ‘e’ does not apply; there is no financial assurance mechanism required.

9.10 BOXES 6 AND 7 IC/EC CERTIFICATIONS

Signatures are provided for the certifications.

FIGURES



GIS FILE PATH: \\haleyaldrich.com\share\loc_common\Projects\265590_Hudson_Harbor - National Resources\Globe\GIS\Maps\2021_12134976_000_0001_PROJECT_LOCUS.mxd — USER: hwachholz — LAST SAVED: 12/29/2021 4:04:43 PM



MAP SOURCE: ESRI
 SITE COORDINATES: 73°52'2"N, 41°4'42"W

**HALEY
ALDRICH**

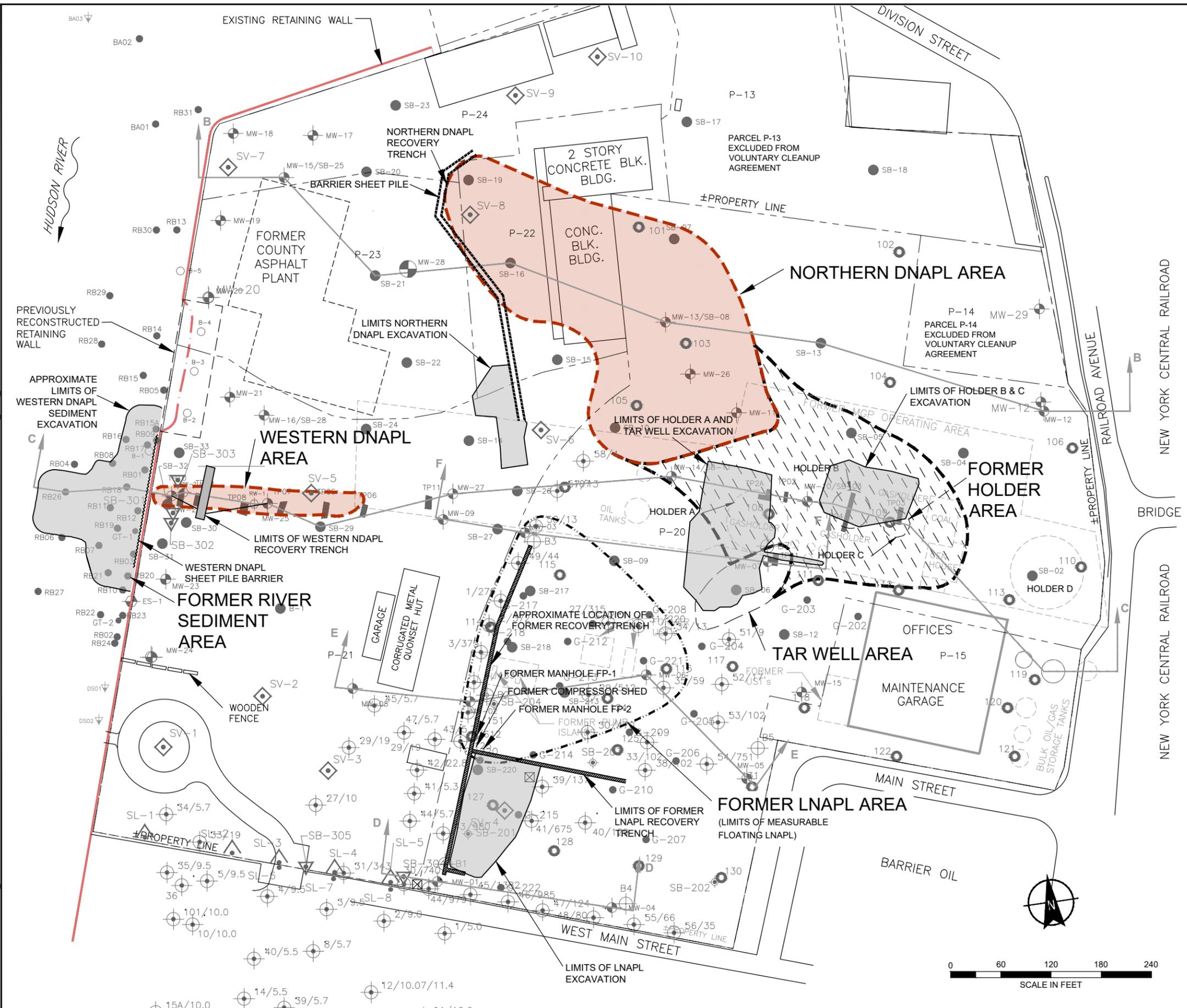
TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
 DECEMBER 2021

FIGURE 1

HENSEN, KRISTIN
 \HALEY\ALDRICH\HAREIROC_COMMON\PROJECTS\28590 HUDSON HARBOR - NATIONAL RESOURCES\GLOBAL\CADD\DRAWINGS\28590-250-0005 SITE PLAN 2016.DWG
 Layout: 12/9/2021 11:30 AM
 Printed: 12/9/2021 11:30 AM



LEGEND

- MW-28 MONITORING WELL
- SV-1 SOIL VAPOR PROBE
- SB-301 BORING TO CHECK DNAPL LIMITS - 28'
- SL-4 SLAM BAR SOIL VAPOR SAMPLE LOCATION
- MW-01 MONITORING WELL LOCATIONS
- SB-01 SOIL BORING LOCATIONS
- RB06 RIVER BORING LOCATION
- GT-2 GEOTECHNICAL BORING LOCATION
- ES-1 RIVER MEASURING POINT
- TP03 TEST PIT LOCATIONS
- G-207 GEOPROBE BORINGS CONDUCTED BY RETEC IN OCTOBER 1996
- SB-202 SOIL BORINGS CONDUCTED BY RETEC IN OCTOBER 1996
- B-2 GEOTECHNICAL BORINGS CONDUCTED BY COUNTY ASPHALT IN MARCH 1998
- FORMER STRUCTURES
- BUILDINGS
- LNAPL AREA - LIMITS OF MEASURABLE FLOATING LNAPL
- LIMITS OF EXCAVATION
- AREAS CONTAINING ZONES OF RESIDUAL MGP DNAPL
- LENSES SATURATED WITH MGP DNAPL
- RETAINING WALL
- APPROX. LOCATIONS OF SOIL GAS SAMPLES PERFORMED BY METCALF & EDDY, DATED DECEMBER 1990. 58/4=SAMPLE#/PID RESULTS IN PPM.
- APPROX. LOCATIONS OF SOIL SAMPLE BORINGS PERFORMED BY METCALF & EDDY, DATED DECEMBER 1990. B5=PROBE NO.
- APPROX. LOCATIONS OF SOIL PROBES PERFORMED BY METCALF & EDDY, DATED DECEMBER 1994. 120=PROBE NO.

NOTES

BASE PLAN ILLUSTRATING EXISTING SITE STRUCTURES, FEATURES, EXISTING EXPLORATIONS AND EXTENT OF IMPACTED AREAS DERIVED FROM PARSONS ENGINEERING SCIENCE, INC., FIGURE 3-1, ENTITLED "TOTAL BTX CONCENTRATIONS IN SOIL SAMPLES, SUPPLEMENTAL INVESTIGATION TARRYTOWN SITE," DATED 28 SEPTEMBER 2000.

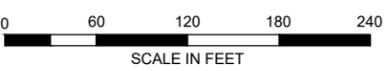


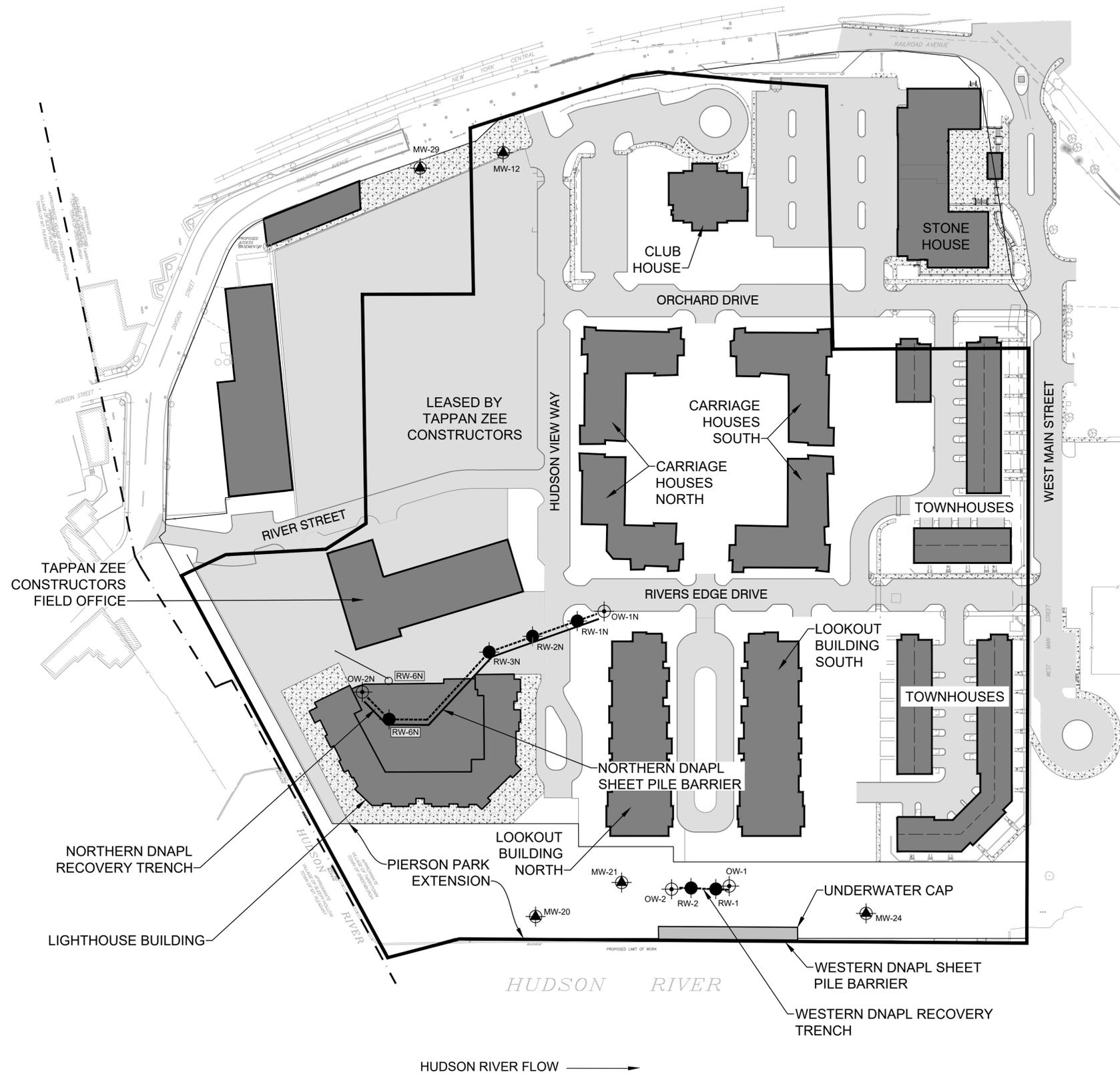
TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

SITE PLAN - REMEDIAL WORK AND HISTORIC EXTENT OF RESIDUAL CONTAMINATION

SCALE: AS SHOWN
 DECEMBER 2021

FIGURE 2





LEGEND

-  GROUNDWATER MONITORING WELL
-  DNAPL RECOVERY WELL
-  DNAPL OBSERVATION WELL
-  APPROXIMATE AREA ENCOMPASSED BY THE BROWNFIELD CLEAN-UP AGREEMENT #C360064
-  LANDSCAPED AREAS (THESE AREAS CONTAIN DEMARCATION LAYER BELOW CLEAN FILL AND LANDSCAPING)
-  PAVED WALKS, PATIOS, OR COURTYARDS
-  EXISTING BUILDINGS
-  ROADS AND PARKING AREAS

NOTES

1. BASE MAP IS BASED ON CAD DRAWING ENTITLED "PH1_10399-08_PHASE.DWG," DATED 1 JULY 2009 FROM CHAZEN COMPANIES OF GLENN FALLS, NEW YORK AND "PARKING ALLOCATION DIAGRAM," DATED 7 MARCH 2013 FROM LESSARD GROUP, INC., VIENNA, VIRGINIA.



TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

SITE COVER PLAN

SCALE: AS SHOWN
 DECEMBER 2021

FIGURE 3

APPENDIX A

Periodic Review Report Form



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



	Site Details	Box 1	
Site No.	C360064		
Site Name CE - Tarrytown MGP			
Site Address: 129 West Main Street		Zip Code: 10591	
City/Town: Tarrytown			
County: Westchester			
Site Acreage: 20.000			
Reporting Period: December 23, 2020 to December 31, 2021 <i>December 1, 2020 to November 30, 2021</i>			
		YES	NO
1. Is the information above correct?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
If NO, include handwritten above or on a separate sheet.			
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.			
5. Is the site currently undergoing development?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Box 2	
		YES	NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial		<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Are all ICs in place and functioning as designed?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.			
A Corrective Measures Work Plan must be submitted along with this form to address these issues.			
_____ Signature of Owner, Remedial Party or Designated Representative		_____ Date	

Box 2A

YES NO

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid?
(The Qualitative Exposure Assessment must be certified every five years)

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C360064

Box 3

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
1-P-20	Ferry Investments, LLC	Ground Water Use Restriction Landuse Restriction O&M Plan Site Management Plan
<p>Inst. Controls:(i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.</p>		
1-P-22	Westchester Industries, Inc.	O&M Plan Site Management Plan Ground Water Use Restriction Landuse Restriction
<p>Inst. Controls:(i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.</p>		
1-P-23	Westchester Industries	Site Management Plan O&M Plan Ground Water Use Restriction Landuse Restriction
<p>Inst. Controls:(i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.</p>		
1-P-24	Ferry Landings, LLC	Site Management Plan O&M Plan Ground Water Use Restriction Landuse Restriction
<p>Inst. Controls:(i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.</p>		
1-P15	Ferry Investments, LLC	O&M Plan Site Management Plan Ground Water Use Restriction Landuse Restriction

Inst. Controls: (i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance.

(ii) The use of untreated groundwater for any purpose is not permitted.

1-P21

Westchester Industries

Site Management Plan
Ground Water Use Restriction
O&M Plan
Landuse Restriction

Inst. Controls: (i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.

1-P24A

Ferry Landings, LLC

Site Management Plan
O&M Plan
Ground Water Use Restriction
Landuse Restriction

Inst. Controls: (i) Any proposed soil excavation on the Controlled Property below the 2 foot cover or below the demarcation layer requires prior notification to the NYSDEC in accordance with the approved Site Management Plan. Excavated soil must be managed, characterized, and properly disposed in accordance with the approved Site Management Plan and applicable regulations and/or guidance. (ii) The use of untreated groundwater for any purpose is not permitted.

Box 4

Description of Engineering Controls

Parcel

Engineering Control

1-P-20

Cover System
Vapor Mitigation

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained. (iii) Operate and maintain the LNAPL Recovery System depicted in Figure 2 as set forth in Section 3 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P-22

Vapor Mitigation
Cover System
Leachate Collection
Subsurface Barriers

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected

Parcel

Engineering Control

within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained. (iii) Operate and maintain the Northern DNAPL Recovery System depicted in Figure 2 as set forth in Section 2 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P-23

Vapor Mitigation
Cover System
Leachate Collection

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained. (iii) Operate and maintain the Northern DNAPL Recovery System depicted on Figure 2 as set forth in Section 2 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P-24

Vapor Mitigation
Cover System
Leachate Collection
Subsurface Barriers

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained. (iii) Operate and maintain the Northern DNAPL Recovery System depicted on Figure 2 as set forth in Section 2 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P15

Vapor Mitigation
Cover System

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained.

1-P21

Vapor Mitigation
Cover System
Leachate Collection

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering,

Parcel

Engineering Control

residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained. (iii) Operate and maintain the Western DNAPL Recovery System depicted on Figure 2 as set forth in Section 2 of OM&MP which is Appendix A to the approved Site Management Plan.

1-P24A

Vapor Mitigation
Cover System

Eng. Controls: (i) In areas not proposed for future building construction or impervious covering, residually contaminated soils on the Controlled Property that meet backfill criteria as stipulated in Section 3.4 of the approved Site Management Plan, must be covered by a demarcation layer consisting of an orange, non-woven, 4 oz/sy geotextile and must be covered with 2 feet of clean imported fill material. This barrier must be maintained as per the approved Site Management Plan; and (ii) A passive Soil Vapor Management System (SVMS) must be installed in every new building erected within the Controlled Property. Newly constructed buildings within the Controlled Property shall also be subjected to a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation. If the results of this SVI investigation demonstrate ineffectiveness of the existing passive SVMS, an appropriate active Soil Vapor Management System shall be designed, constructed and maintained.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C360064

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

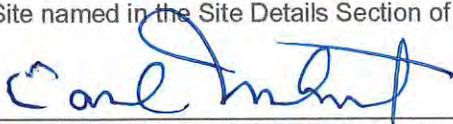
I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

485 West Putnam Ave. Greenwich, CT 06830

I Carl Monheit at 485 West Putnam Ave. Greenwich, CT 06830,
print name print business address

am certifying as Designated Representative (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.



Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

12/20/21
Date

EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Jonathan D. Babcock at Haley & Aldrich of New York
200 Town Centre Drive, Suite 2, Rochester, NY 14623
print name print business address

am certifying as a Professional Engineer for the Owner
(Owner or Remedial Party)



Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp
(Required for PE)

Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

- I. Executive Summary: (1/2-page or less)
 - A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
 - B. Effectiveness of the Remedial Program - Provide overall conclusions regarding:
 1. progress made during the reporting period toward meeting the remedial objectives for the site
 2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
 - C. Compliance
 1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
 2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
 - D. Recommendations
 1. recommend whether any changes to the SMP are needed
 2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
 3. recommend whether the requirements for discontinuing site management have been met.

- II. Site Overview (one page or less)
 - A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
 - B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

- III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

- IV. IC/EC Plan Compliance Report (if applicable)
 - A. IC/EC Requirements and Compliance
 1. Describe each control, its objective, and how performance of the control is evaluated.
 2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
 3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
 4. Conclusions and recommendations for changes.
 - B. IC/EC Certification
 1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

- V. Monitoring Plan Compliance Report (if applicable)
 - A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
 - B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
 - C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
 - D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
 - E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

- VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
 - A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
 - B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.

- C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluate the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.
- D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.
- E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

- A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
 - 1. whether all requirements of each plan were met during the reporting period
 - 2. any requirements not met
 - 3. proposed plans and a schedule for coming into full compliance.
- B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.
- C. Future PRR Submittals
 - 1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
 - 2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

APPENDIX B

Correspondence

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 12th Floor, Albany, NY 12233-7014
P: (518) 402-9662 | F: (518) 402-9679
www.dec.ny.gov

January 7, 2021

Carl Monheit
Ferry Landings, LLC
485 West Putnam Ave.
Greenwich, CT 06830

Re: Site Management Periodic Review Report Response Letter
NYSDEC Site No.: C360064
CE - Tarrytown MGP
Tarrytown, New York

Dear Mr. Monheit (as the Certifying Party):

The New York State Department of Environmental Conservation (NYSDEC) and Department of Health (NYSDOH) have reviewed your Periodic Review Report (PRR) and IC/EC Certification dated December 23, 2020, for the following period: December 1, 2019 to November 30, 2020. The PRR and associated Certification are hereby approved.

The frequency of Periodic Reviews for this site is 1 year, so your next PRR is due on December 1, 2021. You will receive a reminder letter and updated certification form 45 days prior to the due date. Regardless of receipt or not of the reminder notice, the next PRR including the signed certification form, is still due on the date specified above.

If you have any questions, or need additional forms, please contact me at 518-402-9546 or e-mail: michael.squire@dec.ny.gov.

Sincerely,



Michael Squire
Project Manager
Remedial Bureau C

ec: Amen Omorogbe, NYSDEC Central Office
Steven Berninger, NYSDOH
Daniel Bendell, NYSDEC RHWRE
Vincent Dick, Haley & Aldrich
D2

Fisher, Samantha

From: Dick, Vince
Sent: Tuesday, December 7, 2021 11:38 AM
To: Fu, Die; Mukherjee, Dibyendu
Cc: Fisher, Samantha; Babcock, Jonathan
Subject: FW: bcp.c360064 - Reminder Notice: Site Management PRR and IC/EC Certification Submittal

Make this an attachment to the PRR as backup to our reporting on the period of time as it's supposed to be.

From: Squire, Michael H (DEC) <Michael.Squire@dec.ny.gov>
Sent: Tuesday, November 9, 2021 11:28 AM
To: Dick, Vince <VDick@haleyaldrich.com>; Hathaway, Jennifer L (DEC) <Jennifer.Hathaway@dec.ny.gov>; cmonheit@nationalresources.com
Cc: Omorogbe, Amen (DEC) <amen.omorogbe@dec.ny.gov>; Bendell, Daniel (DEC) <daniel.bendell@dec.ny.gov>; Babcock, Jonathan <JBabcock@haleyaldrich.com>; Fisher, Samantha <SFisher@haleyaldrich.com>
Subject: RE: bcp.c360064 - Reminder Notice: Site Management PRR and IC/EC Certification Submittal

CAUTION: External Email

Vince,

Go ahead and submit for the usual period and you can just correct the dates in the IC/EC certification page. I can change the date in the system, but the certifying period start date will still be incorrect due to when the previous PRR was received, so not sure if you want a new IC/EC certification page.

Thanks,
Michael

From: Dick, Vince <VDick@haleyaldrich.com>
Sent: Tuesday, 9 November, 2021 11:12
To: Hathaway, Jennifer L (DEC) <Jennifer.Hathaway@dec.ny.gov>; cmonheit@nationalresources.com
Cc: Squire, Michael H (DEC) <Michael.Squire@dec.ny.gov>; Omorogbe, Amen (DEC) <amen.omorogbe@dec.ny.gov>; Bendell, Daniel (DEC) <daniel.bendell@dec.ny.gov>; Babcock, Jonathan <JBabcock@haleyaldrich.com>; Fisher, Samantha <SFisher@haleyaldrich.com>
Subject: RE: bcp.c360064 - Reminder Notice: Site Management PRR and IC/EC Certification Submittal

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Michael,

As you see by the email below, we've received the Tarrytown site PRR notice for this year – thank you.

A quick review shows that the PRR reporting period has been changed from our current one year period of December 1, 2020 – November 30, 2021 to instead be December 23, 2020 to December 31, 2021. While I'm no longer surprised to see these shifts of the PRR period from whatever the calendaring system is, this year's shift leaves out a ~23 day period from the reporting year compared to last year and changes the period and submittal to 1 month later.

So my question is, which of the following would you like us to do:

- Submit as directed in the PRR notice, but modify the start of the period to December 1, 2020 (so as not to lose the 23 days not included in the notice)?
- Submit for the usual period (12/1 to 11/30) as has been the schedule the last few years? (This assumes that you will change the dates in NYSDEC's system?).
- Do something else?

Let us know and we'll follow whatever direction you provide as long as it makes sense with National Resources too.

Thanks much and best regards,

Vince

Vincent B. Dick

Principal

Haley & Aldrich

200 Town Centre Drive, Suite 2

Rochester, NY 14623

T: 585.321.4207

C: 585.734.6838

www.haleyaldrich.com

From: Hathaway, Jennifer L (DEC) <Jennifer.Hathaway@dec.ny.gov>

Sent: Tuesday, November 9, 2021 10:54 AM

To: cmonheit@nationalresources.com

Cc: Squire, Michael H (DEC) <Michael.Squire@dec.ny.gov>; Omorogbe, Amen (DEC) <amen.omorogbe@dec.ny.gov>;

Bendell, Daniel (DEC) <daniel.bendell@dec.ny.gov>; Dick, Vince <VDick@haleyaldrich.com>

Subject: bcp.c360064 - Reminder Notice: Site Management PRR and IC/EC Certification Submittal

CAUTION: External Email

Hello,

Attached is your electronic copy of the Periodic Review Report Reminder Notice for the subject site. A hard copy will not follow in the mail

Please direct all questions and concerns to the Project Manager, listed on the second page of the attached correspondence.

Thank you.

Jennifer Hathaway

Administrative Assistant 2

Pronouns: she/her/hers

Division of Environmental Remediation

Office of the Division Director

New York State Department of Environmental Conservation

625 Broadway, Albany, NY 12233-7011

Jennifer.Hathaway@dec.ny.gov

www.dec.ny.gov |  |  | 



APPENDIX C

Annual Site Inspection Form



SMP - ANNUAL SITE INSPECTION

PROJECT	Tarrytown Former MGP Site	Prepared By: Die Fu	Routine/Nonroutine Inspection: Routine Annual
LOCATION	Tarrytown, NY	Company: Haley & Aldrich	Weather: Sunny 30s F
DATE(s)	11/23/2021	Title: Assistant Project Manager	Other Noteworthy Conditions: None

Attach sketches and/or photographs, as needed.

1. SITE COVER - SOIL, CONCRETE, ASPHALT, STRUCTURES

A. Visual Inspection and Observations:

During the 12/1/20 - 11/30/21 reporting period, Haley & Aldrich performed environmental monitoring and other services as needed under the Site Management Plan. The site cover is in place and effective at the time of inspection. There were no changes in the site cover plan.

B. Maintenance, repairs, or changes to site cover completed since previous inspection(s):

In September 2021, Haley & Aldrich observed the effects of a leaking irrigation system water line in the part of Pierson Park located on site. A small area of eroded grass cover and soil, approximately five feet in diameter and no more than two and a half feet deep was observed at a location about 120 feet north of MW-20. The underlying demarcation layer was not exposed. The water line was repaired, and the site cover was restored in November 2021. At the time of site inspection, the repaired cover was shown to be in good condition. A photograph (attached) was taken during the site inspection to document the repaired site cover area.

C. Deficiencies noted, if any:

None related to site cover.

D. Recommended actions:

None related to site engineering controls.

2. OTHER SITE OBSERVATIONS (include any incidents, repairs, maintenance, or other observations affecting site management plan and reporting):

DNAPL monitoring and extractions were performed three times during the reporting period. Because the next round of groundwater sampling is not scheduled until 2023, the groundwater well flush-mount surface completions were checked and found to be in satisfactory condition. Representative photographs of the inspected groundwater well are attached.

3. SITE / OWNER PERSONNEL CONTACTED:

- a. Michael Cooney, Ferry Landings, LLC
- b. Carlos Jimenez, Ferry Landings, LLC



Photo 1: Site Cover Restoration After Irrigation Water Line Repair, Facing Southeast

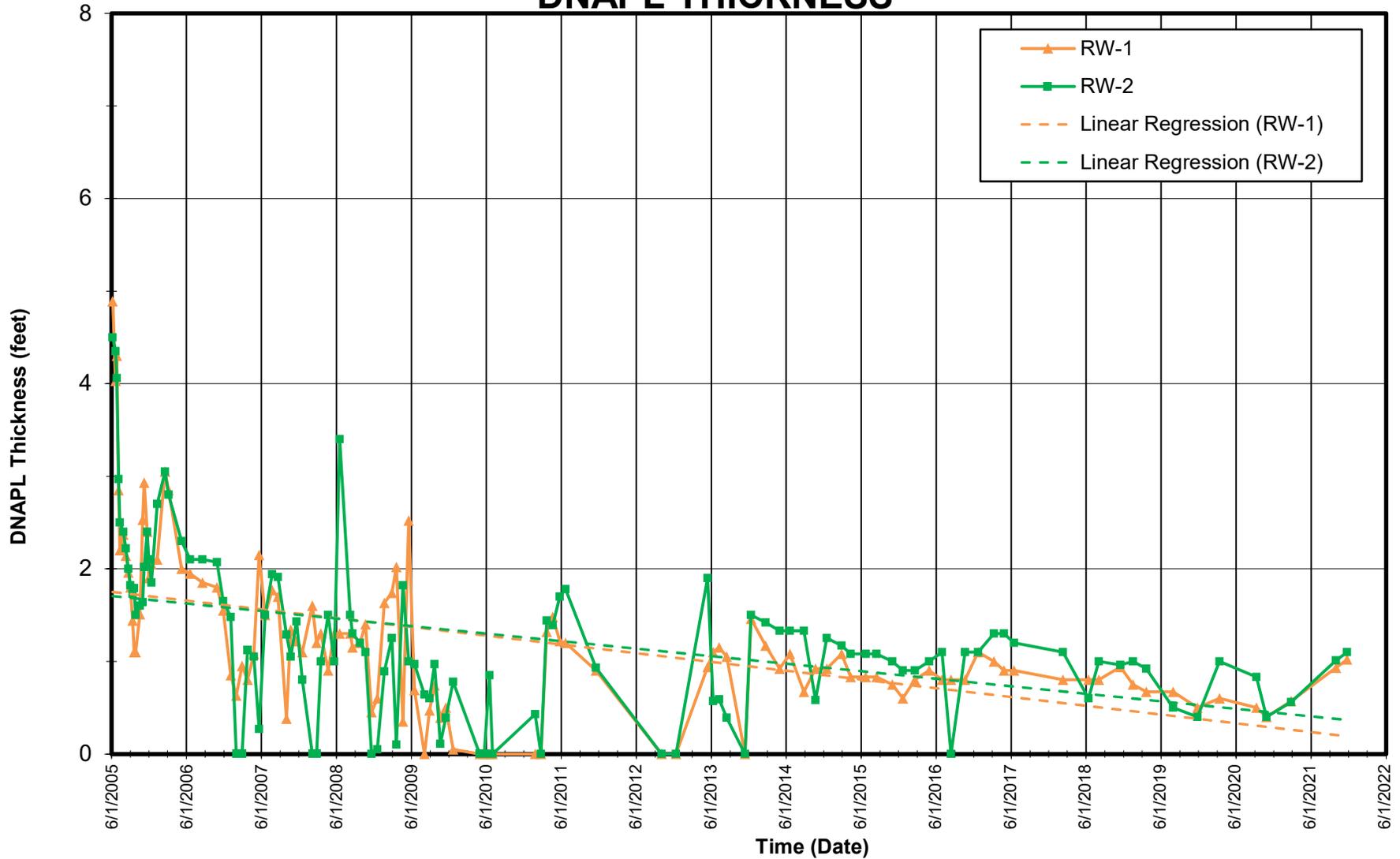


Photo 2: Groundwater Monitoring Well MW-20

APPENDIX D

DNAPL Monitoring and Extraction Summary

FIGURE 1 WESTERN DNAPL RECOVERY SYSTEM DNAPL THICKNESS



NOTES:
1. Lines illustrate data trends only and should not be used to interpolate data.

FIGURE 2
WESTERN DNAPL RECOVERY SYSTEM
FLUID VOLUME EXTRACTED

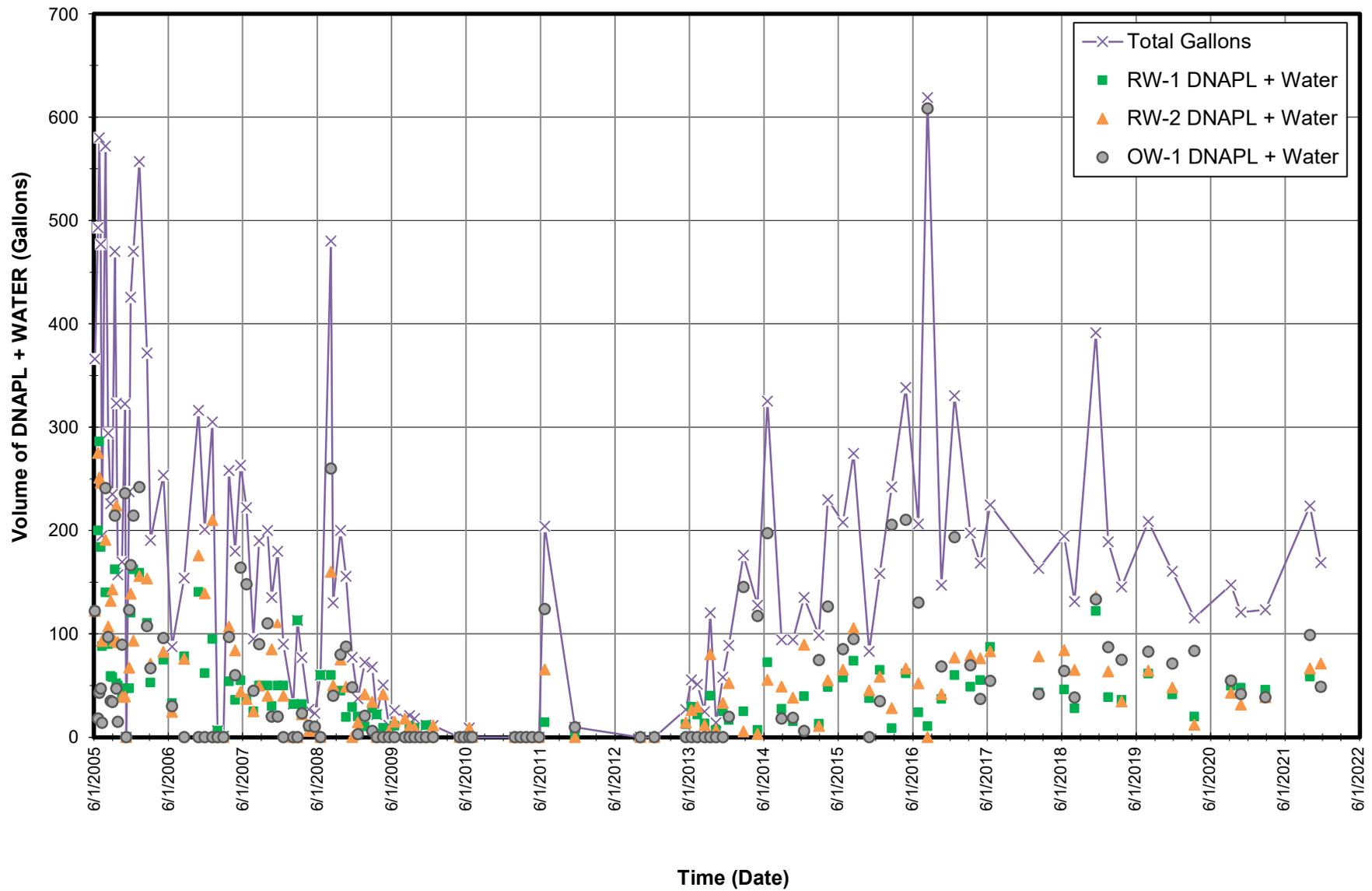
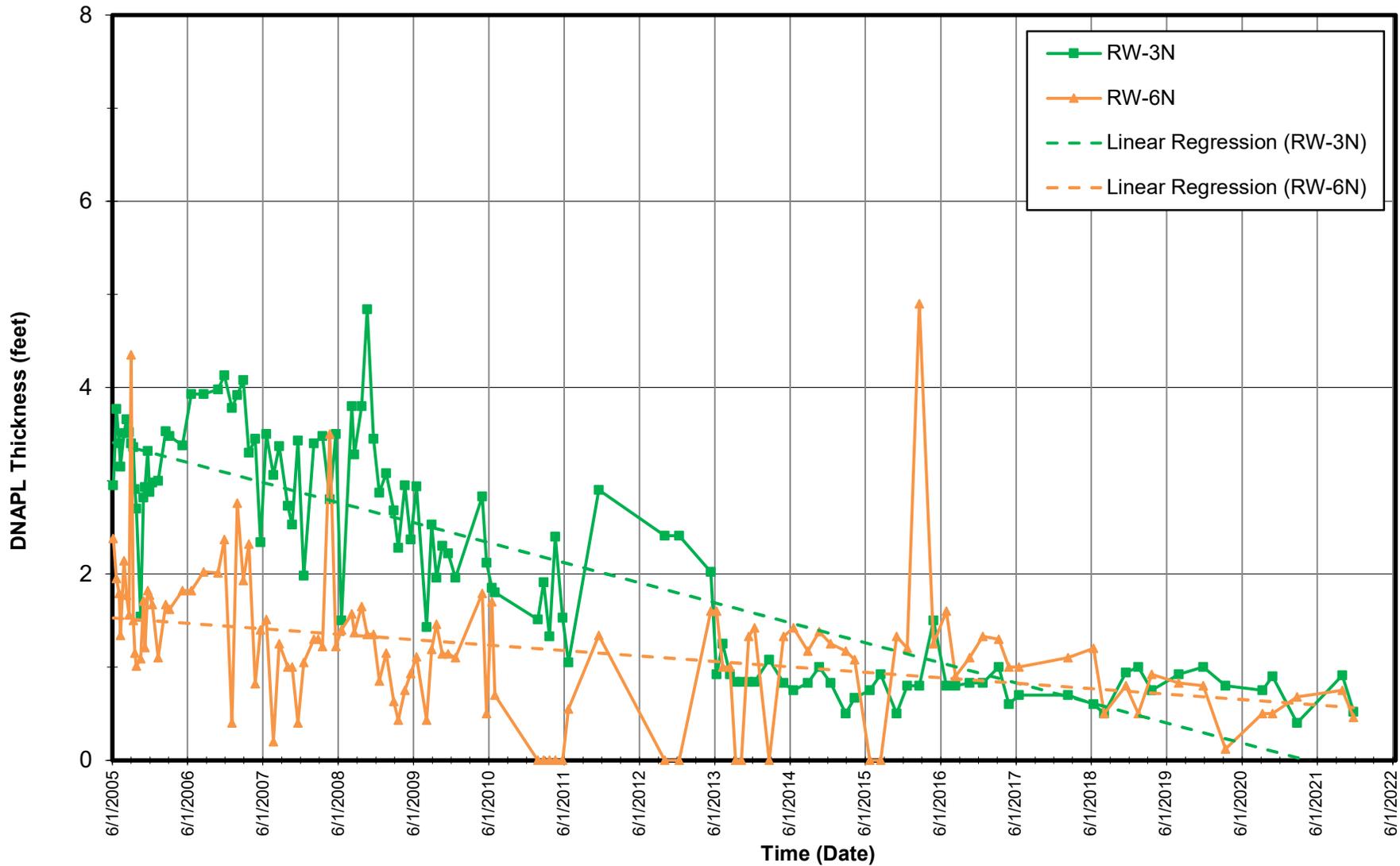
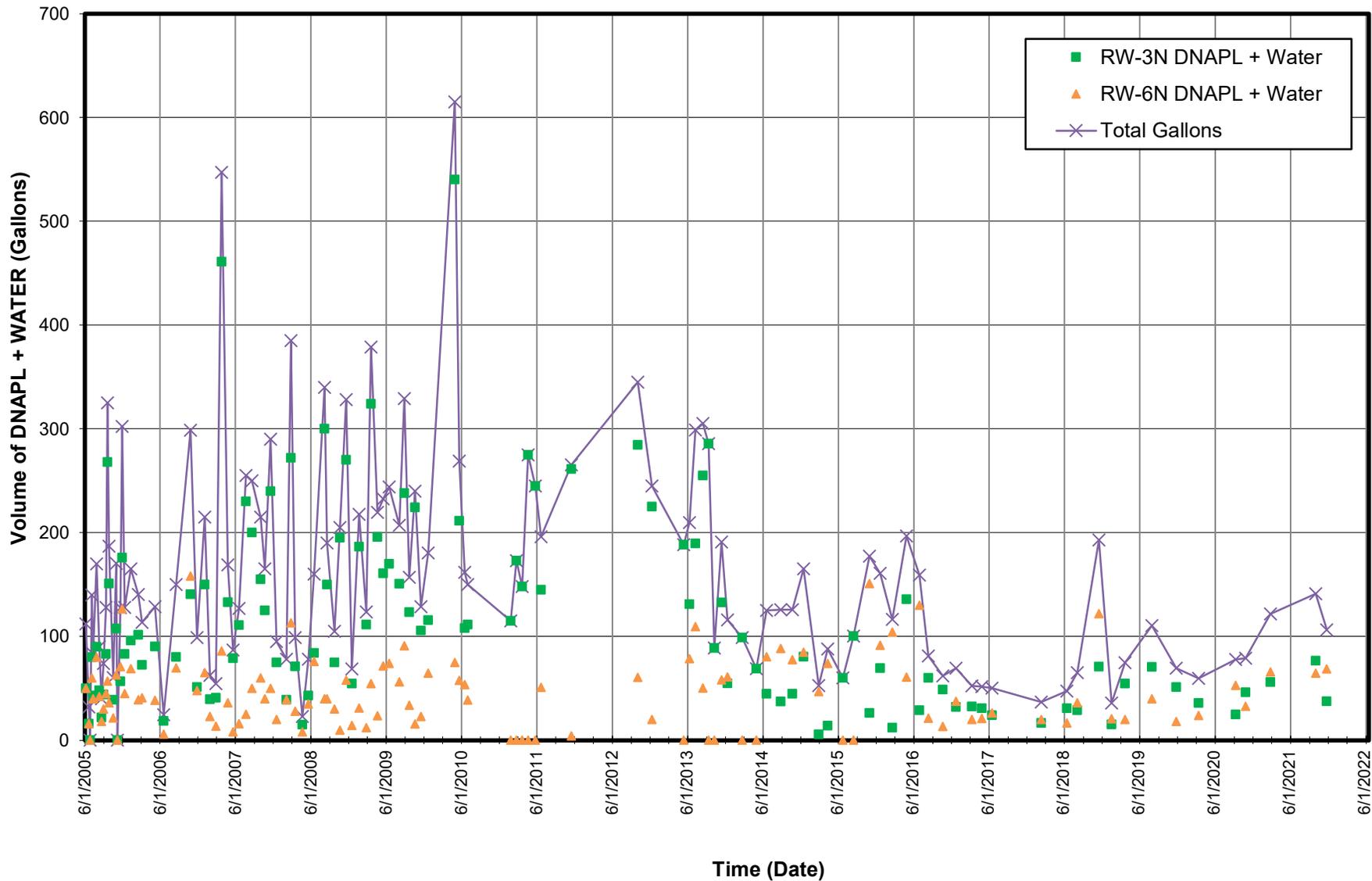


FIGURE 3 NORTHERN DNAPL RECOVERY SYSTEM DNAPL THICKNESS



NOTES:
1. Lines illustrate data trends only and should not be used to interpolate data.

FIGURE 4
NORTHERN DNAPL RECOVERY SYSTEM
FLUID VOLUME EXTRACTED



SHIPPING DOCUMENT

IN THE EVENT OF AN EMERGENCY CALL **24-Hr-Number** 1-800-468-1760 (SAFETY-KLEEN SYSTEMS, INC.)

REFERENCE NBR.

95551527 - 2100946460

CUSTOMER / GENERATOR: FE18257 Ferry Landings Llc
129 Main Street
Tarrytown NY 10591-0000
PHONE: 209-661-0055

GENERATOR USEPA ID.

GENERATOR STATE:

MANIFEST#:

FORM CD : NR

SHIP# 233605248

TRANSPORTER 1 TXR000081205 SAFETY-KLEEN SYSTEMS INC.

TRANSPORTER 2

US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID)

OILY WATER

(NOT USDOT OR USEPA REGULATED)(VAC)

FEDERAL WASTE CODES NONE

STATE WASTE CODES

TOTAL CONT 1

TYPE: TT

WT/VOL G

SKDOT 7008471

CNT# 210222249159 6Z: BULK VOLUME CONTAINER QTY: 245 PROF# 150451

DESIGNATED FACILITY NAME/ADDRESS:

ENVIRO WASTE OIL RECOVERY LLC

279 RTE 6

MAHOPAC

NY 10541

TSD PHONE: 845-279-0263

FACILITY USEPA ID NO NYD044825636

FACILITY STATE ID NO

GENERATOR STATUS

CESQG: Vehicle



CUSTOMER / GENERATOR: mtoheal



TRANSPORTER: Tejada, Emmanuel

TRANSPORTER 2:

LAST PAGE

APPENDIX E

SS/IAQ Report



HALEY & ALDRICH OF NEW YORK
200 Town Centre Drive
Suite 2
Rochester, NY 14623
585.359.9000

8 April 2021
File No. 134976-002

New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, NY 12233-7014

Attention: Michael Squire
Project Manager
Remedial Bureau C

Subject: Vapor Intrusion Management Systems (VIMS)
NYSDEC Site No. C360064
Tarrytown Former MGP
Tarrytown, New York

Dear Mr. Squire:

On behalf of Ferry Landings, LLC, Haley & Aldrich of New York (Haley & Aldrich) has prepared this letter report of soil vapor and indoor air sampling for the above-referenced site. This report fulfills remaining sampling and reporting obligations of the commitment letter submitted by Haley & Aldrich dated 21 August 2019 on behalf of Ferry Landings and responds to NYSDEC's email dated 27 September 2019 regarding the subject site (the "Site"). For all locations referred to in this report, please see the attached Site Plan figure set. Results of the sampling program conducted between 16 and 23 February 2021 are presented herein.

Purpose

Sub-slab soil vapor (SS) and indoor air (IA) quality sampling and analysis were performed as outlined in Section 2.3.4 of the revised *Site Management Plan – Tarrytown Former MGP Site, Tarrytown, NY*, dated August 2010 and accepted by the NYSDEC on 26 August 2010 (the SMP), and as adapted to the phases and footprints of buildings developed on the site since the SMP was approved.

In general, the verification air sampling consisted of concurrent indoor air and sub-slab sampling for one ground floor location in each of 13 buildings present on the Site. Results of previous sampling in six buildings were reported to NYSDEC in the Haley & Aldrich letter report dated 7 May 2020. Results of sampling for the remaining seven buildings are reported herein.

Descriptions of the sampling program's scope, locations, methods, and laboratory analyses are presented in this report; our conclusions are presented in the following section.

General Conclusions

Based on the data resulting from the indoor air quality and sub-slab soil vapor sampling, we conclude:

- Soil vapor sampling and analysis for compounds required by New York State Department of Health (NYSDOH) vapor intrusion guidance indicated most target compounds were not detected in the soil vapor samples. Where chemical concentrations for target compounds were detected, the resulting concentrations are uniformly less than the NYSDOH vapor intrusion comparison criteria that would require further action or monitoring. Therefore, based on NYSDOH criteria and guidance, no further monitoring or action is required.
- Indoor air quality analyses conducted concurrently with the sub-slab soil vapor sampling indicate indoor air has not been compromised by the compounds of concern for the site. A limited set of compounds were detected in indoor air with results above EPA national survey 75th-percentile data for indoor air quality. We conclude these detections are not present due to the site conditions and instead appear to be related to common commercial cleaner products, personal care products, or building materials/building finishes.

Based on the data regarding the post-construction soil vapor sampling, we conclude:

- Soil vapor chemical concentrations for compounds detected in the samples collected are uniformly less than NYSDOH vapor intrusion matrix comparison criteria and USEPA vapor intrusion evaluation criteria.
- Vapor Intrusion Mitigation System (VIMS) controls described in the SMP should continue to be installed in future buildings constructed at the site, as they have been in the past; the data do not indicate any revision in VIMS design or modification to their current function is needed for future buildings.

Please note we have also prepared a letter with sample results for each of the seven individual residence locations noted herein. Each letter is being provided to that resident by Ferry Landings/National Resources under separate cover and following submittal of this report to NYSDEC.

INDOOR AIR AND SUB-SLAB SOIL VAPOR SAMPLING AND ANALYSIS

Scope and Methods

To be representative of the Site, one set of indoor air and sub-slab soil vapor samples was collected for each building at the Site to be consistent with the SMP. Sampling of the remaining seven buildings was completed in the 2020-2021 heating season, consistent with procedures contained in NYSDOH *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006*. See Figure 1 for the overall site layout, showing locations where the current sampling effort was completed. Sample locations within building groups (Carriage Houses, Townhouses) and specific sample locations within the residential units made accessible for sampling are shown in subsequent figures. Brief descriptions of the accessible buildings and sampling locations are as follows:

- Figure 2 – shows the general position of units sampled within the Carriage House buildings.
- Northeast Carriage House – each unit from this building has a garage, bathroom, and living space on the ground floor slab-on grade. An occupied unit was made accessible for both sub-slab and indoor air sampling. Sample locations are shown on Figure 3.
- Northwest Carriage House – each unit from this building has a garage, bathroom, and living space on the ground floor slab-on grade. An occupied unit was made accessible for both sub-slab and indoor air sampling. Sample locations are shown on Figure 4.
- Southeast Carriage House – each unit from this building has a garage, bathroom, and living space on the ground floor slab-on grade. An occupied unit was made accessible for both sub-slab and indoor air sampling. Sample locations are shown on Figure 5.
- Southwest Carriage House – each unit from this building has a garage, bathroom, and living space on the ground floor slab-on grade. An occupied unit was made accessible for both sub-slab and indoor air sampling. Sample locations are shown on Figure 6.
- Figure 7 – shows the general position of units sampled within the Townhouse buildings.
- Townhouse 1 – each unit from this building has a garage, bathroom, and living space on the ground floor slab-on grade. An occupied unit was made accessible for sub-slab and indoor air sampling. Sampling locations are shown on Figure 8.
- Townhouse 3 – each unit from this building has a garage, bathroom, and living space on the ground floor slab-on grade. An occupied unit was made accessible for both sub-slab and indoor air sampling. Sample locations are shown on Figure 9.
- Townhouse 4 – each unit from this building has a garage, bathroom, and living space on the ground floor slab-on grade. An occupied unit was made accessible for both sub-slab and indoor air sampling. Sample locations are shown on Figure 10.

Field methods used to complete the sampling program were consistent with guidance from the NYSDOH *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006*. Indoor air and sub-slab sampling occurred concurrently. For indoor air sampling, a laboratory-supplied 2.7-liter Summa canister with flow regulator was placed within the living space of a residential unit on the ground floor (floor in contact with the slab-on-grade) and the regulator was set to obtain a complete sample over an approximately one-hour sample duration.

For sub-slab soil vapor sampling a small hole was drilled through the concrete slab into the sub-slab gravel. A new vapor pin seal was used for each test hole and flexible tubing was connected a laboratory-supplied 2.7-liter Summa canister with a flow regulator set to fill at a rate to obtain a complete sample over an approximately one-hour duration (consistent with the indoor air sample). Following sampling, the test holes were sealed with hydrated bentonite and finished with non-shrinking grout. Per the SMP,

at least once for each round of sampling a tracer gas (Helium) was used as a quality assurance/quality control measure to verify the method to seal the soil vapor probe was satisfactory.

Please note that this overall project Site was cleaned up and redeveloped through NYSDEC's Brownfield Cleanup Program due to its past use as a manufactured gas plant, bus fleet fueling facility and asphalt batch plant, which in aggregate left residues of coal tar and petroleum products that were remediated. However, all samples were analyzed for all target VOCs included within the United States Environmental Protection Agency (USEPA) Method TO-15 at a NYSDOH certified laboratory, including compounds (such as chlorinated solvents) beyond just those necessary to assess just coal tar and petroleum residues. Laboratory analyses were performed by Alpha Analytical, Mansfield, Massachusetts (Alpha), which is accredited by the National Environmental Laboratory Accreditation Program (NELAP). Alpha is also a NYSDOH ELAP lab, ID #11627.

Laboratory Results and Evaluation

Laboratory testing results are provided in Table 1. A data usability summary report (DUSR) was prepared for each round of analyses performed by Alpha. The results presented by Alpha were compliant with the data quality objectives for the project. Results in Table 1 have been flagged as indicated by the laboratory and DUSR. Laboratory Data Reports and DUSRs are provided in Appendix A.

Analytical results of the indoor air sampling events were evaluated by comparison to two sets of comparison criteria:

- For compounds targeted for soil vapor intrusion evaluation by the NYSDOH, indoor air sample results were compared to matrices contained in the NYSDOH *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006*.
- For all compounds, including those not targeted by the NYSDOH guidance, results were also compared to the Indoor Air Quality (IAQ) levels published by the USEPA Office of Indoor Air and Radiation in the Building Assessment Survey (BASE) Study (USEPA, 2001). The BASE study used a standardized protocol to collect extensive indoor air quality data from one hundred locations in thirty-seven cities in the U.S. The indoor and outdoor comparison levels used for comparison in the evaluation of analytical data were those published in the USEPA guidance document at the 75th percentile level.

Regarding the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, 2006)*, the analyte-appropriate decision matrix determinations used were provided by Tables 3.1, 3.2, and Appendix A of the NYSDOH guidance document as updated in May 2017. Specifically, NYSDOH has established guidance action levels for eight volatile chemicals, mainly chlorinated volatile organic compounds, based on state review of toxicity data, risk assessments, and soil vapor intrusion data. Regarding all other compounds, including compounds related to coal tar and petroleum residues associated with the past site use and addressed by remediation completed on the site, the USEPA BASE study provides comparison criteria for assessment of those compounds.

In overall summary, based on our comparison of the data to the applicable NYSDOH guidance matrices (Matrix A, Matrix B, Matrix C) for both indoor air and sub-slab vapor samples, all comparisons to the NYSDOH guidance values in Table 1 show that No Further Action is required.

The NYSDOH guidance provides comparison criteria within the risk matrices predominantly for chlorinated VOCs (e.g., trichloroethene) and does not provide criteria for coal tar or petroleum-based VOCs. Building-specific sampling descriptions are provided below. Please note that due to residence floor finishes, drilling through to the sub-slab soils was only feasible within the garage spaces for most residential units (an option allowed in the sampling plan approved for this work by NYSDEC).

In the Northeast Carriage House, the sub-slab sample was collected in the garage and the indoor air sample was collected at the approximate center of the open plan ground floor kitchen/living area. Both the indoor air and sub-slab soil vapor concentrations were below NYSDOH criteria for further action or monitoring and the BASE database comparison levels.

In the Northwest Carriage House, the sub-slab sample was collected in the garage, and the indoor air sample was collected at the approximate center of the open plan ground floor kitchen/living area. Both the indoor air and sub-slab soil vapor concentrations were below NYSDOH criteria for further action or monitoring. Only two results exceeded BASE 75th percentile levels: ethanol and methylene chloride, both common in cleaning and personal care products such as rubbing alcohol, nail polish remover, and common cleaning products.

In the Southeast Carriage House, the sub-slab sample was collected in the garage and the indoor air sample was collected at the approximate center of the open plan ground floor kitchen/living area. Both the indoor air and sub-slab soil vapor concentrations were below NYSDOH criteria for further action or monitoring and the BASE database comparison levels.

In the Southwest Carriage House, the sub-slab sample was collected in the garage, and the indoor air sample was collected at the approximate center of the open plan ground floor kitchen/living area. Both the indoor air and sub-slab soil vapor concentrations were below NYSDOH criteria for further action or monitoring. Results for four compounds exceeded BASE 75th percentile levels: 1,2-dichloroethane, trichloromethane, ethanol, ethyl acetate, and isopropyl alcohol. All of these compounds are commonly found in cleaning products and/or personal care products such as rubbing alcohol, nail polish remover, and common cleaning products.

In the Townhouse 1 building the sub-slab sample was collected in the garage, and the indoor air sample was collected in a hallway adjacent to a ground floor bathroom and playroom. Both the indoor air and sub-slab soil vapor concentrations were below NYSDOH criteria for further action or monitoring and BASE database comparison levels.

In the Townhouse 3 building the sub-slab sample was collected in a mechanical area just off the painted garage floor and the indoor air sample was collected in a hallway adjacent to a ground floor bathroom and bedroom. Both the indoor air and sub-slab soil vapor concentrations were below NYSDOH criteria for further action or monitoring and the BASE database comparison criteria.

In the Townhouse 4 building the sub-slab sample was collected in the garage, and the indoor air sample was collected in a hallway adjacent to a ground floor bathroom and living area. Both the indoor air and sub-slab soil vapor concentrations were below NYSDOH criteria for further action or monitoring. Results for one compound exceeded its BASE 75th percentile level: ethanol. This compound is commonly found in cleaning products and/or personal care products such as rubbing alcohol, nail polish remover, and common cleaning products.

Closing

Based on the sampling completed and comparison of the data to the applicable NYSDOH guidance matrices (Matrix A, Matrix B, Matrix C) for both indoor air and sub-slab vapor samples, all comparisons to the NYSDOH guidance values indicate that No Further Action or Monitoring is required for the buildings/locations where sampling has been completed.

The NYSDOH guidance provides comparison criteria within the risk matrices predominantly for chlorinated VOCs (e.g., trichloroethene) and does not provide criteria for coal tar or petroleum-based VOCs. For those compounds, comparison was made to the USEPA BASE data 75th percentile values. Results of indoor air compared to that database indicates only a select few compounds detected at concentrations greater than the BASE comparison criteria; all of the compounds detected above the 75th percentile threshold appear to be associated with common commercial cleaner products, personal care products and/or building materials or finishes.

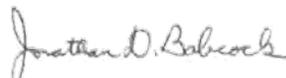
Please note we have also prepared a letter with sample results for each of the seven individual occupied residences noted herein. Each letter is being provided to that resident by Ferry Landings/National Resources under separate cover and following submittal of this report to NYSDEC.

Please contact us if you have any questions.

Sincerely yours,
HALEY & ALDRICH OF NEW YORK



Vincent B. Dick
Principal



Jonathan D. Babcock, P.E.
Senior Technical Specialist

Attachments:

Table 1 – Summary of Air Quality Analytical Results, April 2021

Figure Set –Overall Site Plan and Individual Unit Sample Locations, updated April 2021

Appendix A – Data Usability Summary Reports and Laboratory Data Report

c: Ferry Landings, LLC; Attn: Carl Monheit
NYSDOH; Attn: Steven Berninger

TABLE 1

Summary of Air Quality Analytical Results, April 2021

TABLE I
SUMMARY OF AIR QUALITY ANALYTICAL RESULTS - 2021
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NY
FILE NO. 28590

Location Group	Comparison Criteria				Comparison Sample	Comparison Sample	Carriage House NE		Carriage House NW		Carriage House SE	
Location/Sample Description	NYSDOH Matrices	NYSDOH Matrices	BASE database	BASE database	Outdoor Ambient Air	Outdoor Ambient Air	Indoor Air - Carriage House NE	Subslab - Carriage House NE	Indoor Air - Carriage House NW	Subslab - Carriage House NW	Indoor Air - Carriage House SE	Subslab - Carriage House SE
Location	Indoor Air	Sub Slab	Indoor Air	Outdoor Air	AAACH-SW	AATH4	IACH-NE	SSCH-NE	IACH-NW	SSCH-NW	IACH-SE	SSCH-SE
Sample Date	No Further	No Further	75th	75th	02/16/2021	02/22/2021	02/18/2021	02/18/2021	02/17/2021	02/17/2021	02/23/2021	02/23/2021
Sample Type	No Further	No Further	75th	75th	N	N	N	N	N	N	N	N
Sample Name	Action	Action	Percentage	Percentage	AA-25RVR-021621	AA-165WMAIN-022221	IAQ-4HUD-021821	SS-4HUD-021821	IAQ-27RVR-021721	SS-27RVR-021721	IAQ-18ORCH-022321	SS-18ORCH-022321
Lab Sample ID	May 2017	May 2017	USEPA, 2001	USEPA, 2001	L2108837-03	L2108837-10	L2108837-08	L2108837-09	L2108837-06	L2108837-07	L2108837-15	L2108837-16
Matrix					AA	AA	IA	GS	IA	GS	IA	GS
Volatile Organic Compounds (ug/m3)												
1,1,1-Trichloroethane	3 - 10	100 - 1000	10.8	1.7	0.109 U	0.109 U	0.109 U	1.09 U	0.109 U	1.7 U	0.109 U	1.09 U
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	1.37 U	1.37 U	1.37 U	1.37 U	1.37 U	2.14 U	1.37 U	1.37 U
1,1,2-Trichloroethane	NA	NA	<1.4	<1.4	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.7 U	1.09 U	1.09 U
1,1-Dichloroethane	NA	NA	<0.5	<0.6	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U	1.26 U	0.809 U	0.809 U
1,1-Dichloroethene	0.2 - 1	6 - 60	<1.2	<1.2	0.079 U	0.079 U	0.079 U	0.793 U	0.079 U	1.24 U	0.079 U	0.793 U
1,2,4-Trichlorobenzene	NA	NA	<1.2	<1.2	1.48 U	1.48 U	1.48 U	1.48 U	1.48 U	2.32 U	1.48 U	1.48 U
1,2,4-Trimethylbenzene	NA	NA	5.1	3.1	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	1.62	0.983 U	0.983 U
1,2-Dibromoethane (Ethylene Dibromide)	NA	NA	<1.4	<1.4	1.54 U	1.54 U	1.54 U	1.54 U	1.54 U	2.4 U	1.54 U	1.54 U
1,2-Dichlorobenzene	NA	NA	<1.0	<1.0	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.88 U	1.2 U	1.2 U
1,2-Dichloroethane	NA	NA	<0.7	<0.6	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U	1.26 U	0.809 U	0.809 U
1,2-Dichloropropane	NA	NA	<1.6	<1.6	0.924 U	0.924 U	0.924 U	0.924 U	0.924 U	1.44 U	0.924 U	0.924 U
1,2-Dichlorotetrafluoroethane (CFC 114)	NA	NA	<3.0	<3.0	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	2.18 U	1.4 U	1.4 U
1,3,5-Trimethylbenzene	NA	NA	<4.6	<2.4	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	1.53 U	0.983 U	0.983 U
1,3-Butadiene	NA	NA	<2.7	<2.8	0.442 U	0.442 U	0.442 U	0.442 U	0.442 U	0.69 U	0.442 U	0.442 U
1,3-Dichlorobenzene	NA	NA	<1.1	<1.0	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.88 U	1.2 U	1.2 U
1,4-Dichlorobenzene	NA	NA	1.4	<1.4	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.88 U	1.2 U	1.2 U
1,4-Dioxane	NA	NA	NA	NA	0.721 U	0.721 U	0.721 U	6.34	0.721 U	14.4	0.721 U	0.721 U
2,2,4-Trimethylpentane	NA	NA	NA	NA	0.934 U	0.934 U	0.934 U	0.934 U	0.934 U	1.46 U	1.28	0.934 U
2-Butanone (Methyl Ethyl Ketone)	NA	NA	7.5	5.7	1.47 U	1.47 U	1.47 U	6.05	1.47 U	4.1	1.47 U	1.47 U
2-Hexanone	NA	NA	NA	NA	0.82 U	0.82 U	0.82 U	0.889	0.82 U	1.28 U	0.82 U	0.82 U
4-Ethyl toluene	NA	NA	<3.1	<2.0	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	1.53 U	0.983 U	0.983 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	3	0.9	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	3.2 U	2.05 U	2.05 U
Acetone	NA	NA	59.8	31.7	6.37	4.92	15.7	247	15.6	70.6	18.4	102
Allyl chloride	NA	NA	NA	NA	0.626 U	0.626 U	0.626 U	0.626 U	0.626 U	0.977 U	0.626 U	0.626 U
Benzene	NA	NA	5.1	3.7	0.639 U	0.639 U	0.639 U	0.639 U	0.639 U	0.997 U	2.32	0.987
Benzyl Chloride (alpha-Chlorotoluene)	NA	NA	<1.7	<1.6	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.62 U	1.04 U	1.04 U
Bromodichloromethane	NA	NA	NA	NA	1.34 U	1.34 U	1.34 U	1.34 U	1.34 U	2.09 U	1.34 U	1.34 U
Bromoform	NA	NA	NA	NA	2.07 U	2.07 U	2.07 U	2.07 U	2.07 U	3.23 U	2.07 U	2.07 U
Bromomethane (Methyl Bromide)	NA	NA	<1.1	<1.0	0.777 U	0.777 U	0.777 U	0.777 U	0.777 U	1.21 U	0.777 U	0.777 U
Carbon disulfide	NA	NA	2.1	2.2	0.623 U	0.623 U	0.623 U	0.629	0.623 U	1.27	0.623 U	0.838
Carbon tetrachloride	0.2 - 1	6 - 60	<1.1	<1.0	0.497	0.44	0.478	1.26 U	0.491	1.96 U	0.51	1.26 U
Chlorobenzene	NA	NA	<0.8	<0.8	0.921 U	0.921 U	0.921 U	0.921 U	0.921 U	1.44 U	0.921 U	0.921 U
Chloroethane	NA	NA	<1.0	<1.0	0.528 U	0.528 U	0.528 U	0.528 U	0.528 U	0.823 U	0.528 U	0.528 U
Chloroform (Trichloromethane)	NA	NA	<1.2	<0.6	0.977 U	0.977 U	0.977 U	0.977 U	0.977 U	1.52 U	0.977 U	0.977 U
Chloromethane (Methyl Chloride)	NA	NA	3.1	3	1.27	1.19	1.31	0.56	1.34	0.871	1.39	0.421
cis-1,2-Dichloroethene	0.2 - 1	6 - 60	<1.2	<1.2	0.079 U	0.079 U	0.079 U	0.793 U	0.079 U	1.24 U	0.079 U	0.793 U
cis-1,3-Dichloropropene	NA	NA	<2.0	<2.0	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	1.42 U	0.908 U	0.908 U
Cyclohexane	NA	NA	NA	NA	0.688 U	0.688 U	0.688 U	0.688 U	0.688 U	1.07 U	0.726	0.688 U
Dibromochloromethane	NA	NA	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	2.66 U	1.7 U	1.7 U
Dichlorodifluoromethane (CFC-12)	NA	NA	10.5	5.8	2.4	2.35	2.43	2.45	2.44	2.41	2.54	2.49
Ethanol	NA	NA	140	47	9.42 U	9.42 U	38.8	311	411	1240	89.1	366
Ethyl acetate	NA	NA	3.2	<1.2	1.8 U	1.8 U	1.8 U	1.8 U	2.64	5.95	1.8 U	1.8 U
Ethylbenzene	NA	NA	3.4	1.6	0.869 U	0.869 U	0.869 U	1.34	0.869 U	1.64	0.869 U	1.65
Hexachlorobutadiene	NA	NA	<2.5	<2.6	2.13 U	2.13 U	2.13 U	2.13 U	2.13 U	3.33 U	2.13 U	2.13 U
Hexane	NA	NA	NA	NA	0.705 U	0.705 U	0.705 U	0.705 U	0.751	1.29	2.04	0.789
Isopropyl Alcohol (2-Propanol)	NA	NA	56	6.6	1.23 U	1.23 U	2.78	5410	30.7	169	5.16	7.96

TABLE I
SUMMARY OF AIR QUALITY ANALYTICAL RESULTS - 2021
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NY
FILE NO. 28590

Location Group	Comparison Criteria				Comparison Sample	Comparison Sample	Carriage House NE		Carriage House NW		Carriage House SE	
	Location/ Sample Description	NYSDOH Matrices	NYSDOH Matrices	BASE database	BASE database	Outdoor Ambient Air	Outdoor Ambient Air	Indoor Air - Carriage House NE	Subslab - Carriage House NE	Indoor Air - Carriage House NW	Subslab - Carriage House NW	Indoor Air - Carriage House SE
Location	Indoor Air	Soil Vapor	Indoor Air	Outdoor Air	AACH-SW	AATH4	IACH-NE	SSCH-NE	IACH-NW	SSCH-NW	IACH-SE	SSCH-SE
Sample Date	No Further	No Further	75th	75th	02/16/2021	02/22/2021	02/18/2021	02/18/2021	02/17/2021	02/17/2021	02/23/2021	02/23/2021
Sample Type	No Further	No Further	75th	75th	N	N	N	N	N	N	N	N
Sample Name	Action	Action	Percentage	Percentage	AA-25RVR-021621	AA-165WMAIN-022221	IAQ-4HUD-021821	SS-4HUD-021821	IAQ-27RVR-021721	SS-27RVR-021721	IAQ-18ORCH-022321	SS-18ORCH-022321
Lab Sample ID	May 2017	May 2017	USEPA, 2001	USEPA, 2001	L2108837-03	L2108837-10	L2108837-08	L2108837-09	L2108837-06	L2108837-07	L2108837-15	L2108837-16
Matrix					AA	AA	IA	GS	IA	GS	IA	GS
Volatile Organic Compounds (ug/m3)												
m,p-Xylenes	NA	NA	12.2	7.3	1.74 U	1.74 U	1.74 U	4.69	1.74 U	5.78	2.34	5.13
Methyl Tert Butyl Ether	NA	NA	<6.4	<5.4	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	1.12 U	0.721 U	0.721 U
Methylene chloride	3 - 10	100 - 1000	5	3	1.74 U	1.74 U	1.74 U	2.83	7.19	2.71 U	1.74 U	1.74 U
N-Heptane	NA	NA	NA	NA	0.82 U	0.82 U	0.82 U	3.87	0.82 U	3.41	1.55	2.52
o-Xylene	NA	NA	4.4	2.6	0.869 U	0.869 U	0.869 U	1.92	0.869 U	2.23	0.903	1.62
Styrene	NA	NA	<2.3	<2.0	0.852 U	0.852 U	0.92	0.852 U	0.852 U	1.33 U	0.852 U	0.852 U
Tert-Butyl Alcohol (tert-Butanol)	NA	NA	NA	NA	1.52 U	1.52 U	1.52 U	14.4	1.52 U	7.7	1.52 U	7.28
Tetrachloroethene	3 - 10	100 - 1000	5.9	3	0.136 U	0.136 U	0.136 U	1.36 U	0.231	2.12 U	0.136	1.36 U
Tetrahydrofuran	NA	NA	NA	NA	1.47 U	1.47 U	1.47 U	1.47 U	1.47 U	20.1	1.47 U	1.47 U
Toluene	NA	NA	25.9	16.3	0.754 U	0.754 U	1.57	1.61	1.84	2.19	5.05	1.64
trans-1,2-Dichloroethene	NA	NA	NA	NA	0.793 U	0.793 U	0.793 U	0.793 U	0.793 U	1.24 U	0.793 U	0.793 U
trans-1,3-Dichloropropene	NA	NA	<1.2	<1.2	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	1.42 U	0.908 U	0.908 U
Trichloroethene	0.2 - 1	6 - 60	1.2	<1.6	0.107 U	0.107 U	0.107 U	1.07 U	0.107 U	1.68 U	0.107 U	1.07 U
Trichlorofluoromethane (CFC-11)	NA	NA	6.7	2.8	1.44	1.43	1.44	1.45	1.48	1.75 U	1.53	1.46
Trifluorotrchloroethane (Freon 113)	NA	NA	<3.0	<2.0	1.53 U	1.53 U	1.53 U	1.53 U	1.53 U	2.39 U	1.53 U	1.53 U
Vinyl Bromide (Bromoethene)	NA	NA	NA	NA	0.874 U	0.874 U	0.874 U	0.874 U	0.874 U	1.36 U	0.874 U	0.874 U
Vinyl chloride	0.2	6	<1.0	<1.0	0.051 U	0.051 U	0.051 U	0.511 U	0.051 U	0.798 U	0.051 U	0.511 U

Abbreviations:

- BASE: Building Assessment Survey Evaluation
- IA: Indoor Air
- AA: Ambient Air
- GS: Soil Gas (Sub-Slab)
- ug/m3: microgram per cubic meter
- U: compound not detected, number value is laboratory reporting limit

Notes Regarding Comparison Criteria and Results

1. No Further Action (NFA) Level – No further action is required when the detected concentration of the target compounds in both the Indoor Air (IA) and Sub Slab (GS) soil vapor samples are below the applicable concentration range provided by the May 2017 NYSDOH Decision Matrices (A or B) where “No Further Action” is recommended.
2. Results above that are in **BOLD** font are compounds detected at concentrations greater than the laboratory reporting limit. They do not exceed regulatory criteria unless they are also highlighted - see the notes below.
3. Target compounds detected at concentrations greater than the May 2017 NYSDOH Decision Matrix No Further Action levels for both the IA and SS samples are **highlighted yellow**.
4. Target compounds in Indoor Air and Ambient Air detected at concentrations greater than the USEPA 2001 BASE 75th Percentage comparison criteria are **highlighted blue**. This can be caused by emissions from nearby businesses, consumer products in the air space sampled or other similar common sources.
5. See the attached report for further details.

**TABLE I
SUMMARY OF AIR QUALITY ANALYTICAL RESULTS - 2021
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NY
FILE NO. 28590**

Location Group	Comparison Criteria				Comparison Sample	Comparison Sample	Carriage House SW		Townhouse 1		Townhouse 3		Townhouse 4	
	Location/Sample Description	NYSDOH Matrices	NYSDOH Matrices	BASE database			BASE database	Indoor Air - Carriage House SW	Subslab - Carriage House SW	Indoor Air - Townhouse 1	Subslab - Townhouse 1	Indoor Air - Townhouse 3	Subslab - Townhouse 3	Indoor Air - Townhouse 4
Location	Indoor Air	Sub Slab	Indoor Air	Outdoor Air	Outdoor Ambient Air	Outdoor Ambient Air	IACH-SW	SSCH-SW	IATH1	SSTH1	IATH3	SSTH3	IATH4	SSTH4
Sample Date	02/16/2021	02/16/2021	02/16/2021	02/22/2021	02/16/2021	02/22/2021	02/16/2021	02/16/2021	02/23/2021	02/23/2021	02/17/2021	02/17/2021	02/22/2021	02/22/2021
Sample Type	No Further	No Further	75th	75th	N	N	N	N	N	N	N	N	N	N
Sample Name	Action	Action	Percentage	Percentage	AA-25RVR-021621	AA-165WMAIN-022221	IAQ-25RVR-021621	SS-25RVR-021621	IAQ-4ORCH-022321	SS-4ORCH-022321	IAQ-9RVR-021721	SS-9RVR-021721	IAQ-165WMAIN-022221	SS-165WMAIN-022221
Lab Sample ID	May 2017	May 2017	USEPA, 2001	USEPA, 2001	L2108837-03	L2108837-10	L2108837-01	L2108837-02	L2108837-13	L2108837-14	L2108837-04	L2108837-05	L2108837-11	L2108837-12
Matrix	AA	AA	IA	GS	IA	GS	IA	GS	IA	GS	IA	GS	IA	GS
Volatile Organic Compounds (ug/m3)														
1,1,1-Trichloroethane	3 - 10	100 - 1000	10.8	1.7	0.109 U	0.109 U	0.109 U	1.09 U	0.109 U	1.09 U	0.109 U	1.09 U	0.109 U	1.09 U
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	1.37 U	1.37 U	1.37 U	1.37 U	1.37 U	1.37 U	1.37 U	1.37 U	1.37 U	1.37 U
1,1,2-Trichloroethane	NA	NA	<1.4	<1.4	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U	1.09 U
1,1-Dichloroethane	NA	NA	<0.5	<0.6	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U
1,1-Dichloroethene	0.2 - 1	6 - 60	<1.2	<1.2	0.079 U	0.079 U	0.079 U	0.793 U	0.079 U	0.793 U	0.079 U	0.793 U	0.079 U	0.793 U
1,2,4-Trichlorobenzene	NA	NA	<1.2	<1.2	1.48 U	1.48 U	1.48 U	1.48 U	1.48 U	1.48 U	1.48 U	1.48 U	1.48 U	1.48 U
1,2,4-Trimethylbenzene	NA	NA	5.1	3.1	0.983 U	0.983 U	0.983 U	1.98	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	1.32
1,2-Dibromoethane (Ethylene Dibromide)	NA	NA	<1.4	<1.4	1.54 U	1.54 U	1.54 U	1.54 U	1.54 U	1.54 U	1.54 U	1.54 U	1.54 U	1.54 U
1,2-Dichlorobenzene	NA	NA	<1.0	<1.0	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,2-Dichloroethane	NA	NA	<0.7	<0.6	0.809 U	0.809 U	1.93	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U	0.809 U
1,2-Dichloropropane	NA	NA	<1.6	<1.6	0.924 U	0.924 U	0.924 U	0.924 U	0.924 U	0.924 U	0.924 U	0.924 U	0.924 U	0.924 U
1,2-Dichlorotetrafluoroethane (CFC 114)	NA	NA	<3.0	<3.0	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,3,5-Trimethylbenzene	NA	NA	<4.6	<2.4	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U
1,3-Butadiene	NA	NA	<2.7	<2.8	0.442 U	0.442 U	0.442 U	0.442 U	0.442 U	0.442 U	0.442 U	0.442 U	0.442 U	0.442 U
1,3-Dichlorobenzene	NA	NA	<1.1	<1.0	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,4-Dichlorobenzene	NA	NA	1.4	<1.4	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,4-Dioxane	NA	NA	NA	NA	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	1.29	0.721 U	0.721 U
2,2,4-Trimethylpentane	NA	NA	NA	NA	0.934 U	0.934 U	1.32	0.934 U	0.934 U	0.934 U	0.934 U	0.934 U	0.934 U	0.934 U
2-Butanone (Methyl Ethyl Ketone)	NA	NA	7.5	5.7	1.47 U	1.47 U	1.6	1.93	1.47 U	4.63	3.89	9.32	1.55	14.4
2-Hexanone	NA	NA	NA	NA	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
4-Ethyl toluene	NA	NA	<3.1	<2.0	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U	0.983 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	NA	3	0.9	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U	2.05 U
Acetone	NA	NA	59.8	31.7	6.37	4.92	29	46.1	11.6	63.4	13.6	209	13.8	131
Allyl chloride	NA	NA	NA	NA	0.626 U	0.626 U	0.626 U	0.626 U	0.626 U	0.626 U	0.626 U	0.626 U	0.626 U	0.626 U
Benzene	NA	NA	5.1	3.7	0.639 U	0.639 U	3.19	0.815	0.76	0.639 U	0.642	0.888	0.728	0.783
Benzyl Chloride (alpha-Chlorotoluene)	NA	NA	<1.7	<1.6	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U	1.04 U
Bromodichloromethane	NA	NA	NA	NA	1.34 U	1.34 U	1.34 U	1.34 U	1.34 U	1.34 U	1.34 U	1.34 U	1.34 U	1.34 U
Bromoform	NA	NA	NA	NA	2.07 U	2.07 U	2.07 U	2.07 U	2.07 U	2.07 U	2.07 U	2.07 U	2.07 U	2.07 U
Bromomethane (Methyl Bromide)	NA	NA	<1.1	<1.0	0.777 U	0.777 U	0.777 U	0.777 U	0.777 U	0.777 U	0.777 U	0.777 U	0.777 U	0.777 U
Carbon disulfide	NA	NA	2.1	2.2	0.623 U	0.623 U	0.623 U	1.05	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U	0.623 U
Carbon tetrachloride	0.2 - 1	6 - 60	<1.1	<1.0	0.497	0.44	0.447	1.26 U	0.421	1.26 U	0.434	1.26 U	0.472	1.26 U
Chlorobenzene	NA	NA	<0.8	<0.8	0.921 U	0.921 U	0.921 U	0.921 U	0.921 U	0.921 U	0.921 U	0.921 U	0.921 U	0.921 U
Chloroethane	NA	NA	<1.0	<1.0	0.528 U	0.528 U	0.528 U	0.528 U	0.528 U	0.528 U	0.528 U	0.528 U	0.528 U	0.528 U
Chloroform (Trichloromethane)	NA	NA	<1.2	<0.6	0.977 U	0.977 U	1.53	0.977 U	0.977 U	0.977 U	0.977 U	0.977 U	0.977 U	0.977 U
Chloromethane (Methyl Chloride)	NA	NA	3.1	3	1.27	1.19	1.47	0.574	1.28	0.496	1.31	1.41	1.42	0.525
cis-1,2-Dichloroethene	0.2 - 1	6 - 60	<1.2	<1.2	0.079 U	0.079 U	0.079 U	0.793 U	0.079 U	0.793 U	0.079 U	0.793 U	0.079 U	0.793 U
cis-1,3-Dichloropropene	NA	NA	<2.0	<2.0	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U
Cyclohexane	NA	NA	NA	NA	0.688 U	0.688 U	0.688 U	0.688 U	0.688 U	0.688 U	0.688 U	0.688 U	0.688 U	0.688 U
Dibromochloromethane	NA	NA	NA	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
Dichlorodifluoromethane (CFC-12)	NA	NA	10.5	5.8	2.4	2.35	2.36	2.47	2.41	2.47	2.4	2.46	2.44	2.4
Ethanol	NA	NA	140	47	9.42 U	9.42 U	1160	226	105	215	119	256	782	220
Ethyl acetate	NA	NA	3.2	<1.2	1.8 U	1.8 U	4.22	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Ethylbenzene	NA	NA	3.4	1.6	0.869 U	0.869 U	0.869 U	1.1	0.869 U	1.3	0.869 U	1.23	0.869 U	2.77
Hexachlorobutadiene	NA	NA	<2.5	<2.6	2.13 U	2.13 U	2.13 U	2.13 U	2.13 U	2.13 U	2.13 U	2.13 U	2.13 U	2.13 U
Hexane	NA	NA	NA	NA	0.705 U	0.705 U	1.17	0.818	0.705 U	0.705 U	0.705 U	1.34	0.705 U	0.923
Isopropyl Alcohol (2-Propanol)	NA	NA	56	6.6	1.23 U	1.23 U	167	15.6	20.8	10	2.61	19.6	3.42	13.8

TABLE I
SUMMARY OF AIR QUALITY ANALYTICAL RESULTS - 2021
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NY
FILE NO. 28590

Location Group	Comparison Criteria				Comparison Sample	Comparison Sample	Carriage House SW		Townhouse 1		Townhouse 3		Townhouse 4	
	Location/ Sample Description	NYSDOH Matrices	NYSDOH Matrices	BASE database	BASE database	Outdoor Ambient Air	Outdoor Ambient Air	Indoor Air - Carriage House SW	Subslab - Carriage House SW	Indoor Air - Townhouse 1	Subslab - Townhouse 1	Indoor Air - Townhouse 3	Subslab - Townhouse 3	Indoor Air - Townhouse 4
Location	Indoor Air	Sub Slab	Indoor Air	Outdoor Air	AACH-SW	AATH4	IACH-SW	SSCH-SW	IATH1	SSTH1	IATH3	SSTH3	IATH4	SSTH4
Sample Date	No Further	No Further	75th	75th	02/16/2021	02/22/2021	02/16/2021	02/16/2021	02/23/2021	02/23/2021	02/17/2021	02/17/2021	02/22/2021	02/22/2021
Sample Type	No Further	No Further	75th	75th	N	N	N	N	N	N	N	N	N	N
Sample Name	Action	Action	Percentage	Percentage	AA-25RVR-021621	AA-165WMAIN-022221	IAQ-25RVR-021621	SS-25RVR-021621	IAQ-4ORCH-022321	SS-4ORCH-022321	IAQ-9RVR-021721	SS-9RVR-021721	IAQ-165WMAIN-022221	SS-165WMAIN-022221
Lab Sample ID Matrix	May 2017	May 2017	USEPA, 2001	USEPA, 2001	L2108837-03	L2108837-10	L2108837-01	L2108837-02	L2108837-13	L2108837-14	L2108837-04	L2108837-05	L2108837-11	L2108837-12
					AA	AA	IA	GS	IA	GS	IA	GS	IA	GS
Volatile Organic Compounds (ug/m3)														
m,p-Xylenes	NA	NA	12.2	7.3	1.74 U	1.74 U	2.39	3.84	1.74 U	4.3	1.95	4.16	1.74 U	9.08
Methyl Tert Butyl Ether	NA	NA	<6.4	<5.4	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U	0.721 U
Methylene chloride	3 - 10	100 - 1000	5	3	1.74 U	1.74 U	1.74 U	2.67	1.74 U	1.74 U	1.74 U	2.49	1.74 U	1.74 U
N-Heptane	NA	NA	NA	NA	0.82 U	0.82 U	0.848	3.9	0.82 U	2.3	0.82 U	3.62	0.82 U	3.53
o-Xylene	NA	NA	4.4	2.6	0.869 U	0.869 U	0.869 U	1.22	0.869 U	1.45	0.869 U	1.76	0.869 U	2.81
Styrene	NA	NA	<2.3	<2.0	0.852 U	0.852 U	1.01	0.852 U	0.852 U	0.852 U	0.852 U	0.852 U	0.852 U	0.852 U
Tert-Butyl Alcohol (tert-Butanol)	NA	NA	NA	NA	1.52 U	1.52 U	1.52 U	7.97	1.52 U	7.06	1.52 U	4.76	1.52 U	6.21
Tetrachloroethene	3 - 10	100 - 1000	5.9	3	0.136 U	0.136 U	0.197	1.36 U	0.136 U	1.36 U	0.136 U	1.36 U	0.325	1.36 U
Tetrahydrofuran	NA	NA	NA	NA	1.47 U	1.47 U	2.72	1.47 U	1.47 U	1.47 U	1.47 U	10.7	1.47 U	1.54
Toluene	NA	NA	25.9	16.3	0.754 U	0.754 U	6.03	1.33	1.42	1.32	1.46	2.8	3	2.06
trans-1,2-Dichloroethene	NA	NA	NA	NA	0.793 U	0.793 U	0.793 U	0.793 U	0.793 U	0.793 U	0.793 U	0.793 U	0.793 U	0.793 U
trans-1,3-Dichloropropene	NA	NA	<1.2	<1.2	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U	0.908 U
Trichloroethene	0.2 - 1	6 - 60	1.2	<1.6	0.107 U	0.107 U	0.107 U	1.07 U	0.107 U	1.07 U	0.107 U	1.07 U	0.107 U	1.07 U
Trichlorofluoromethane (CFC-11)	NA	NA	6.7	2.8	1.44	1.43	1.46	1.46	1.48	1.53	1.46	1.5	1.46	1.49
Trifluorotrchloroethane (Freon 113)	NA	NA	<3.0	<2.0	1.53 U	1.53 U	1.53 U	1.53 U	1.53 U	1.53 U	1.53 U	1.53 U	1.53 U	1.53 U
Vinyl Bromide (Bromoethene)	NA	NA	NA	NA	0.874 U	0.874 U	0.874 U	0.874 U	0.874 U	0.874 U	0.874 U	0.874 U	0.874 U	0.874 U
Vinyl chloride	0.2	6	<1.0	<1.0	0.051 U	0.051 U	0.051 U	0.511 U	0.051 U	0.511 U	0.051 U	0.511 U	0.051 U	0.511 U

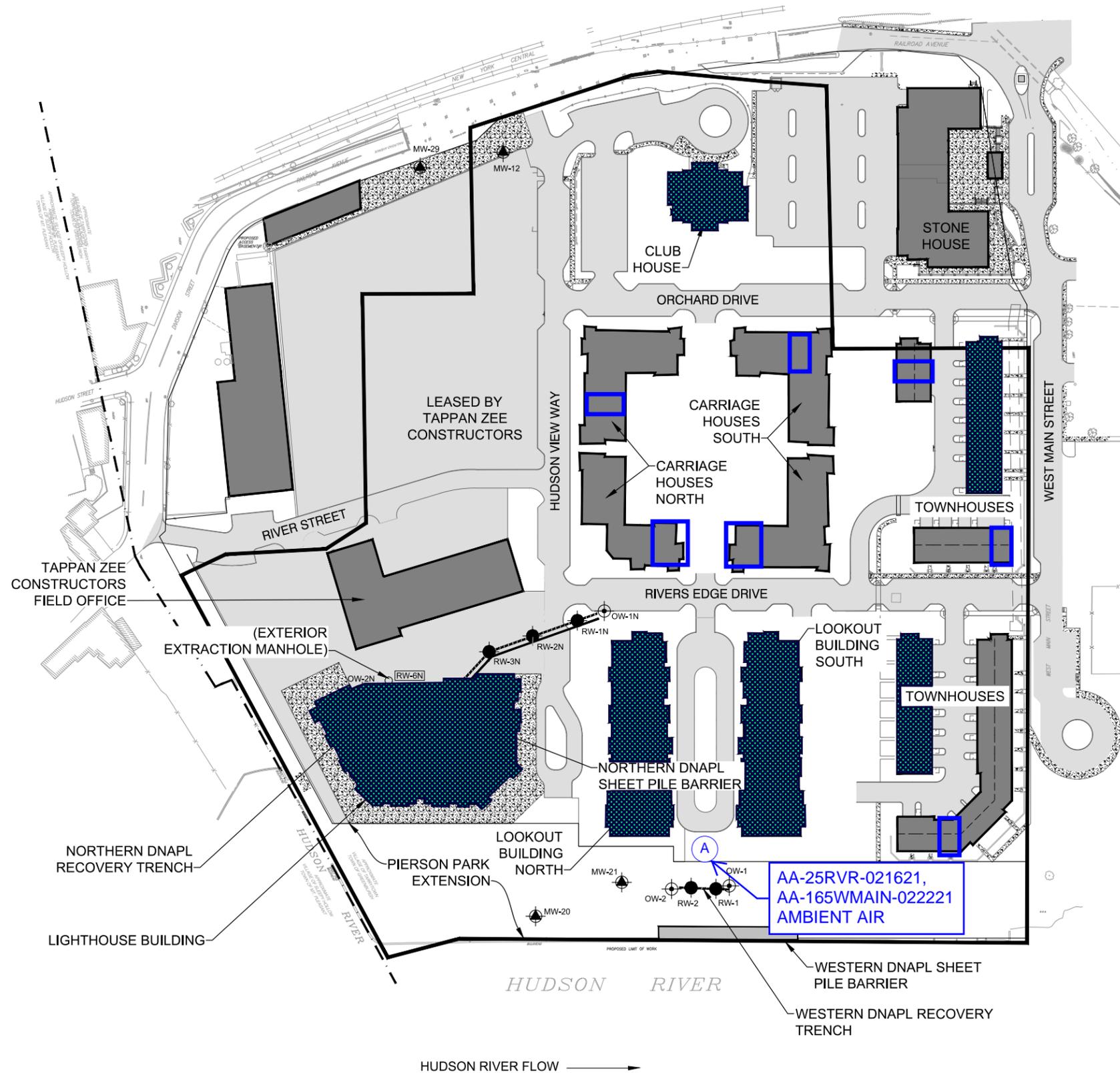
- Abbreviations:**
- BASE: Building Assessment Survey Evaluation
 - IA: Indoor Air
 - AA: Ambient Air
 - GS: Soil Gas (Sub-Slab)
 - ug/m3: microgram per cubic meter
 - U: compound not detected, number value is laboratory reporting limit

Notes Regarding Comparison Criteria and Results

1. No Further Action (NFA) Level – No further action is required when the detected concentration of the target compounds in both the Indoor Air (IA) and Sub Slab (GS) soil vapor samples are below the applicable concentration range provided by the May 2017 NYSDOH Decision Matrices (A or B) where “No Further Action” is recommended.
2. Results above that are in **BOLD** font are compounds detected at concentrations greater than the laboratory reporting limit. They do not exceed regulatory criteria unless they are also highlighted - see the notes below.
3. Target compounds detected at concentrations greater than the May 2017 NYSDOH Decision Matrix No Further Action levels for both the IA and SS samples are **highlighted yellow**.
4. Target compounds in Indoor Air and Ambient Air detected at concentrations greater than the USEPA 2001 BASE 75th Percentage comparison criteria are **highlighted blue**. This can be caused by emissions from nearby businesses, consumer products in the air space sampled or other similar common sources.
5. See the attached report for further details.

FIGURE SET

**Overall Site Plan and Individual Unit Sample Locations,
updated April 2021**



LEGEND

- A AMBIENT AIR SAMPLE LOCATION, SAME LOCATION EACH WEEK
- SUB-SLAB AND INDOOR AIR SAMPLE COLLECTED IN THE SAME UNIT
- MARCH 2020 SAMPLING COMPLETED
- APPROXIMATE AREA ENCOMPASSED BY THE BROWNFIELD CLEAN-UP AGREEMENT #C360064
- LANDSCAPED AREAS (THESE AREAS CONTAIN DEMARCATION LAYER BELOW CLEAN FILL AND LANDSCAPING)
- PAVED WALKS, PATIOS, OR COURTYARDS
- EXISTING BUILDINGS
- ROADS AND PARKING AREAS

NOTES

1. BASE MAP IS BASED ON CAD DRAWING ENTITLED "PH1_10399-08_PHASE.DWG," DATED 1 JULY 2009 FROM CHAZEN COMPANIES OF GLENN FALLS, NEW YORK AND "PARKING ALLOCATION DIAGRAM," DATED 7 MARCH 2013 FROM LESSARD GROUP, INC., VIENNA, VIRGINIA.



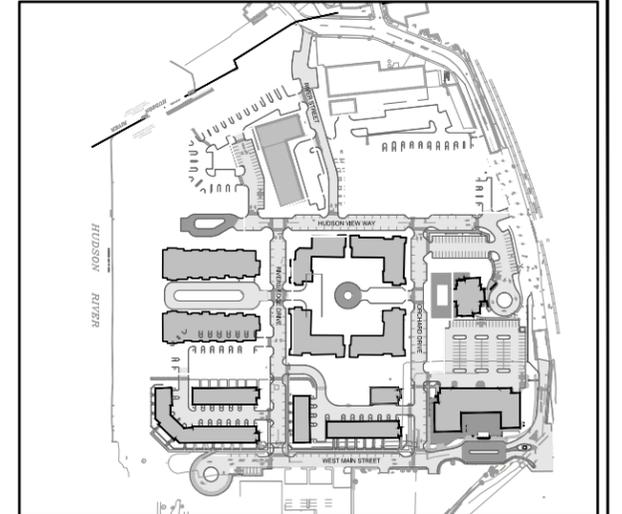
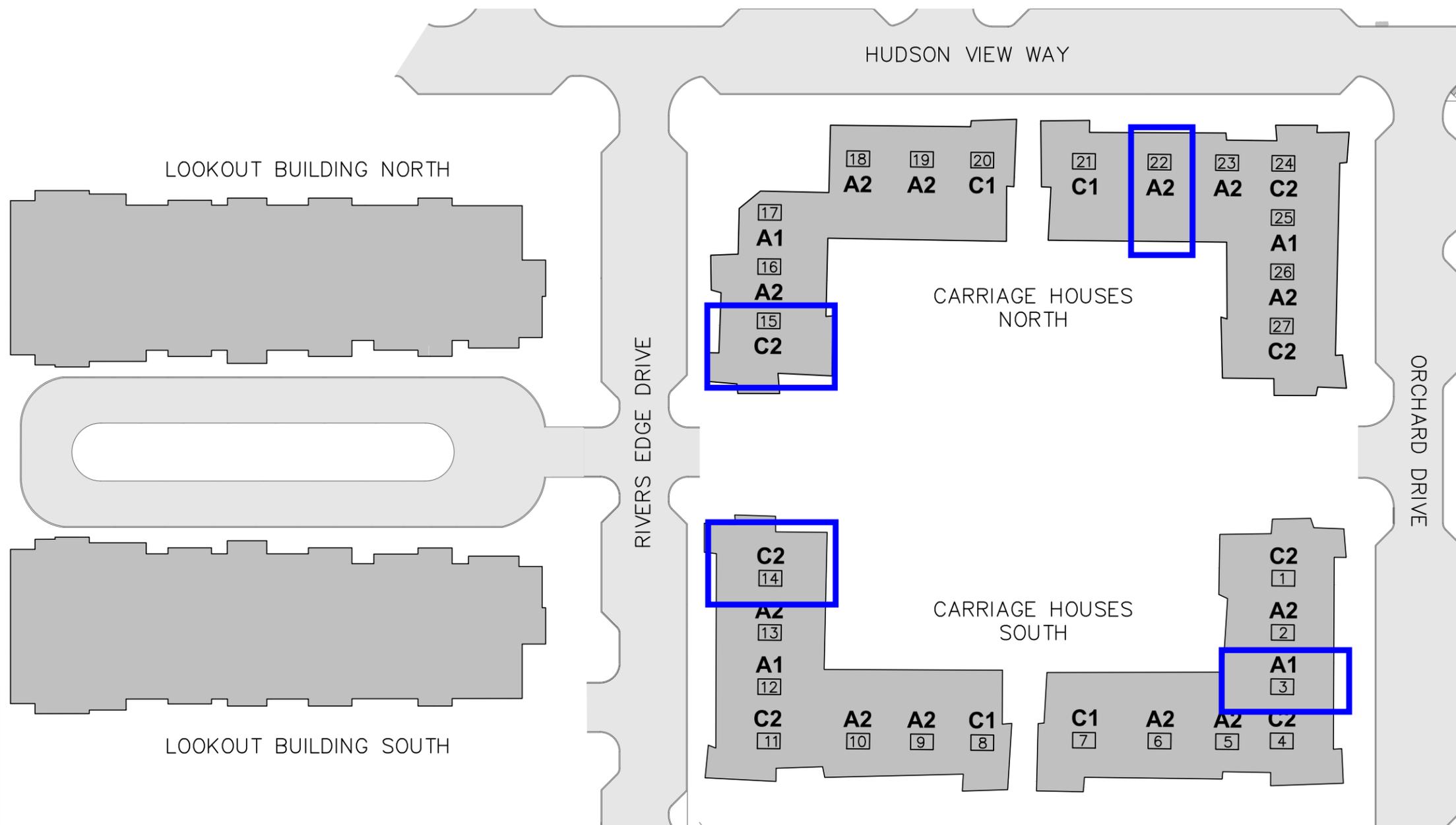
HALEY ALDRICH
 TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

INDOOR AIR QUALITY
 ASSESSMENT - SITE OVERVIEW

SCALE: AS SHOWN
 APRIL 2021

FIGURE 1

G:\28590\GLOBAL\CADD\DRAWINGS\28590-000-0014 CARRIAGE HOUSE SOIL VAPOR SYSTEM R3.DWG



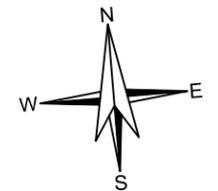
KEYMAP
SCALE 1" = 500'

LEGEND:

- 23 UNIT NUMBER
- A1** UNIT FLOOR PLAN TYPE

NOTES:

1. THIS PLAN IS ADAPTED FROM CHAZEN COMPANIES DRAWING FILE "XLAYOUT_10399-00.DWG".

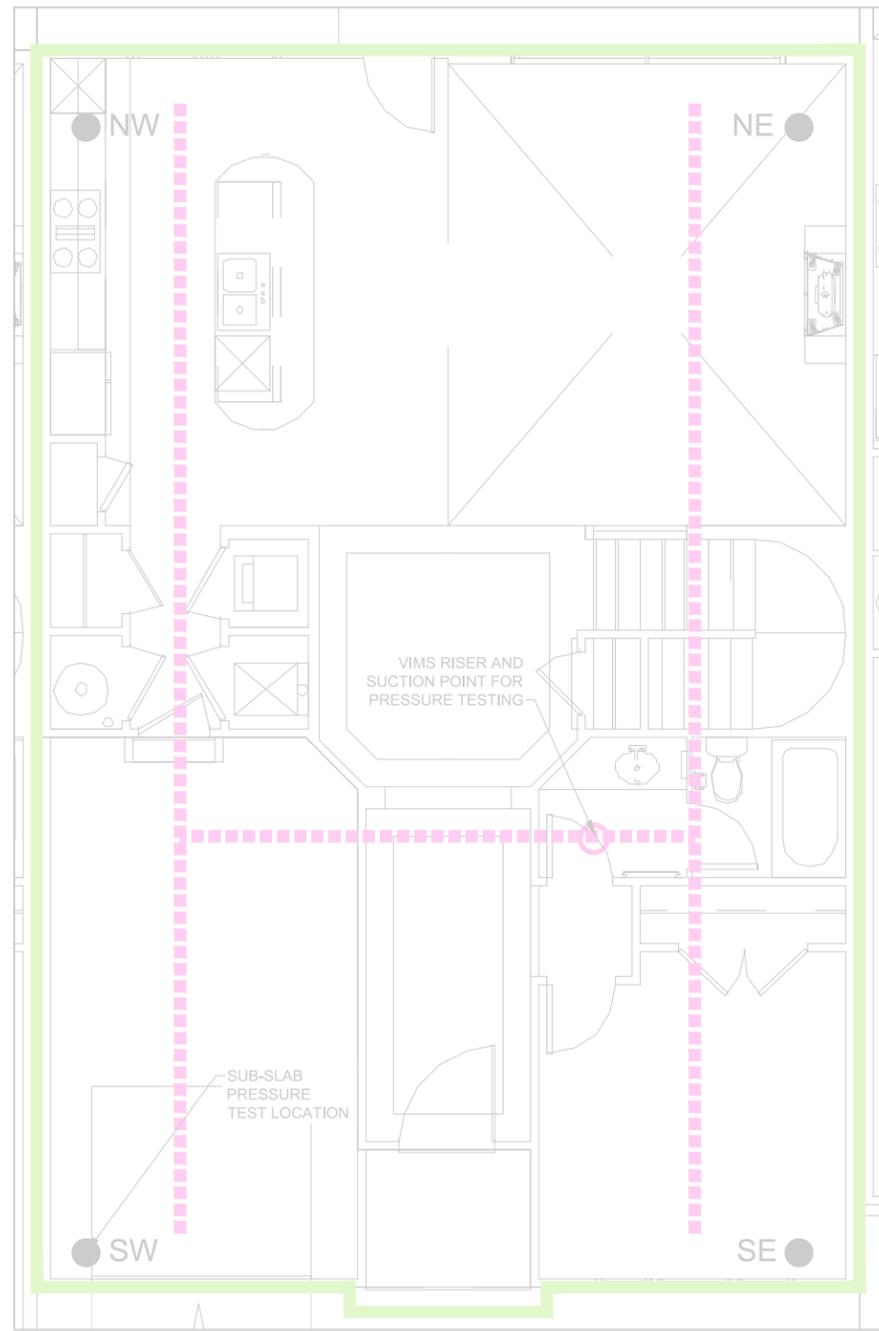


HALEY ALDRICH
 TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE No. C360064

UNIT LAYOUT WITH FLOOR PLAN TYPES - CARRIAGE HOUSES

SCALE: AS SHOWN
APRIL 2021

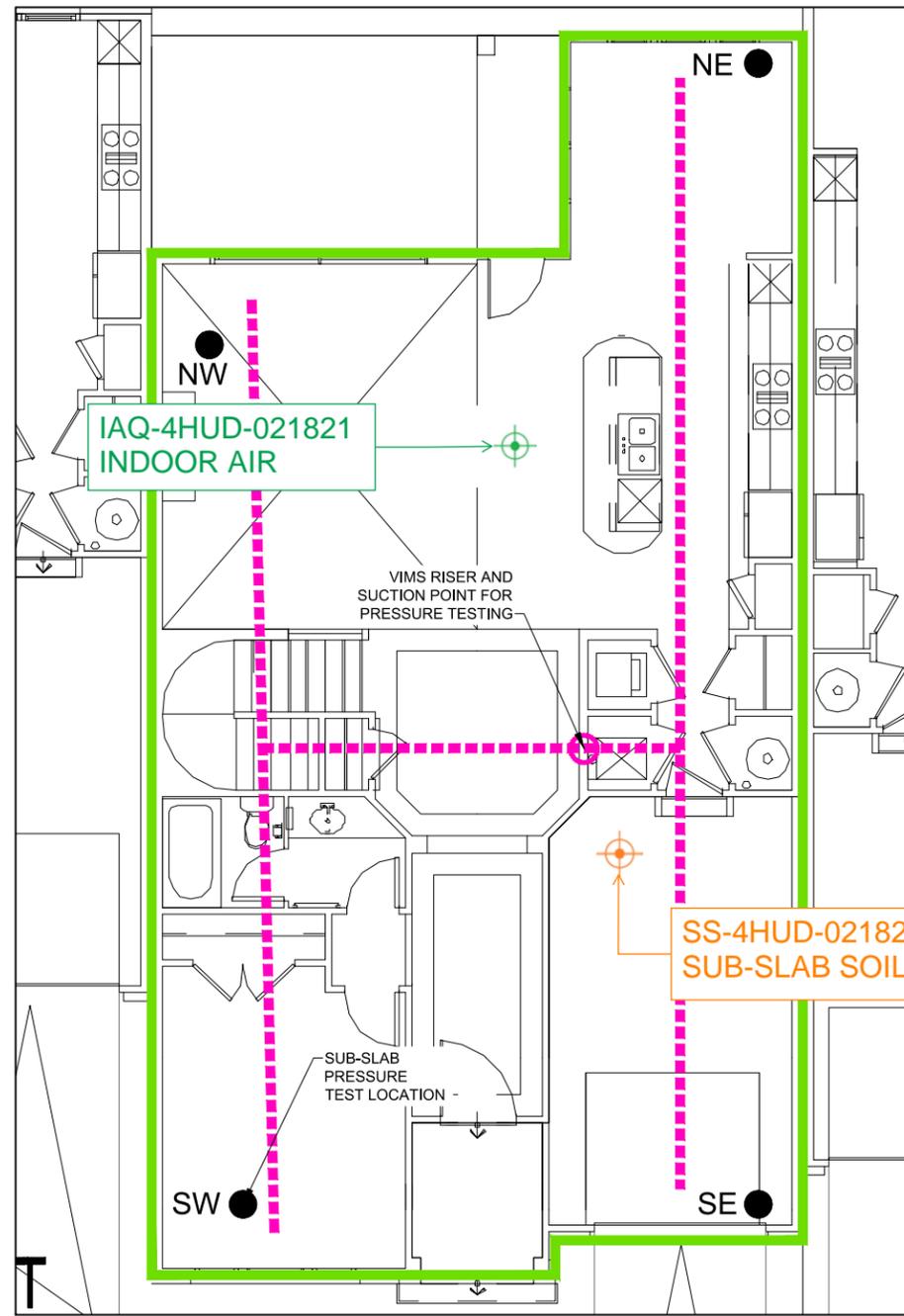
FIGURE 2



UNIT A1 - GROUND FLOOR



POST CONSTRUCTION
APPROXIMATE VIMS TEST LOCATIONS



UNIT A2 - GROUND FLOOR



POST CONSTRUCTION
APPROXIMATE VIMS TEST LOCATIONS

LEGEND:

- SUB-SLAB PRESSURE TEST LOCATION
- VIMS RISER
- NW TEST LOCATION IDENTIFICATION
- 4" DIA PERFORATED PIPE
- ===== OUTER BUILDING WALL

NOTES:

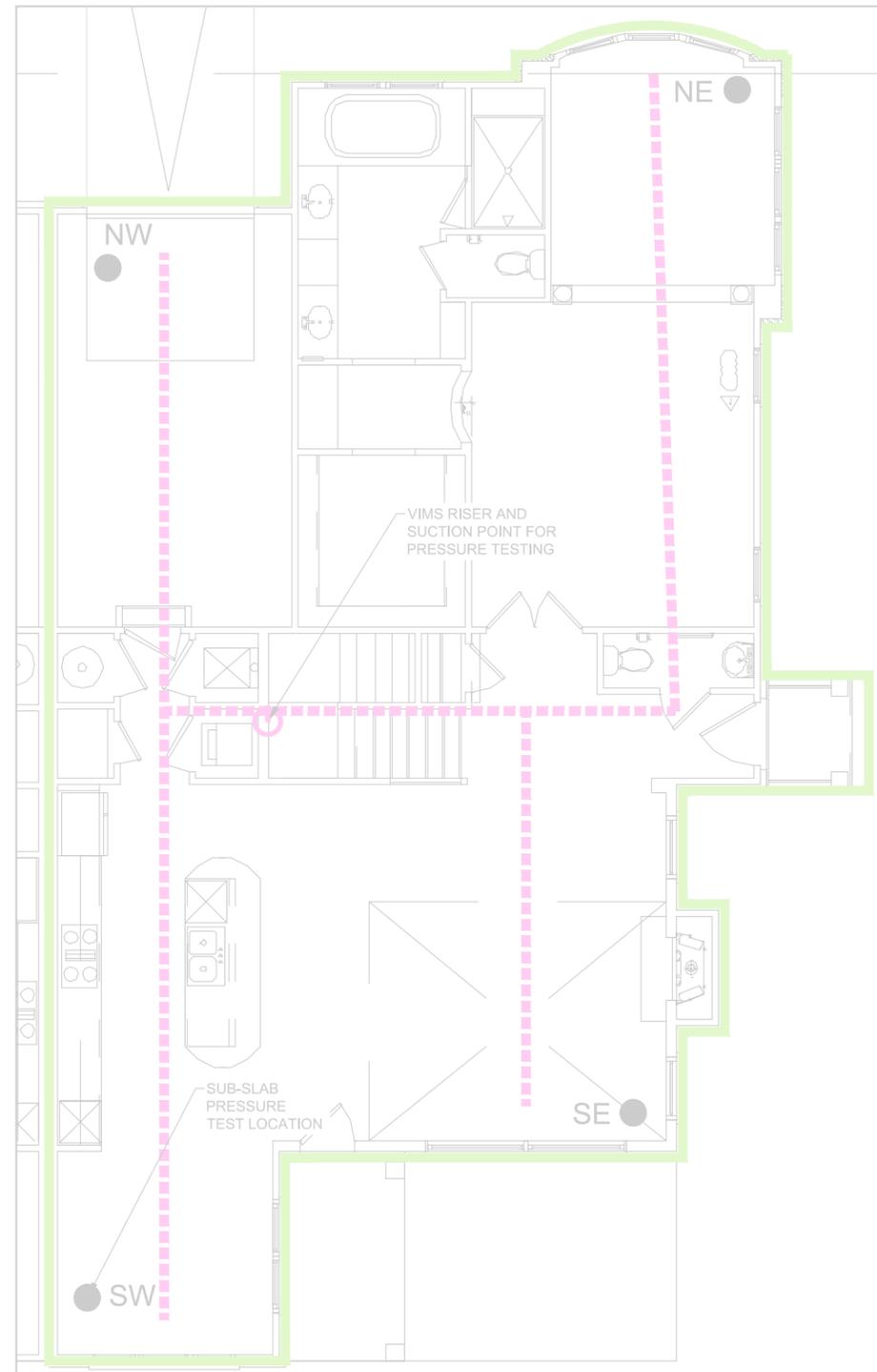
1. VIMS = VAPOR INTRUSION MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. VIMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.



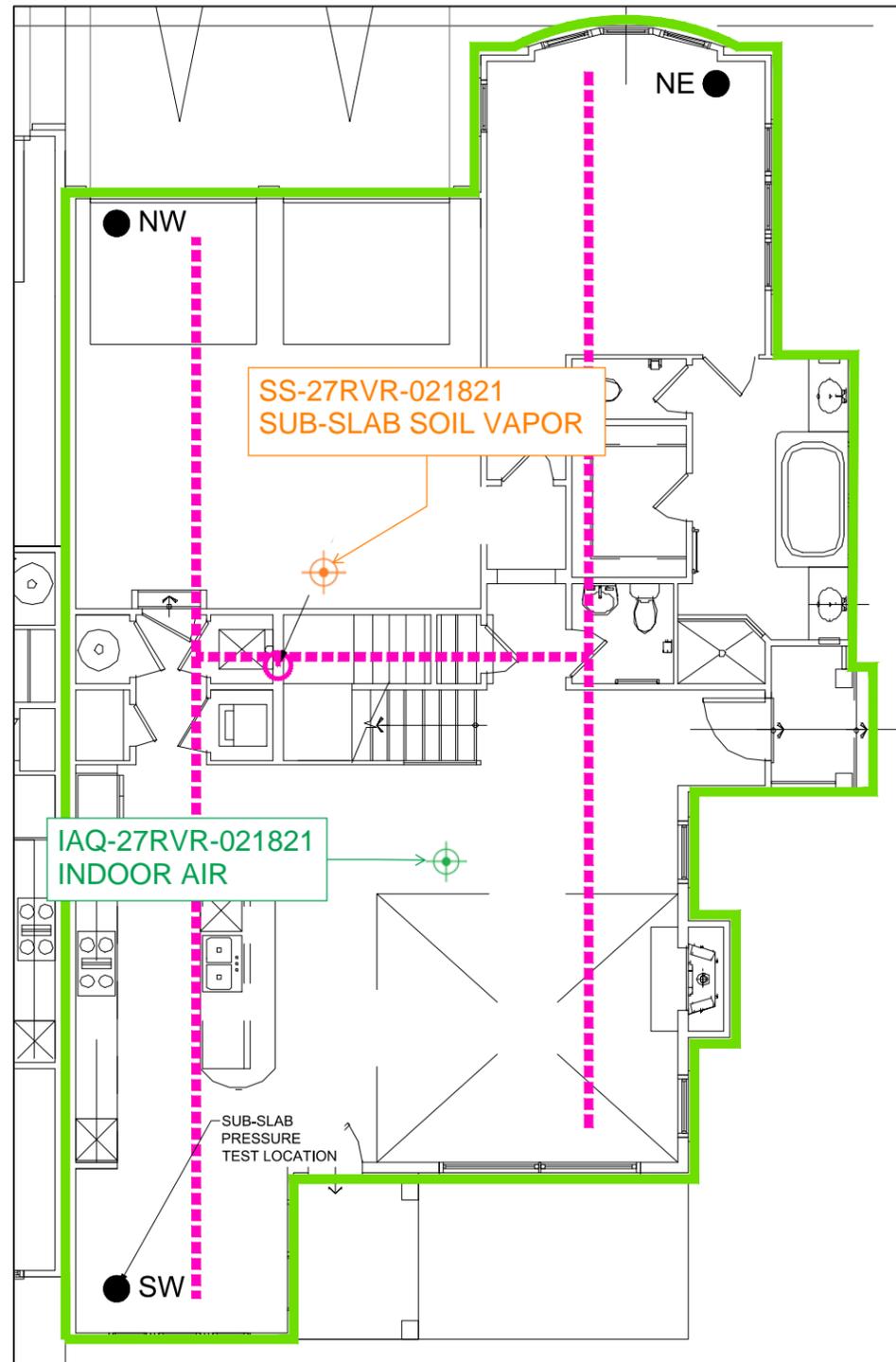
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE No. C360064

CARRIAGE HOUSE - NORTHEAST:
TYPICAL FLOORPLAN

SCALE: NOT TO SCALE
APRIL 2021



UNIT C1 - GROUND FLOOR
 0 5 10
 SCALE IN FEET
 POST CONSTRUCTION
 APPROXIMATE VIMS TEST LOCATIONS



UNIT C2 - GROUND FLOOR
 0 5 10
 SCALE IN FEET
 POST CONSTRUCTION
 APPROXIMATE VIMS TEST LOCATIONS

LEGEND:

- SUB-SLAB PRESSURE TEST LOCATION
- VIMS RISER
- NW TEST LOCATION IDENTIFICATION
- ▬ 4" DIA PERFORATED PIPE
- ▬ OUTER BUILDING WALL

NOTES:

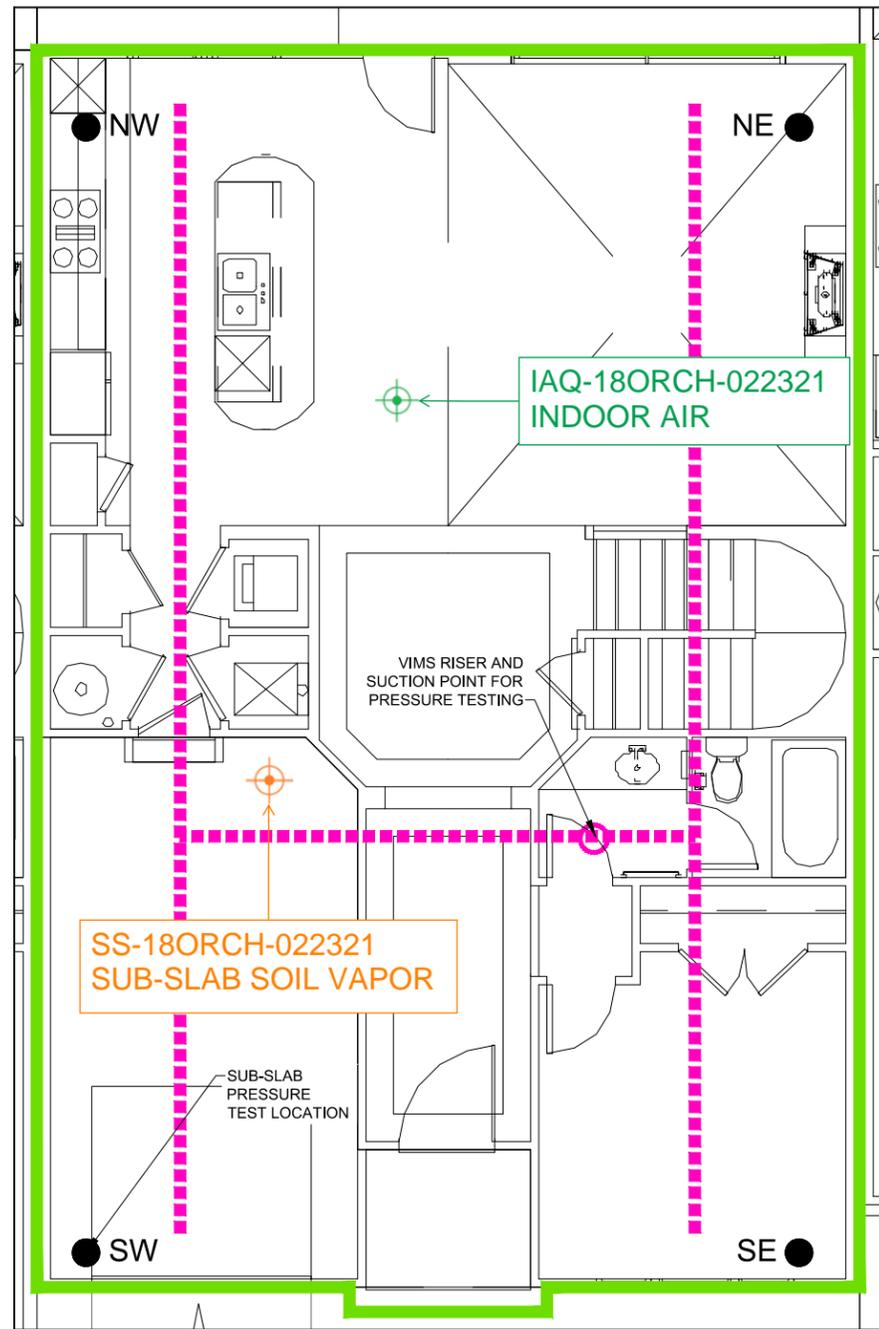
1. VIMS = VAPOR INTRUSION MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. VIMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.



TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE No. C360064

**CARRIAGE HOUSE - NORTHWEST:
 TYPICAL FLOORPLAN**

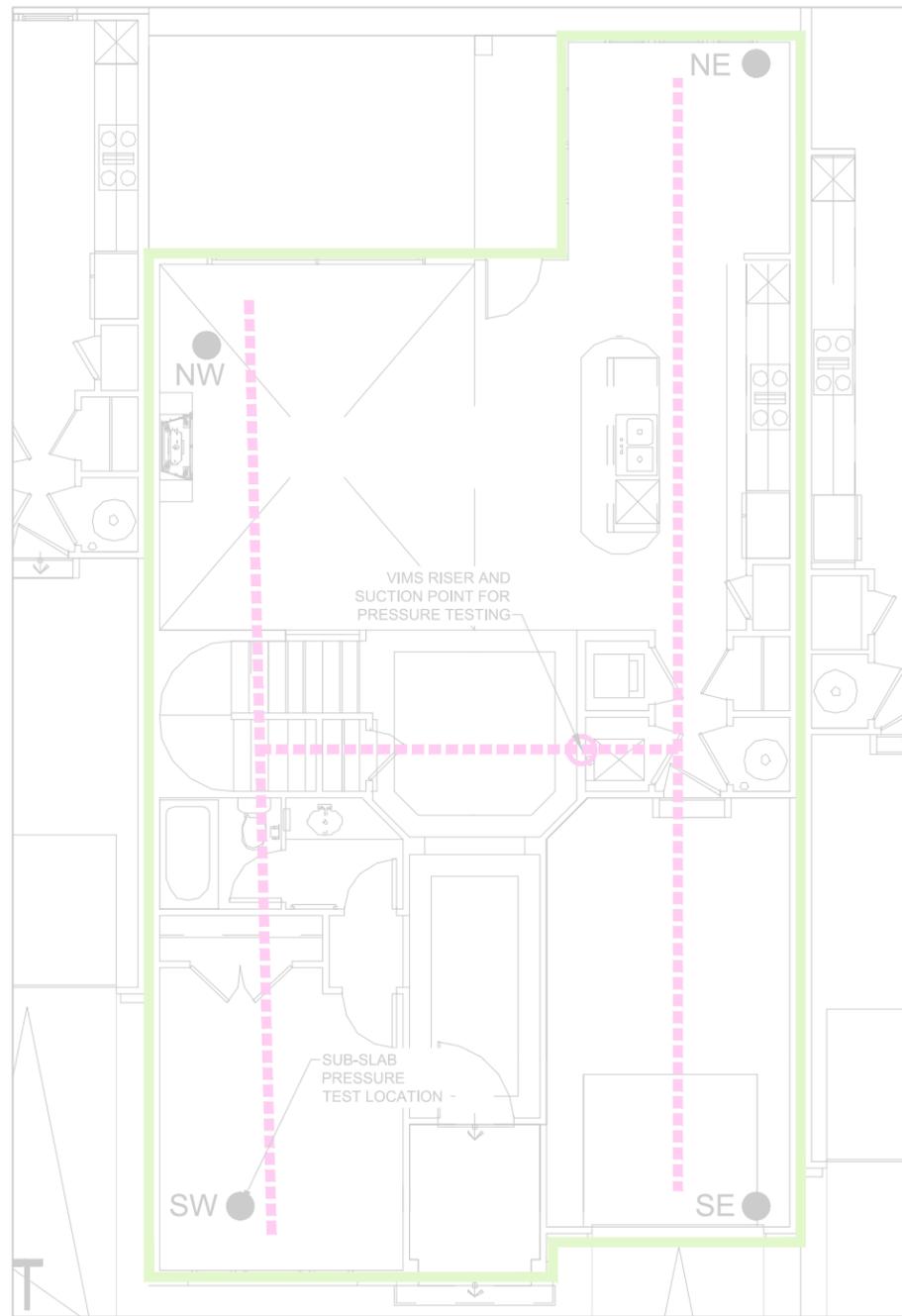
SCALE: NOT TO SCALE
 APRIL 2021



UNIT A1 - GROUND FLOOR



POST CONSTRUCTION
APPROXIMATE VIMS TEST LOCATIONS



UNIT A2 - GROUND FLOOR



POST CONSTRUCTION
APPROXIMATE VIMS TEST LOCATIONS

LEGEND:

- SUB-SLAB PRESSURE TEST LOCATION
- VIMS RISER
- NW TEST LOCATION IDENTIFICATION
- 4" DIA PERFORATED PIPE
- OUTER BUILDING WALL

NOTES:

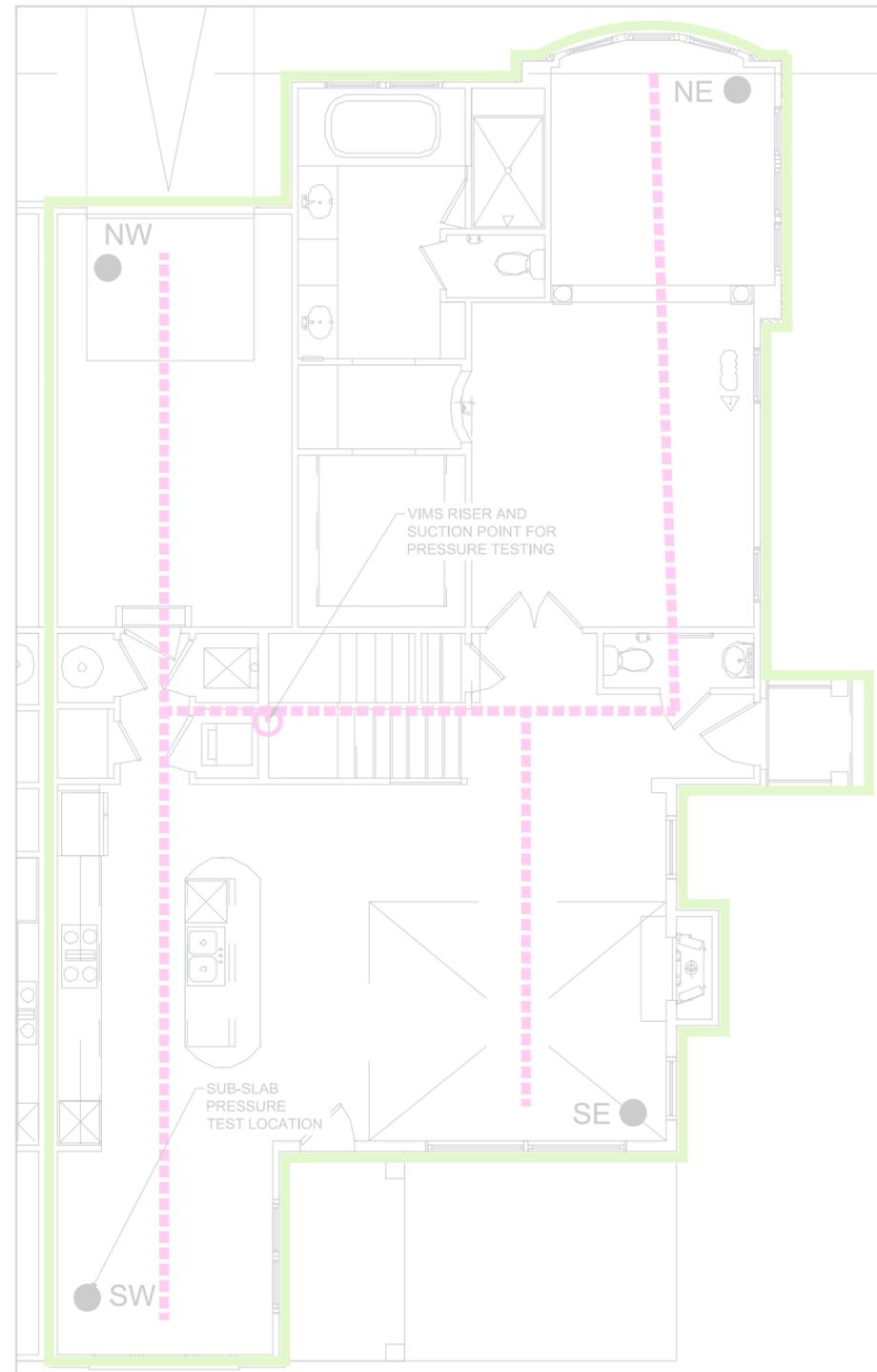
1. VIMS = VAPOR INTRUSION MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. VIMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.



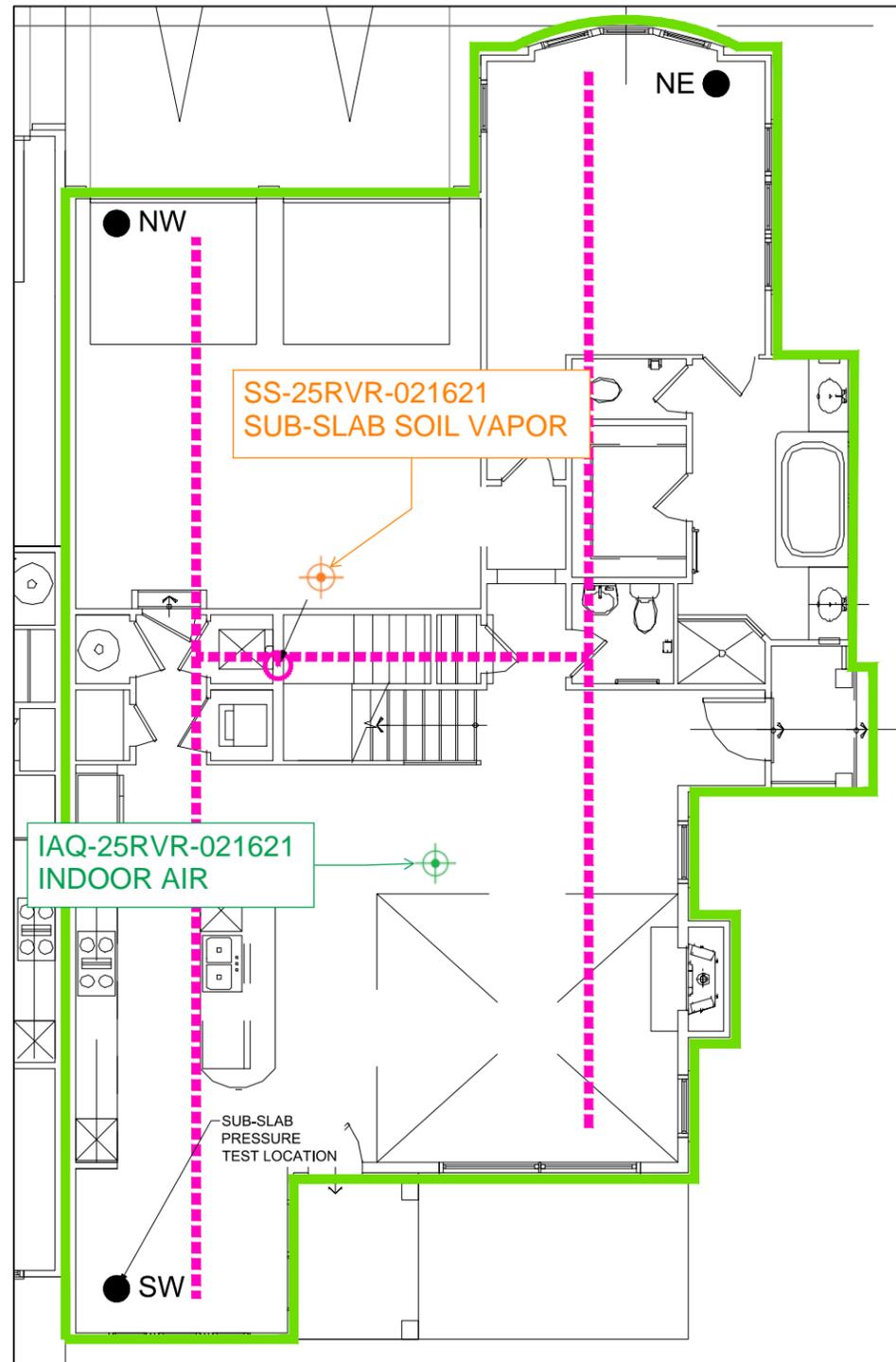
TARRYTOWN FORMER MGP SITE
TARRYTOWN, NEW YORK
FERRY LANDINGS, LLC
NYSDEC SITE No. C360064

**CARRIAGE HOUSE - SOUTHEAST:
TYPICAL FLOORPLAN**

SCALE: NOT TO SCALE
APRIL 2021



UNIT C1 - GROUND FLOOR
 0 5 10
 SCALE IN FEET
 POST CONSTRUCTION
 APPROXIMATE VIMS TEST LOCATIONS



UNIT C2 - GROUND FLOOR
 0 5 10
 SCALE IN FEET
 POST CONSTRUCTION
 APPROXIMATE VIMS TEST LOCATIONS

LEGEND:

- SUB-SLAB PRESSURE TEST LOCATION
- VIMS RISER
- NW TEST LOCATION IDENTIFICATION
- 4" DIA PERFORATED PIPE
- OUTER BUILDING WALL

NOTES:

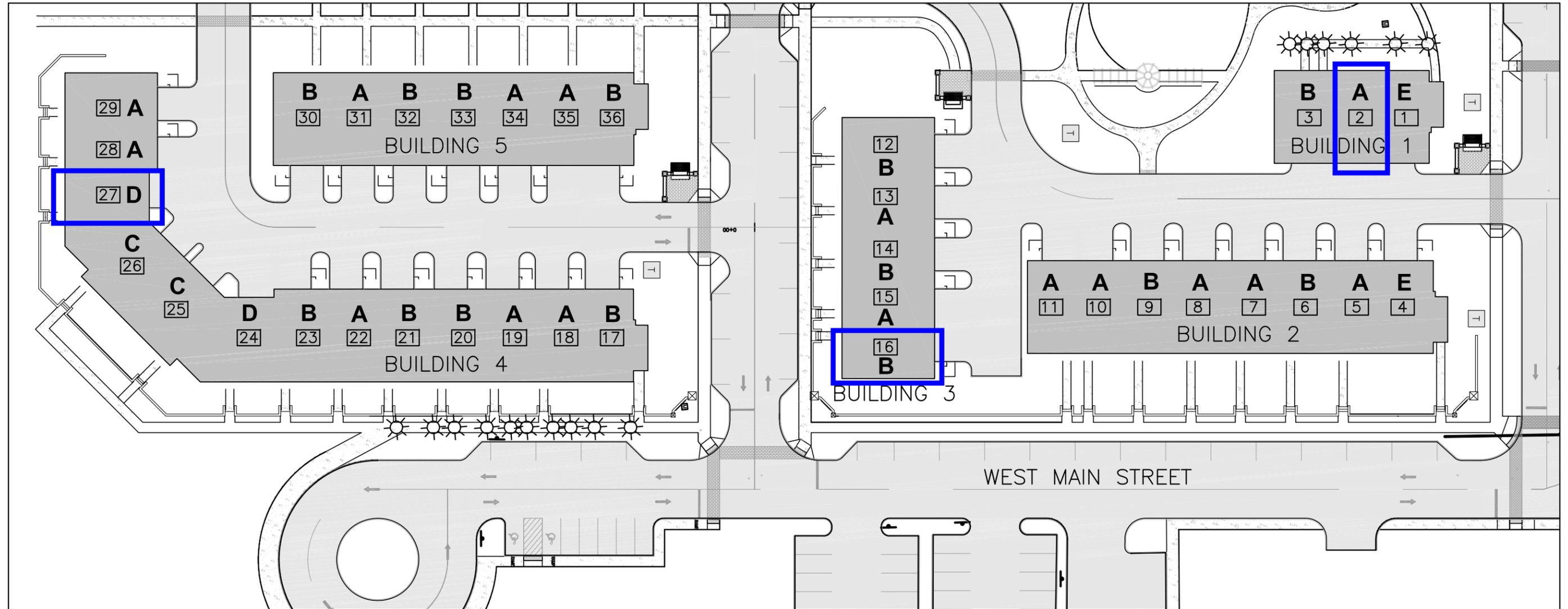
1. VIMS = VAPOR INTRUSION MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. VIMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.



TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NEW YORK
 FERRY LANDINGS, LLC
 NYSDEC SITE No. C360064

**CARRIAGE HOUSE - SOUTHWEST:
 TYPICAL FLOORPLAN**

SCALE: NOT TO SCALE
 APRIL 2021

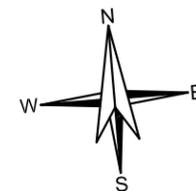


LEGEND:

- 23 UNIT NUMBER
- A** UNIT FLOOR PLAN TYPE

NOTES:

1. THIS PLAN IS ADAPTED FROM CHAZEN COMPANIES DRAWING FILE "XLAYOUT_10399-00.DWG".
2. GEOTHERMAL SYSTEM INSTALLATION LOCATIONS ARE APPROXIMATE.
3. FOR SPECIFIC SAMPLE LOCATIONS WITHIN UNITS, SEE FIGURES 7 AND 8.

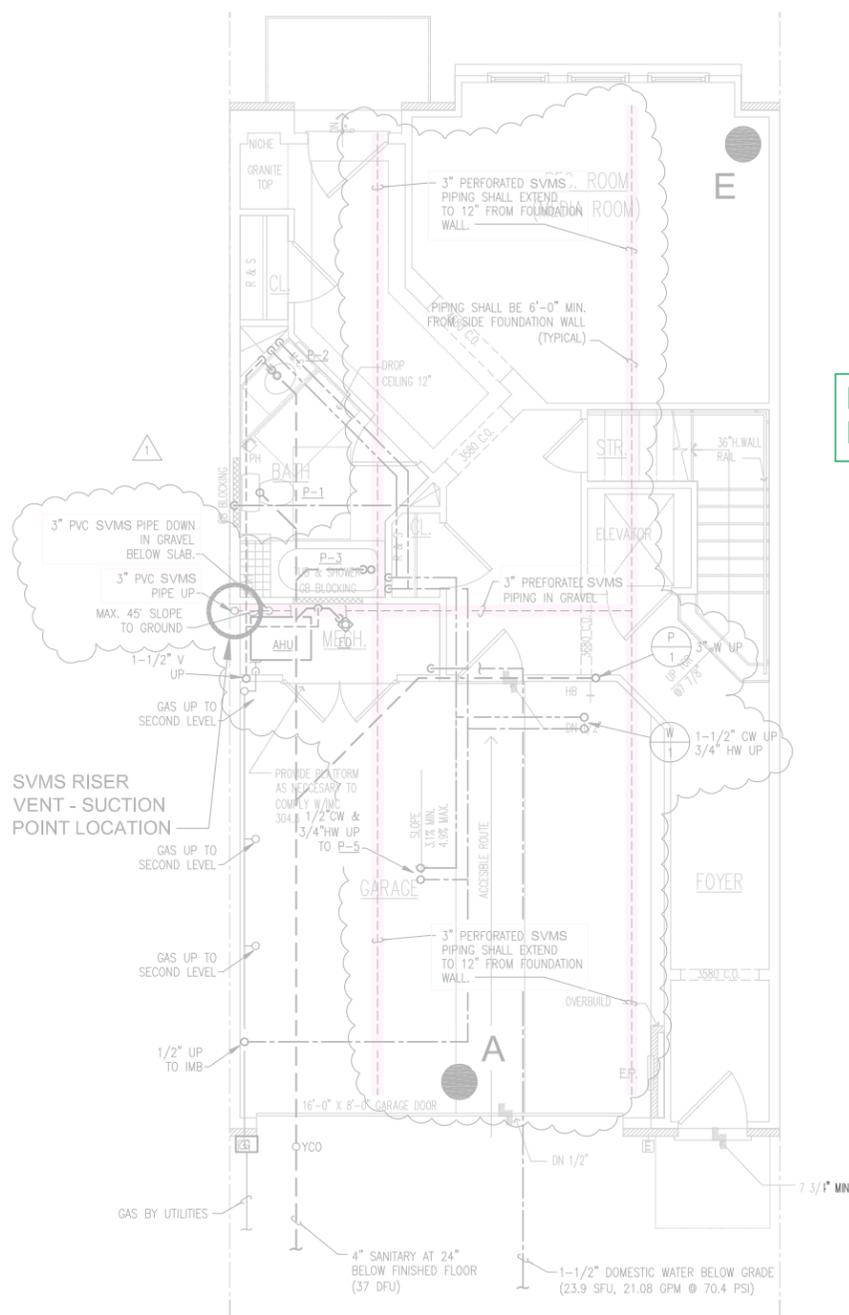


HALEY ALDRICH
 TARRYTOWN FORMER MGP SITE
 TARRYTOWN, NY
 FERRY LANDINGS, LLC
 NYSDEC SITE NO. C360064

TOWNHOUSE BUILDING LAYOUT

SCALE: AS SHOWN
 APRIL 2021

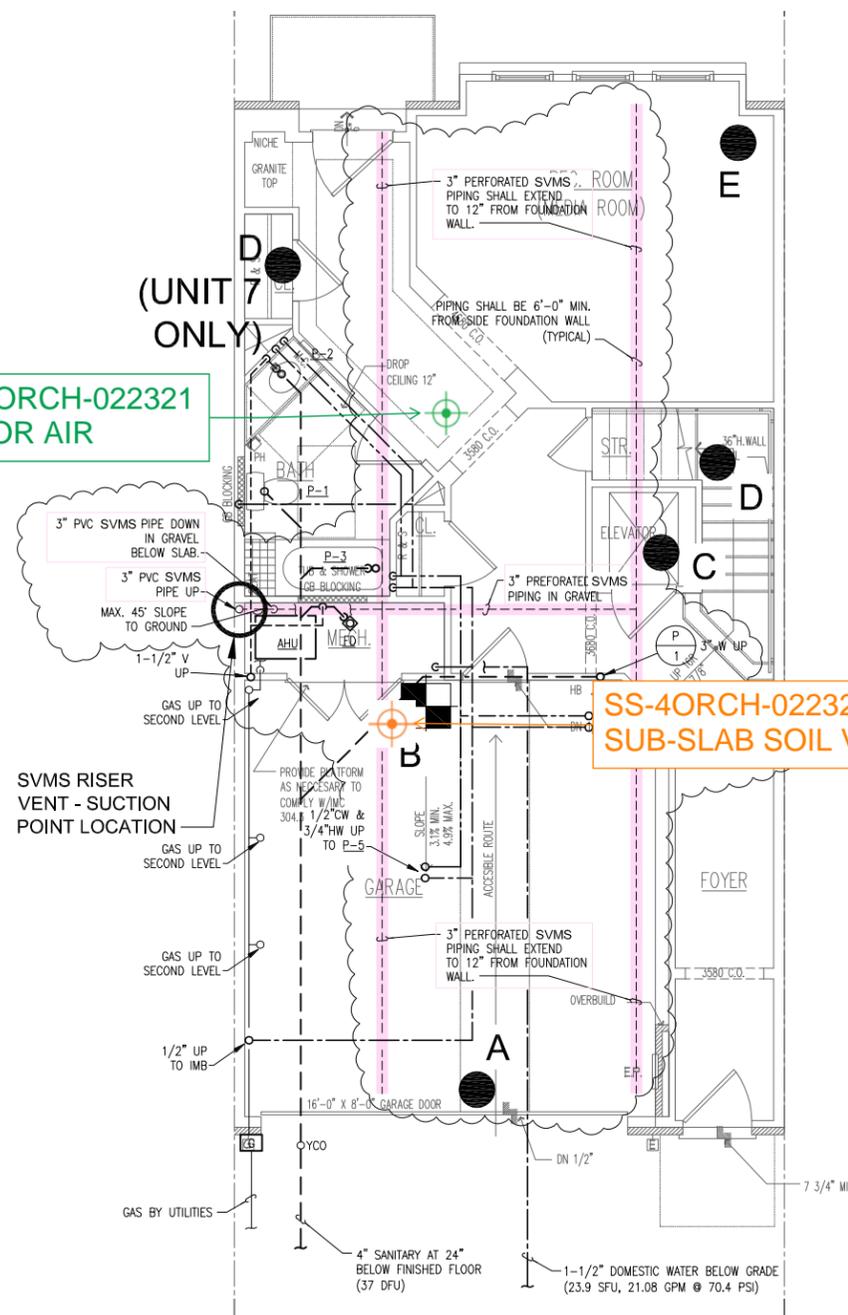
FIGURE 7



UNIT A - GROUND FLOOR
SCALE: 1/4" = 1'-0"



POST CONSTRUCTION
APPROXIMATE SVMS TEST LOCATIONS
(TYP - UNIT A, EXCEPT CENTER UNIT)



UNIT A - GROUND FLOOR
SCALE: 1/4" = 1'-0"



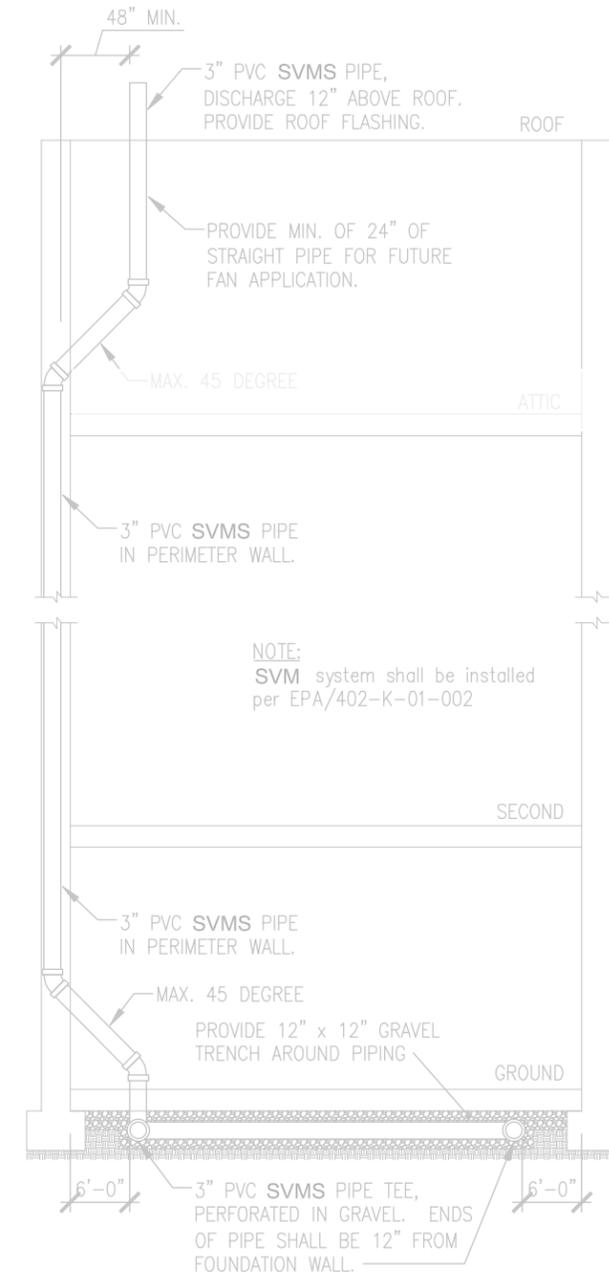
POST CONSTRUCTION
APPROXIMATE SVMS TEST LOCATIONS
(TYP. - CENTER UNIT A)

LEGEND:

- SUB-SLAB VACUUM TEST
- SOIL VAPOR SAMPLE AND SUB-SLAB PRESSURE TEST
- A TEST LOCATION IDENTIFICATION

NOTES:

1. SVMS = SOIL VAPOR MANAGEMENT SYSTEM
2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. SVMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.



SVSM PROFILE (TYP - ALL UNITS)
N.T.S.

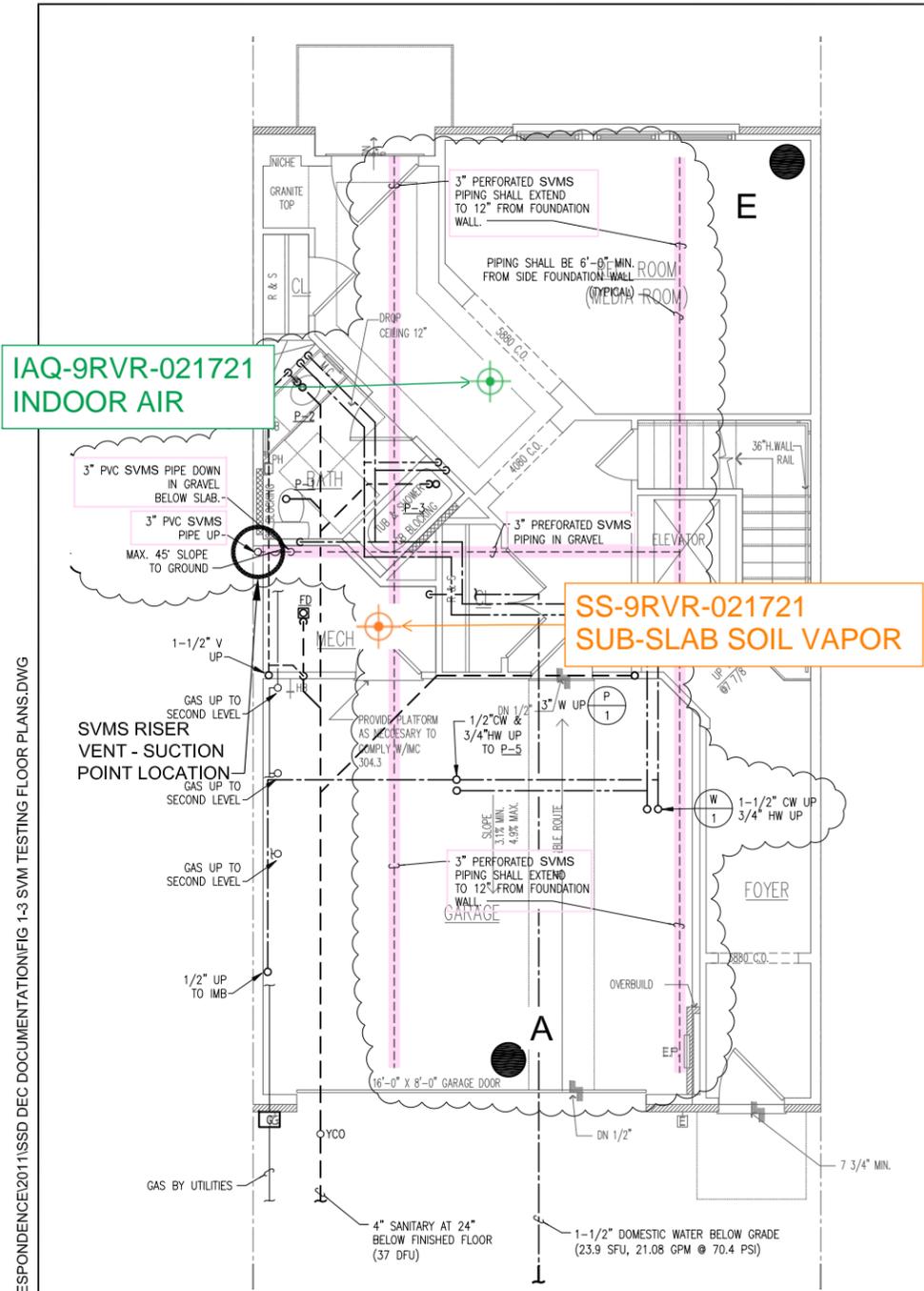


TARRYTOWN PROPERTY DEVELOPMENT
FERRY LANDINGS, LLC
SITE NO. C360064
BROWNFIELD CLEANUP INDEX NO. W3-1007-04-06

TOWNHOUSE UNIT A:
TYPICAL FLOORPLAN

SCALE: NOT TO SCALE
APRIL 2021

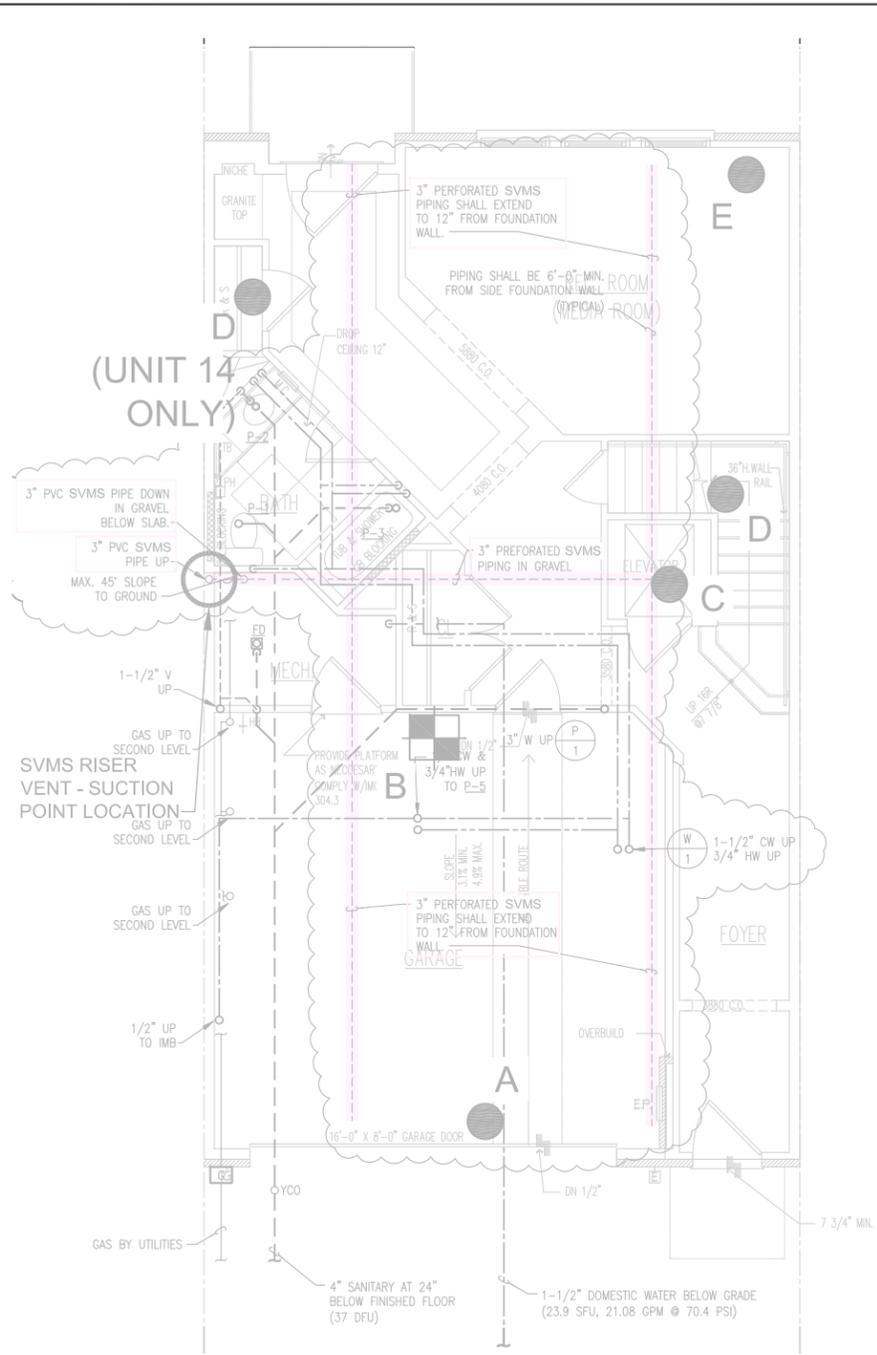
G:\PROJECTS\28590\017 SITE DEVELOPMENT SERVICES\CORRESPONDENCE\2011\SSD DEC DOCUMENTATION\FIG 1-3 SVM TESTING FLOOR PLANS.DWG



UNIT B - GROUND FLOOR
SCALE: 1/4" = 1'-0"

POST CONSTRUCTION
APPROXIMATE SVMS TEST LOCATIONS
(TYP - UNIT B, EXCEPT CENTER UNIT)

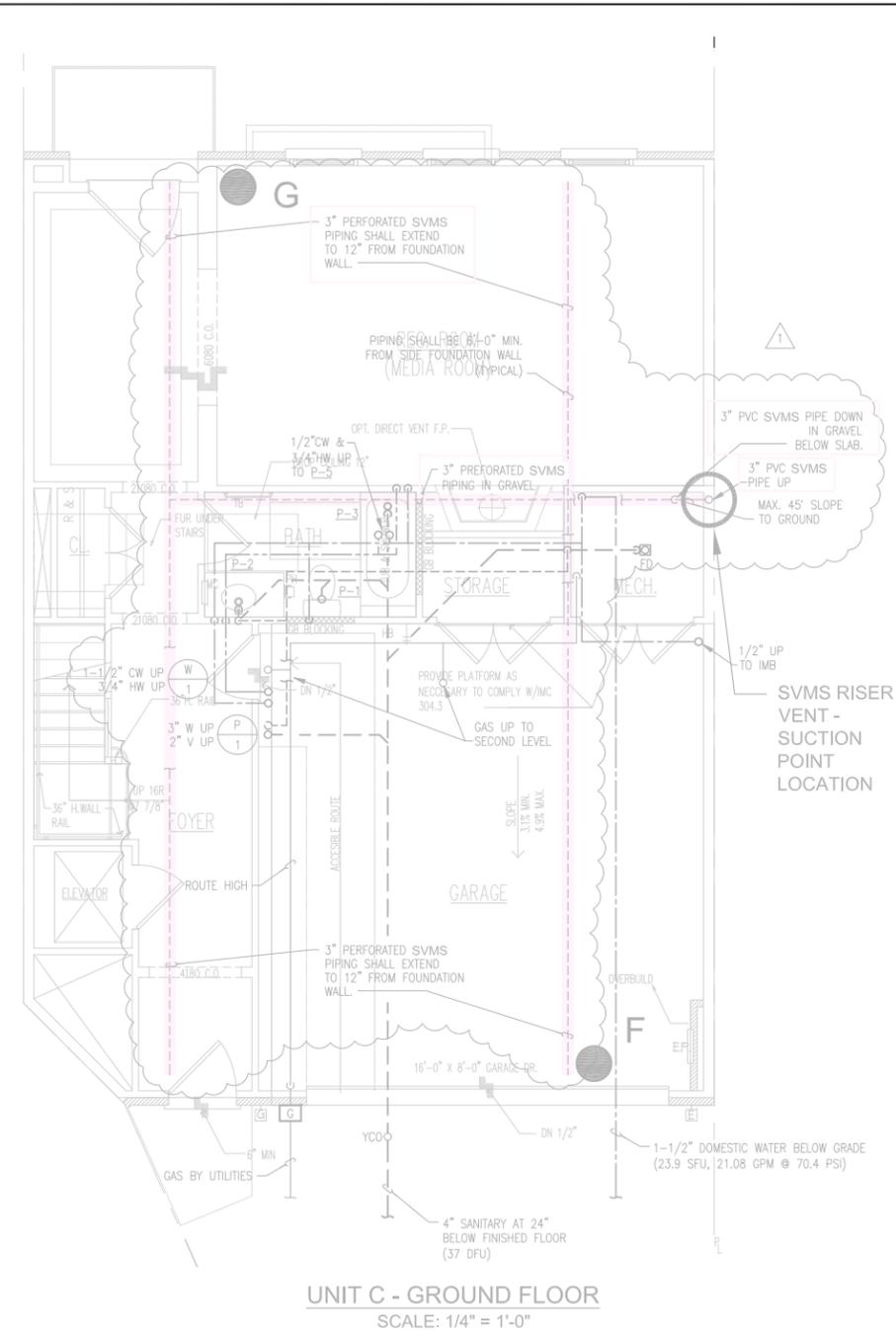
- LEGEND:**
- SUB-SLAB VACUUM TEST
 - SOIL VAPOR SAMPLE AND SUB-SLAB PRESSURE TEST
 - A TEST LOCATION IDENTIFICATION



UNIT B - GROUND FLOOR
SCALE: 1/4" = 1'-0"

POST CONSTRUCTION
APPROXIMATE SVMS TEST LOCATIONS
(TYP. - CENTER UNIT B)

- NOTES:**
- SVMS = SOIL VAPOR MANAGEMENT SYSTEM
 - GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. SVMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.



UNIT C - GROUND FLOOR
SCALE: 1/4" = 1'-0"

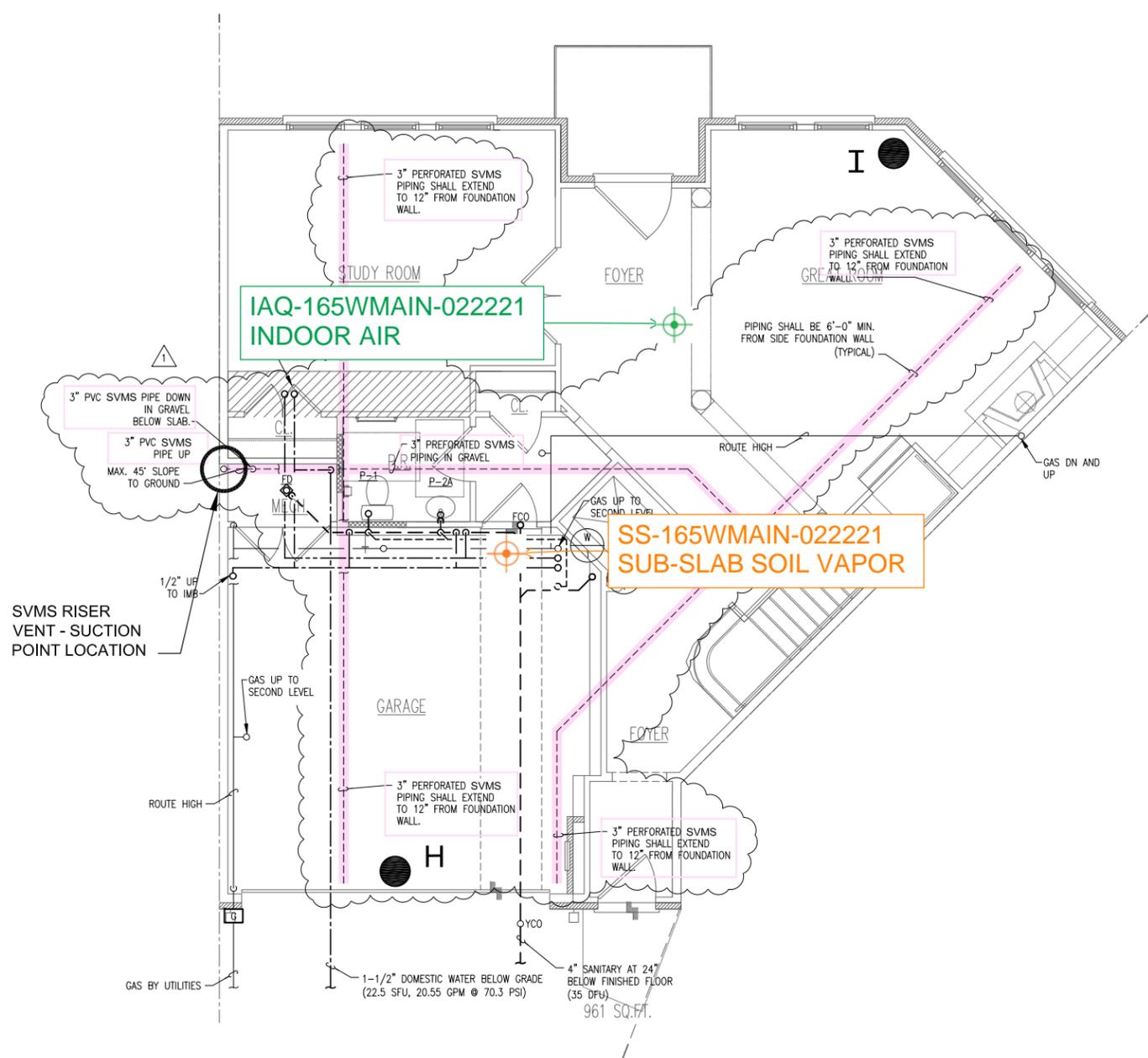
POST CONSTRUCTION
APPROXIMATE SVMS TEST LOCATIONS
(TYP. - ALL UNIT C)

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TARRYTOWN PROPERTY DEVELOPMENT
FERRY LANDINGS, LLC
SITE NO. C360064
BROWNFIELD CLEANUP INDEX NO. W3-1007-04-06

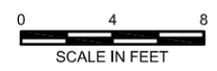
TOWNHOUSE UNIT B:
TYPICAL FLOORPLAN

SCALE: NOT TO SCALE
APRIL 2021

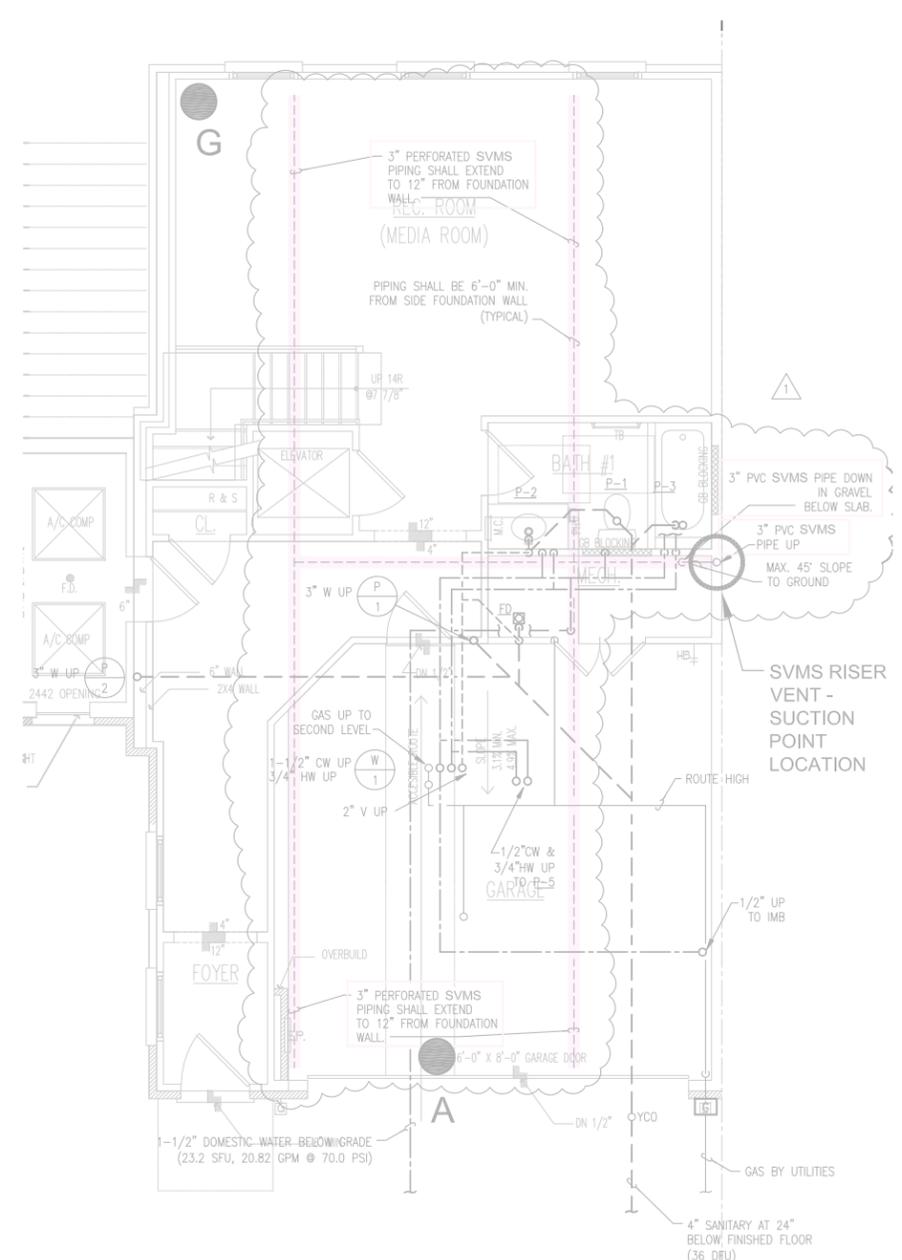
G:\PROJECTS\28590\017 SITE DEVELOPMENT SERVICES\CORRESPONDENCE\2011\SSD DEC DOCUMENTATION\FIG 1-3 SVM TESTING FLOOR PLANS.DWG



UNIT D - GROUND FLOOR
SCALE: 1/4" = 1'-0"



POST CONSTRUCTION APPROXIMATE SVMS TEST LOCATIONS
(TYP - ALL UNIT D)



UNIT E - GROUND FLOOR
SCALE: 1/4" = 1'-0"



POST CONSTRUCTION APPROXIMATE SVMS TEST LOCATIONS
(TYP. - ALL UNIT E)

- LEGEND:**
- SUB-SLAB VACUUM TEST
 - SOIL VAPOR SAMPLE AND SUB-SLAB PRESSURE TEST
 - A TEST LOCATION IDENTIFICATION

- NOTES:**
1. SVMS = SOIL VAPOR MANAGEMENT SYSTEM
 2. GROUND FLOOR PLANS SHOWN WERE TAKEN FROM DWGS. PA-200 THRU PE-200, PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07. SVMS PROFILE TAKEN FROM DWG. P-701 PREPARED BY LESSARD ARCHITECTURAL GROUP, DATED 11-08-07.

HALEY ALDRICH
TARRYTOWN PROPERTY DEVELOPMENT
FERRY LANDINGS, LLC
SITE NO. C360064
BROWNFIELD CLEANUP INDEX NO. W3-1007-04-06

**TOWNHOUSE UNIT D:
TYPICAL FLOORPLAN**

SCALE: NOT TO SCALE
APRIL 2021

APPENDIX A

Data Usability Summary Reports and Laboratory Data Report

Data Usability Summary Report

Project Name: Tarrytown Former MGP Site

Project Description: Ambient Air and Soil Vapor Samples

Sample Date(s): 16-23 February 2021

Analytical Laboratory: Alpha Analytical – Mansfield, MA

Validation Performed by: Vanessa Godard

Validation Reviewed by: Katherine Miller

Validation Date: 9 March 2021

Haley & Aldrich, Inc. prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the samples described above. The analytical results for Sample Delivery Group(s) (SDG) listed below were reviewed to determine the data's usability:

1. Sample Delivery Group Number L2108837

This data validation and usability assessment was performed per the guidance and requirements established by the U.S. Environmental Protection Agency's (USEPA) *National Functional Guidelines (NFG) for Organic Data Review and Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15* and the project-specific Quality Assurance Project Plan (QAPP), herein referred to as the specified limits (see references section). Written in 2010, the QAPP referenced the NFG written at the time. Data in this report has been reviewed against the most recent NFG.

Data reported in this sampling event were reported to the laboratory reporting limit (RL).

Sample data were qualified in accordance with laboratory's standard operating procedures (SOP). The results presented in each laboratory report were found to be compliant with the data quality objectives for the project and therefore usable; any exceptions are noted in the following pages.

For more detailed quality control (QC) information see Explanations section.

1. Sample Delivery Group Number L2108837

1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG number L2108837, dated 2 March 2021. Samples were collected, preserved, and shipped following standard chain of custody (COC) protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC. Issues noted with sample management are listed below:

- The flow controller ID number for the sample designated SS-18ORCH-022321 (L2108837-16) was listed on the COC as 0216 but should be 02106.
- The canister ID number for the sample designated IAQ-18ORCH-022321 (L2108837-15) was listed on the COC as 14713 but should be 147B.
- Canister ID 2006 was labeled in the laboratory prior to shipment with a media tag that indicated the canister ID number was 2033. The canister ID number for the sample designated AA-165WMAIN-022221 (L2108837-10) is listed on the COC as 2033 due to the ID error on the canister tag but should be 2006.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods
IAQ-25RVR-021621	N	L2108837-01	2/16/2021	Indoor Air	A, B
SS-25RVR-021621	N	L2108837-02	2/16/2021	Soil Gas	A
AA-25RVR-021621	N	L2108837-03	2/16/2021	Ambient Air	A, B
IAQ-9RVR-021721	N	L2108837-04	2/17/2021	Indoor Air	A, B
SS-9RVR-021721	N	L2108837-05	2/17/2021	Soil Gas	A
IAQ-27RVR-021721	N	L2108837-06	2/17/2021	Indoor Air	A, B
SS-27RVR-021721	N	L2108837-07	2/17/2021	Soil Gas	A
IAQ-4HUD-021821	N	L2108837-08	2/18/2021	Indoor Air	A, B
SS-4HUD-021821	N	L2108837-09	2/18/2021	Soil Gas	A
AA-165WMAIN-022221	N	L2108837-10	2/22/2021	Ambient Air	A, B
IAQ-165WMAIN-022221	N	L2108837-11	2/22/2021	Indoor Air	A, B
SS-165WMAIN-022221	N	L2108837-12	2/22/2021	Soil Gas	A
IAQ-4ORCH-022321	N	L2108837-13	2/23/2021	Indoor Air	A, B
SS-4ORCH-022321	N	L2108837-14	2/23/2021	Soil Gas	A
IAQ-18ORCH-022321	N	L2108837-15	2/23/2021	Indoor Air	A, B
SS-18ORCH-022321	N	L2108837-16	2/23/2021	Soil Gas	A

Method Holding Time			
A.	TO-15	Volatile Organic Compounds (VOCs)	30 days
B.	TO-15 SIM	Volatile Organic Compounds (VOCs) Low Level – Select List	30 days

1.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

1.3 REPORTING LIMITS AND SAMPLE DILUTIONS

The project specific QAPP only lists MDL/RL requirements for soil and groundwater samples. Review of gaseous sample limits was not possible.

All dilutions were reviewed and found to be justified. Any non-detects with elevated reported limits are noted and explained below. Samples collected in summa canisters are pressurized by the laboratory, usually resulting in a ~2x dilution. In cases when multiple dilutions were reported per sample, the reviewer chose the lowest dilution with results still within the calibration range and rejected the alternative result.

Sample ID	Lab ID	Analyte/ Method	Dilution Factor	Issue/Explanation
SS-27RVR-021721	L2108837-07	VOCs by TO-15	1.563x	Dilution required due to elevated concentrations of target compounds.

1.4 SURROGATE RECOVERY COMPLIANCE

[Refer to section E 1.2.](#) The percent recovery (%R) for each surrogate compound added to each project sample were determined to be within the laboratory specified QC limits.

1.5 LABORATORY CONTROL SAMPLES

[Refer to section E 1.3.](#) Compounds associated with the laboratory control samples/laboratory control sample duplicates (LCS) analyses exhibited recoveries within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	TO-15	WG-1469435	Trichlorotrifluoroethane	131%	NA	None, samples all ND.
LCS			1,2,4Trichlorobenzene	133%	NA	None, samples all ND.

1.6 BLANK SAMPLE ANALYSIS

[Refer to section E 1.5.](#) Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

1.7 DUPLICATE SAMPLE ANALYSIS

[Refer to section E 1.6](#). The following sample(s) were used for laboratory duplicate analysis and the RPDs were all below 20 percent:

Lab Sample Number	Laboratory Duplicate Sample Client ID	Method(s)
L2108837-06	IAQ-27RVR-021721	VOCs by TO-15 & TO-15 SIM

1.8 PRECISION AND ACCURACY

[Refer to section E 1.7](#). Some measurement of analytical accuracy and precision was reported for each method with the site samples.

1.9 CLEAN CANISTER CERTIFICATION

The canisters used for the TO-15 and TO-15 SIM sample collection were certified clean by batch can analysis prior to sampling to ensure that no target analytes were present. These analysis sheets were reviewed, and no target analytes were detected in the laboratory-provided canisters.

1.10 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by the analytical method. Based on the review of this report, the data are useable and acceptable, except for rejected data noted below. A summary of qualifiers applied to this SDG are shown below.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
IAQ-25RVR-021621	Ethanol	1040 E	1040 R	Exceeded Calibration Range. Another Result Available.
SS-4HUD-021821	Isopropyl Alcohol	2880 E	2880 R	

Explanations

The following explanations include more detailed information regarding each of the sections in the DUSR above. Not all sections in the Explanations are represented:

- E 1.2 Surrogate Recovery Compliance
 - Surrogates, also known as system monitoring compounds, are compounds added to each sample prior to sample preparation to determine the efficiency of the extraction procedure by evaluating the percent recovery (%R) of the compounds.
- E 1.3 Laboratory Control Samples
 - The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses are used to assess the precision and accuracy of the analytical method independent of matrix interferences.
- E 1.5 Blank Sample Analysis
 - Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination.
 - Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport.
- E 1.6 Laboratory and Field Duplicate Sample Analysis
 - The laboratory duplicate sample analysis is used by the laboratory at the time of the analysis to demonstrate acceptable method precision.
 - The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method.
- E 1.7 Precision and Accuracy
 - Precision measures the reproducibility of repetitive measurements. In a laboratory environment, this will be measured by determining the relative percent difference (%RPD) found between a primary and a duplicate sample. This can be an LCS/LCSD pair, a MS/MSD pair, a laboratory duplicate performed on a site sample, or a field duplicate collected and analyzed concurrently with a site sample.
 - Accuracy is a statistical measurement of the correctness of a measured value and includes components of random error (variability caused by imprecision) and systematic error. In a laboratory environment, this will be measured by determining the percent recovery (%Rec) of certain spiked compounds. This can be assessed using LCS, BS, MS, and/or surrogate recoveries.

Glossary

Not all of the following symbols, acronyms, or qualifiers occur in this document.

- Sample Types:
 - EB Equipment Blank Sample
 - FB Field Blank Sample
 - FD Field Duplicate Sample
 - N Primary Sample
 - TB Trip Blank Sample
- Units:
 - $\mu\text{g}/\text{kg}$ microgram per kilogram
 - $\mu\text{g}/\text{L}$ microgram per liter
 - $\mu\text{g}/\text{cm}^3$ microgram per centimeter cubed
 - mg/kg milligram per kilogram
 - mg/L milligram per liter
 - ppb v/v parts per billion volume/volume
- Matrices:
 - AA Ambient Air
 - GS Soil Gas
 - GW Groundwater
 - IA Indoor Air
 - SE Sediment
 - SO Soil
- Table Footnotes
 - NA Not applicable
 - ND Non-detect
 - NR Not reported
- Abbreviations
 - %D Percent Difference
 - %R Percent Recovery
 - %RSD Percent Relative Standard Deviation
 - Abs Diff Absolute Difference
 - BPJ Best Professional Judgement
 - CCB Continuing Calibration Blank
 - CCV Continuing Calibration Verification
 - CCVL Continuing Calibration Verification Low
 - COC Chain of Custody
 - CRI Collision Reaction Interface
 - DUSR Data Usability Summary Report
 - EMPC Estimated Maximum Possible Concentration
 - GC Gas Chromatograph
 - GPC Gel Permeation Chromatography
 - ICAL Initial Calibration
 - ICB Initial Calibration Blank
 - ICP/MS Inductively Coupled Plasma/ Mass Spectrometry
 - ICV Initial Calibration Verification

- ICVL	Initial Calibration Verification Low
- IPA	Isopropyl Alcohol
- LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
- MDL	Laboratory Method Detection Limit
- MS/MSD	Matrix Spike/Matrix Spike Duplicate
- ND	Non-Detect
- NFG	National Functional Guidelines
- PCB	Polychlorinated Biphenyl
- PDS	Post Digestion Spike
- PEM	Performance Evaluation Mixture
- PFAS	Per- and Polyfluoroalkyl Substances
- QAPP	Quality Assurance Project Plan
- QC	Quality Control
- RL	Laboratory Reporting Limit
- RPD	Relative Percent Difference
- RT	Retention Time
- RRF	Relative Response Factors
- SDG	Sample Delivery Group
- SOP	Laboratory Standard Operating Procedures
- SPE	Solid Phase Extraction
- USEPA	U.S. Environmental Protection Agency

Qualifiers

The qualifiers below are from the USEPA National Functional Guidelines and the data in the DUSR may contain these qualifiers:

- Concentration (C) Qualifiers:
 - U The compound was analyzed for but not detected. The associated value is either the compound quantitation limit if not detected by the analytical instrument or could be the reported or blank concentration if qualified by blank contamination. This can also be displayed as less than the associated compound quantitation limit (<RL or <MDL), or “ND”.
 - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
 - E The compound was quantitated above the calibration range.
 - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
 - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
 - J+ The result is an estimated quantity, but the result may be biased high.
 - J- The result is an estimated quantity, but the result may be biased low.
 - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is estimated and may or may not represent the actual limit of quantitation.
 - NJ The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is an estimated concentration only.
 - R The sample results were rejected as unusable; the compound may or may not be present in the sample.

References

1. United States Environmental Protection Agency, 2014a. Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15, SOP NO. HW-31, Revision 6. June.
2. United States Environmental Protection Agency, 2017c. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-2017-002. January.
3. Haley & Aldrich, Inc., 2010. Quality Assurance Project Plan with Field Sampling Plan. Site Management Plan – Tarrytown. Revision 1. June.



ANALYTICAL REPORT

Lab Number:	L2108837
Client:	Haley & Aldrich 200 Town Centre Drive Suite 2 Rochester, NY 14623-4264
ATTN:	Vince Dick
Phone:	(585) 321-4207
Project Name:	TARRYTOWN FORMER MGP SITE
Project Number:	0134976-002
Report Date:	03/02/21

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

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Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2108837-01	IAQ-25RVR-021621	AIR	TARRYTOWN, NY	02/16/21 14:30	02/23/21
L2108837-02	SS-25RVR-021621	SOIL_VAPOR	TARRYTOWN, NY	02/16/21 14:40	02/23/21
L2108837-03	AA-25RVR-021621	AIR	TARRYTOWN, NY	02/16/21 15:53	02/23/21
L2108837-04	IAQ-9RVR-021721	AIR	TARRYTOWN, NY	02/17/21 10:31	02/23/21
L2108837-05	SS-9RVR-021721	SOIL_VAPOR	TARRYTOWN, NY	02/17/21 10:22	02/23/21
L2108837-06	IAQ-27RVR-021721	AIR	TARRYTOWN, NY	02/17/21 14:18	02/23/21
L2108837-07	SS-27RVR-021721	SOIL_VAPOR	TARRYTOWN, NY	02/17/21 14:24	02/23/21
L2108837-08	IAQ-4HUD-021821	AIR	TARRYTOWN, NY	02/18/21 10:06	02/23/21
L2108837-09	SS-4HUD-021821	SOIL_VAPOR	TARRYTOWN, NY	02/18/21 10:05	02/23/21
L2108837-10	AA-165WMAIN-022221	AIR	TARRYTOWN, NY	02/22/21 09:47	02/23/21
L2108837-11	IAQ-165WMAIN-022221	AIR	TARRYTOWN, NY	02/22/21 14:15	02/23/21
L2108837-12	SS-165WMAIN-022221	SOIL_VAPOR	TARRYTOWN, NY	02/22/21 14:16	02/23/21
L2108837-13	IAQ-4ORCH-022321	AIR	TARRYTOWN, NY	02/23/21 11:01	02/23/21
L2108837-14	SS-4ORCH-022321	SOIL_VAPOR	TARRYTOWN, NY	02/23/21 10:56	02/23/21
L2108837-15	IAQ-18ORCH-022321	AIR	TARRYTOWN, NY	02/23/21 16:15	02/23/21
L2108837-16	SS-18ORCH-022321	SOIL_VAPOR	TARRYTOWN, NY	02/23/21 16:16	02/23/21
L2108837-17	UNUSED CAN#2242	AIR	TARRYTOWN, NY		02/23/21
L2108837-18	UNUSED CAN#132	AIR	TARRYTOWN, NY		02/23/21

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on February 15, 2021. The canister certification results are provided as an addendum.

L2108837-01D: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L2108837-07D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L2108837-09D: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

The WG1469435-3 LCS recoveries for 1,1,2-trichloro-1,2,2-trifluoroethane (131%) and 1,2,4-trichlorobenzene (133%) are above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of these analytes.

Sample Receipt

The flow controller ID number for the sample designated SS-18ORCH-022321 (L2108837-16) is listed on the CoC as 0216 but should be 02106.

The canister ID number for the sample designated IAQ-18ORCH-022321 (L2108837-15) is listed on the CoC as 14713 but should be 147B.

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Case Narrative (continued)

Canister ID 2006 was labeled in the laboratory prior to shipment with a media tag that indicated the canister ID number was 2033. The canister ID number for the sample designated AA-165WMAIN-022221 (L2108837-10) is listed on the CoC as 2033 due to the ID error on the canister tag but should actually be 2006.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 03/02/21

AIR

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-01
 Client ID: IAQ-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 14:30
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/01/21 19:15
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.477	0.200	--	2.36	0.989	--		1
Chloromethane	0.711	0.200	--	1.47	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	550	5.00	--	1040	9.42	--	E	1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	12.2	1.00	--	29.0	2.38	--		1
Trichlorofluoromethane	0.260	0.200	--	1.46	1.12	--		1
Isopropanol	68.0	0.500	--	167	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.543	0.500	--	1.60	1.47	--		1
Ethyl Acetate	1.17	0.500	--	4.22	1.80	--		1
Chloroform	0.314	0.200	--	1.53	0.977	--		1
Tetrahydrofuran	0.923	0.500	--	2.72	1.47	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-01
 Client ID: IAQ-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 14:30
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	0.477	0.200	--	1.93	0.809	--		1
n-Hexane	0.331	0.200	--	1.17	0.705	--		1
Benzene	0.997	0.200	--	3.19	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	0.283	0.200	--	1.32	0.934	--		1
Heptane	0.207	0.200	--	0.848	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	1.60	0.200	--	6.03	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	0.551	0.400	--	2.39	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	0.238	0.200	--	1.01	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-01
 Client ID: IAQ-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 14:30
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	97		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-01
 Client ID: IAQ-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 14:30
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 03/01/21 19:15
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.071	0.020	--	0.447	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.029	0.020	--	0.197	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	98		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-01 D
 Client ID: IAQ-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 14:30
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/02/21 05:49
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethanol	613	10.0	--	1160	18.8	--		2

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	98		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-02
 Client ID: SS-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 14:40
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 03/02/21 00:34
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.499	0.200	--	2.47	0.989	--		1
Chloromethane	0.278	0.200	--	0.574	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	120	5.00	--	226	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	19.4	1.00	--	46.1	2.38	--		1
Trichlorofluoromethane	0.259	0.200	--	1.46	1.12	--		1
Isopropanol	6.33	0.500	--	15.6	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	2.63	0.500	--	7.97	1.52	--		1
Methylene chloride	0.769	0.500	--	2.67	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.336	0.200	--	1.05	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.656	0.500	--	1.93	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-02
 Client ID: SS-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 14:40
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.232	0.200	--	0.818	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.255	0.200	--	0.815	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.951	0.200	--	3.90	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.354	0.200	--	1.33	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.253	0.200	--	1.10	0.869	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-02
 Client ID: SS-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 14:40
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	0.885	0.400	--	3.84	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.281	0.200	--	1.22	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.402	0.200	--	1.98	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	98		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-03
 Client ID: AA-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 15:53
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/01/21 17:55
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.485	0.200	--	2.40	0.989	--		1
Chloromethane	0.613	0.200	--	1.27	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.68	1.00	--	6.37	2.38	--		1
Trichlorofluoromethane	0.257	0.200	--	1.44	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-03
 Client ID: AA-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 15:53
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-03
 Client ID: AA-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 15:53
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	91		60-140
chlorobenzene-d5	95		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-03
 Client ID: AA-25RVR-021621
 Sample Location: TARRYTOWN, NY

Date Collected: 02/16/21 15:53
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 03/01/21 17:55
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.079	0.020	--	0.497	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	96		60-140



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-04
 Client ID: IAQ-9RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 10:31
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/01/21 19:54
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.486	0.200	--	2.40	0.989	--		1
Chloromethane	0.632	0.200	--	1.31	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	63.3	5.00	--	119	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	5.73	1.00	--	13.6	2.38	--		1
Trichlorofluoromethane	0.260	0.200	--	1.46	1.12	--		1
Isopropanol	1.06	0.500	--	2.61	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.32	0.500	--	3.89	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-04
 Client ID: IAQ-9RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 10:31
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.201	0.200	--	0.642	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.388	0.200	--	1.46	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	0.450	0.400	--	1.95	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-04
 Client ID: IAQ-9RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 10:31
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	98		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-04
 Client ID: IAQ-9RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 10:31
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 03/01/21 19:54
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.069	0.020	--	0.434	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	100		60-140



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-05
 Client ID: SS-9RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 10:22
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 03/02/21 01:13
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.498	0.200	--	2.46	0.989	--		1
Chloromethane	0.685	0.200	--	1.41	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	136	5.00	--	256	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	88.0	1.00	--	209	2.38	--		1
Trichlorofluoromethane	0.267	0.200	--	1.50	1.12	--		1
Isopropanol	7.99	0.500	--	19.6	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	1.57	0.500	--	4.76	1.52	--		1
Methylene chloride	0.717	0.500	--	2.49	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	3.16	0.500	--	9.32	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-05
 Client ID: SS-9RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 10:22
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	3.63	0.500	--	10.7	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.381	0.200	--	1.34	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.278	0.200	--	0.888	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	0.357	0.200	--	1.29	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.883	0.200	--	3.62	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.743	0.200	--	2.80	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.283	0.200	--	1.23	0.869	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-05
 Client ID: SS-9RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 10:22
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	0.957	0.400	--	4.16	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.405	0.200	--	1.76	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	98		60-140



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-06
 Client ID: IAQ-27RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 14:18
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/01/21 20:34
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.494	0.200	--	2.44	0.989	--		1
Chloromethane	0.649	0.200	--	1.34	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	218	5.00	--	411	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	6.56	1.00	--	15.6	2.38	--		1
Trichlorofluoromethane	0.264	0.200	--	1.48	1.12	--		1
Isopropanol	12.5	0.500	--	30.7	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	2.07	0.500	--	7.19	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	0.733	0.500	--	2.64	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-06
 Client ID: IAQ-27RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 14:18
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.213	0.200	--	0.751	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.489	0.200	--	1.84	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-06
 Client ID: IAQ-27RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 14:18
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	97		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-06
 Client ID: IAQ-27RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 14:18
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 03/01/21 20:34
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.078	0.020	--	0.491	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.034	0.020	--	0.231	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	98		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-07 D
 Client ID: SS-27RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 14:24
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 03/02/21 01:51
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.487	0.312	--	2.41	1.54	--		1.563
Chloromethane	0.422	0.312	--	0.871	0.644	--		1.563
Freon-114	ND	0.312	--	ND	2.18	--		1.563
Vinyl chloride	ND	0.312	--	ND	0.798	--		1.563
1,3-Butadiene	ND	0.312	--	ND	0.690	--		1.563
Bromomethane	ND	0.312	--	ND	1.21	--		1.563
Chloroethane	ND	0.312	--	ND	0.823	--		1.563
Ethanol	657	7.81	--	1240	14.7	--		1.563
Vinyl bromide	ND	0.312	--	ND	1.36	--		1.563
Acetone	29.7	1.56	--	70.6	3.71	--		1.563
Trichlorofluoromethane	ND	0.312	--	ND	1.75	--		1.563
Isopropanol	68.9	0.781	--	169	1.92	--		1.563
1,1-Dichloroethene	ND	0.312	--	ND	1.24	--		1.563
Tertiary butyl Alcohol	2.54	0.781	--	7.70	2.37	--		1.563
Methylene chloride	ND	0.781	--	ND	2.71	--		1.563
3-Chloropropene	ND	0.312	--	ND	0.977	--		1.563
Carbon disulfide	0.409	0.312	--	1.27	0.972	--		1.563
Freon-113	ND	0.312	--	ND	2.39	--		1.563
trans-1,2-Dichloroethene	ND	0.312	--	ND	1.24	--		1.563
1,1-Dichloroethane	ND	0.312	--	ND	1.26	--		1.563
Methyl tert butyl ether	ND	0.312	--	ND	1.12	--		1.563
2-Butanone	1.39	0.781	--	4.10	2.30	--		1.563
cis-1,2-Dichloroethene	ND	0.312	--	ND	1.24	--		1.563



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-07 D
 Client ID: SS-27RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 14:24
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	1.65	0.781	--	5.95	2.81	--		1.563
Chloroform	ND	0.312	--	ND	1.52	--		1.563
Tetrahydrofuran	6.82	0.781	--	20.1	2.30	--		1.563
1,2-Dichloroethane	ND	0.312	--	ND	1.26	--		1.563
n-Hexane	0.367	0.312	--	1.29	1.10	--		1.563
1,1,1-Trichloroethane	ND	0.312	--	ND	1.70	--		1.563
Benzene	ND	0.312	--	ND	0.997	--		1.563
Carbon tetrachloride	ND	0.312	--	ND	1.96	--		1.563
Cyclohexane	ND	0.312	--	ND	1.07	--		1.563
1,2-Dichloropropane	ND	0.312	--	ND	1.44	--		1.563
Bromodichloromethane	ND	0.312	--	ND	2.09	--		1.563
1,4-Dioxane	4.00	0.312	--	14.4	1.12	--		1.563
Trichloroethene	ND	0.312	--	ND	1.68	--		1.563
2,2,4-Trimethylpentane	ND	0.312	--	ND	1.46	--		1.563
Heptane	0.831	0.312	--	3.41	1.28	--		1.563
cis-1,3-Dichloropropene	ND	0.312	--	ND	1.42	--		1.563
4-Methyl-2-pentanone	ND	0.781	--	ND	3.20	--		1.563
trans-1,3-Dichloropropene	ND	0.312	--	ND	1.42	--		1.563
1,1,2-Trichloroethane	ND	0.312	--	ND	1.70	--		1.563
Toluene	0.581	0.312	--	2.19	1.18	--		1.563
2-Hexanone	ND	0.312	--	ND	1.28	--		1.563
Dibromochloromethane	ND	0.312	--	ND	2.66	--		1.563
1,2-Dibromoethane	ND	0.312	--	ND	2.40	--		1.563
Tetrachloroethene	ND	0.312	--	ND	2.12	--		1.563
Chlorobenzene	ND	0.312	--	ND	1.44	--		1.563
Ethylbenzene	0.378	0.312	--	1.64	1.36	--		1.563



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-07 D
 Client ID: SS-27RVR-021721
 Sample Location: TARRYTOWN, NY

Date Collected: 02/17/21 14:24
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	1.33	0.625	--	5.78	2.71	--		1.563
Bromoform	ND	0.312	--	ND	3.23	--		1.563
Styrene	ND	0.312	--	ND	1.33	--		1.563
1,1,2,2-Tetrachloroethane	ND	0.312	--	ND	2.14	--		1.563
o-Xylene	0.514	0.312	--	2.23	1.36	--		1.563
4-Ethyltoluene	ND	0.312	--	ND	1.53	--		1.563
1,3,5-Trimethylbenzene	ND	0.312	--	ND	1.53	--		1.563
1,2,4-Trimethylbenzene	0.330	0.312	--	1.62	1.53	--		1.563
Benzyl chloride	ND	0.312	--	ND	1.62	--		1.563
1,3-Dichlorobenzene	ND	0.312	--	ND	1.88	--		1.563
1,4-Dichlorobenzene	ND	0.312	--	ND	1.88	--		1.563
1,2-Dichlorobenzene	ND	0.312	--	ND	1.88	--		1.563
1,2,4-Trichlorobenzene	ND	0.312	--	ND	2.32	--		1.563
Hexachlorobutadiene	ND	0.312	--	ND	3.33	--		1.563

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	100		60-140



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-08
 Client ID: IAQ-4HUD-021821
 Sample Location: TARRYTOWN, NY

Date Collected: 02/18/21 10:06
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/01/21 21:55
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.492	0.200	--	2.43	0.989	--		1
Chloromethane	0.635	0.200	--	1.31	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	20.6	5.00	--	38.8	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	6.59	1.00	--	15.7	2.38	--		1
Trichlorofluoromethane	0.256	0.200	--	1.44	1.12	--		1
Isopropanol	1.13	0.500	--	2.78	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-08
 Client ID: IAQ-4HUD-021821
 Sample Location: TARRYTOWN, NY

Date Collected: 02/18/21 10:06
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.416	0.200	--	1.57	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	0.216	0.200	--	0.920	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-08
 Client ID: IAQ-4HUD-021821
 Sample Location: TARRYTOWN, NY

Date Collected: 02/18/21 10:06
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	96		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-08
 Client ID: IAQ-4HUD-021821
 Sample Location: TARRYTOWN, NY

Date Collected: 02/18/21 10:06
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 03/01/21 21:55
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.076	0.020	--	0.478	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	98		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-09
 Client ID: SS-4HUD-021821
 Sample Location: TARRYTOWN, NY

Date Collected: 02/18/21 10:05
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 03/02/21 02:30
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.496	0.200	--	2.45	0.989	--		1
Chloromethane	0.271	0.200	--	0.560	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	165	5.00	--	311	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	104	1.00	--	247	2.38	--		1
Trichlorofluoromethane	0.258	0.200	--	1.45	1.12	--		1
Isopropanol	1170	0.500	--	2880	1.23	--	E	1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	4.74	0.500	--	14.4	1.52	--		1
Methylene chloride	0.816	0.500	--	2.83	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.202	0.200	--	0.629	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	2.05	0.500	--	6.05	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-09
 Client ID: SS-4HUD-021821
 Sample Location: TARRYTOWN, NY

Date Collected: 02/18/21 10:05
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	1.76	0.200	--	6.34	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.944	0.200	--	3.87	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.427	0.200	--	1.61	0.754	--		1
2-Hexanone	0.217	0.200	--	0.889	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.308	0.200	--	1.34	0.869	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-09
 Client ID: SS-4HUD-021821
 Sample Location: TARRYTOWN, NY

Date Collected: 02/18/21 10:05
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	1.08	0.400	--	4.69	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.442	0.200	--	1.92	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	100		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	102		60-140



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-09 D
 Client ID: SS-4HUD-021821
 Sample Location: TARRYTOWN, NY

Date Collected: 02/18/21 10:05
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 03/02/21 06:25
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Isopropanol	2200	8.34	--	5410	20.5	--		16.67

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	96		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-10
 Client ID: AA-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 09:47
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/01/21 18:34
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.475	0.200	--	2.35	0.989	--		1
Chloromethane	0.578	0.200	--	1.19	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.07	1.00	--	4.92	2.38	--		1
Trichlorofluoromethane	0.254	0.200	--	1.43	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-10
 Client ID: AA-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 09:47
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-10
 Client ID: AA-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 09:47
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	97		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-10
 Client ID: AA-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 09:47
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 03/01/21 18:34
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.070	0.020	--	0.440	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	98		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-11
 Client ID: IAQ-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 14:15
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/01/21 22:35
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.494	0.200	--	2.44	0.989	--		1
Chloromethane	0.689	0.200	--	1.42	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	415	5.00	--	782	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	5.80	1.00	--	13.8	2.38	--		1
Trichlorofluoromethane	0.260	0.200	--	1.46	1.12	--		1
Isopropanol	1.39	0.500	--	3.42	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.526	0.500	--	1.55	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-11
 Client ID: IAQ-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 14:15
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.228	0.200	--	0.728	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.797	0.200	--	3.00	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-11
 Client ID: IAQ-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 14:15
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	96		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-11
 Client ID: IAQ-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 14:15
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 03/01/21 22:35
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.075	0.020	--	0.472	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.048	0.020	--	0.325	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	97		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-12
 Client ID: SS-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 14:16
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 03/02/21 03:10
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.485	0.200	--	2.40	0.989	--		1
Chloromethane	0.254	0.200	--	0.525	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	117	5.00	--	220	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	55.3	1.00	--	131	2.38	--		1
Trichlorofluoromethane	0.265	0.200	--	1.49	1.12	--		1
Isopropanol	5.60	0.500	--	13.8	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	2.05	0.500	--	6.21	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	4.87	0.500	--	14.4	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-12
 Client ID: SS-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 14:16
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	0.522	0.500	--	1.54	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.262	0.200	--	0.923	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.245	0.200	--	0.783	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.862	0.200	--	3.53	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.547	0.200	--	2.06	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.637	0.200	--	2.77	0.869	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-12
 Client ID: SS-165WMAIN-022221
 Sample Location: TARRYTOWN, NY

Date Collected: 02/22/21 14:16
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	2.09	0.400	--	9.08	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.648	0.200	--	2.81	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.269	0.200	--	1.32	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	98		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	100		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-13
 Client ID: IAQ-4ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 11:01
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/01/21 23:15
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.487	0.200	--	2.41	0.989	--		1
Chloromethane	0.621	0.200	--	1.28	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	55.6	5.00	--	105	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.88	1.00	--	11.6	2.38	--		1
Trichlorofluoromethane	0.264	0.200	--	1.48	1.12	--		1
Isopropanol	8.48	0.500	--	20.8	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-13
 Client ID: IAQ-4ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 11:01
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	0.238	0.200	--	0.760	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.377	0.200	--	1.42	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-13
 Client ID: IAQ-4ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 11:01
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	95		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-13
 Client ID: IAQ-4ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 11:01
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 03/01/21 23:15
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.067	0.020	--	0.421	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	96		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-14
 Client ID: SS-4ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 10:56
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 03/02/21 03:50
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.499	0.200	--	2.47	0.989	--		1
Chloromethane	0.240	0.200	--	0.496	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	114	5.00	--	215	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	26.7	1.00	--	63.4	2.38	--		1
Trichlorofluoromethane	0.273	0.200	--	1.53	1.12	--		1
Isopropanol	4.08	0.500	--	10.0	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	2.33	0.500	--	7.06	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	1.57	0.500	--	4.63	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-14
 Client ID: SS-4ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 10:56
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.561	0.200	--	2.30	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.351	0.200	--	1.32	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.300	0.200	--	1.30	0.869	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-14
 Client ID: SS-4ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 10:56
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	0.989	0.400	--	4.30	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.333	0.200	--	1.45	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	98		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	99		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-15
 Client ID: IAQ-18ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 16:15
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 03/01/21 23:55
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.513	0.200	--	2.54	0.989	--		1
Chloromethane	0.673	0.200	--	1.39	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	47.3	5.00	--	89.1	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	7.74	1.00	--	18.4	2.38	--		1
Trichlorofluoromethane	0.273	0.200	--	1.53	1.12	--		1
Isopropanol	2.10	0.500	--	5.16	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-15
 Client ID: IAQ-18ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 16:15
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.578	0.200	--	2.04	0.705	--		1
Benzene	0.725	0.200	--	2.32	0.639	--		1
Cyclohexane	0.211	0.200	--	0.726	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	0.273	0.200	--	1.28	0.934	--		1
Heptane	0.377	0.200	--	1.55	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	1.34	0.200	--	5.05	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	0.539	0.400	--	2.34	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.208	0.200	--	0.903	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-15
 Client ID: IAQ-18ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 16:15
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	95		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-15
 Client ID: IAQ-18ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 16:15
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 03/01/21 23:55
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.081	0.020	--	0.510	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.020	0.020	--	0.136	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	97		60-140



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-16
 Client ID: SS-18ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 16:16
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 03/02/21 04:29
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.504	0.200	--	2.49	0.989	--		1
Chloromethane	0.204	0.200	--	0.421	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	194	5.00	--	366	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	43.0	1.00	--	102	2.38	--		1
Trichlorofluoromethane	0.259	0.200	--	1.46	1.12	--		1
Isopropanol	3.24	0.500	--	7.96	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	2.40	0.500	--	7.28	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.269	0.200	--	0.838	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**SAMPLE RESULTS**

Lab ID: L2108837-16
 Client ID: SS-18ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 16:16
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.224	0.200	--	0.789	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.309	0.200	--	0.987	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.616	0.200	--	2.52	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.436	0.200	--	1.64	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.381	0.200	--	1.65	0.869	--		1



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

SAMPLE RESULTS

Lab ID: L2108837-16
 Client ID: SS-18ORCH-022321
 Sample Location: TARRYTOWN, NY

Date Collected: 02/23/21 16:16
 Date Received: 02/23/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	1.18	0.400	--	5.13	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.373	0.200	--	1.62	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	98		60-140



Project Name: TARRYTOWN FORMER MGP SITE

Lab Number: L2108837

Project Number: 0134976-002

Report Date: 03/02/21

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 03/01/21 15:06

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-16 Batch: WG1469435-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1



Project Name: TARRYTOWN FORMER MGP SITE

Lab Number: L2108837

Project Number: 0134976-002

Report Date: 03/02/21

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 03/01/21 15:06

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-16 Batch: WG1469435-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1



Project Name: TARRYTOWN FORMER MGP SITE

Lab Number: L2108837

Project Number: 0134976-002

Report Date: 03/02/21

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 03/01/21 15:06

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-16 Batch: WG1469435-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM

Analytical Date: 03/01/21 15:45

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01,03-04,06,08,10-11,13,15 Batch: WG1469436-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1



Lab Control Sample Analysis

Batch Quality Control

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-16 Batch: WG1469435-3								
Dichlorodifluoromethane	101		-		70-130	-		
Chloromethane	115		-		70-130	-		
Freon-114	105		-		70-130	-		
Vinyl chloride	116		-		70-130	-		
1,3-Butadiene	116		-		70-130	-		
Bromomethane	120		-		70-130	-		
Chloroethane	127		-		70-130	-		
Ethanol	89		-		40-160	-		
Vinyl bromide	120		-		70-130	-		
Acetone	93		-		40-160	-		
Trichlorofluoromethane	122		-		70-130	-		
Isopropanol	106		-		40-160	-		
1,1-Dichloroethene	116		-		70-130	-		
Tertiary butyl Alcohol	92		-		70-130	-		
Methylene chloride	122		-		70-130	-		
3-Chloropropene	130		-		70-130	-		
Carbon disulfide	113		-		70-130	-		
Freon-113	131	Q	-		70-130	-		
trans-1,2-Dichloroethene	111		-		70-130	-		
1,1-Dichloroethane	115		-		70-130	-		
Methyl tert butyl ether	101		-		70-130	-		
2-Butanone	118		-		70-130	-		
cis-1,2-Dichloroethene	114		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-16 Batch: WG1469435-3								
Ethyl Acetate	116		-		70-130	-		
Chloroform	100		-		70-130	-		
Tetrahydrofuran	117		-		70-130	-		
1,2-Dichloroethane	110		-		70-130	-		
n-Hexane	112		-		70-130	-		
1,1,1-Trichloroethane	124		-		70-130	-		
Benzene	98		-		70-130	-		
Carbon tetrachloride	106		-		70-130	-		
Cyclohexane	110		-		70-130	-		
1,2-Dichloropropane	127		-		70-130	-		
Bromodichloromethane	106		-		70-130	-		
1,4-Dioxane	120		-		70-130	-		
Trichloroethene	115		-		70-130	-		
2,2,4-Trimethylpentane	117		-		70-130	-		
Heptane	126		-		70-130	-		
cis-1,3-Dichloropropene	110		-		70-130	-		
4-Methyl-2-pentanone	130		-		70-130	-		
trans-1,3-Dichloropropene	94		-		70-130	-		
1,1,2-Trichloroethane	119		-		70-130	-		
Toluene	112		-		70-130	-		
2-Hexanone	124		-		70-130	-		
Dibromochloromethane	119		-		70-130	-		
1,2-Dibromoethane	100		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: TARRYTOWN FORMER MGP SITE

Lab Number: L2108837

Project Number: 0134976-002

Report Date: 03/02/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-16 Batch: WG1469435-3								
Tetrachloroethene	108		-		70-130	-		
Chlorobenzene	101		-		70-130	-		
Ethylbenzene	113		-		70-130	-		
p/m-Xylene	114		-		70-130	-		
Bromoform	114		-		70-130	-		
Styrene	100		-		70-130	-		
1,1,2,2-Tetrachloroethane	117		-		70-130	-		
o-Xylene	118		-		70-130	-		
4-Ethyltoluene	100		-		70-130	-		
1,3,5-Trimethylbenzene	115		-		70-130	-		
1,2,4-Trimethylbenzene	110		-		70-130	-		
Benzyl chloride	124		-		70-130	-		
1,3-Dichlorobenzene	110		-		70-130	-		
1,4-Dichlorobenzene	112		-		70-130	-		
1,2-Dichlorobenzene	110		-		70-130	-		
1,2,4-Trichlorobenzene	133	Q	-		70-130	-		
Hexachlorobutadiene	119		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01,03-04,06,08,10-11,13,15 Batch: WG1469436-3								
Vinyl chloride	111		-		70-130	-		25
1,1-Dichloroethene	113		-		70-130	-		25
cis-1,2-Dichloroethene	108		-		70-130	-		25
1,1,1-Trichloroethane	119		-		70-130	-		25
Carbon tetrachloride	102		-		70-130	-		25
Trichloroethene	108		-		70-130	-		25
Tetrachloroethene	101		-		70-130	-		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-16 QC Batch ID: WG1469435-5 QC Sample: L2108837-06 Client ID: IAQ-27RVR-021721						
Dichlorodifluoromethane	0.494	0.496	ppbV	0		25
Chloromethane	0.649	0.652	ppbV	0		25
Freon-114	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethanol	218	216	ppbV	1		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	6.56	6.55	ppbV	0		25
Trichlorofluoromethane	0.264	0.257	ppbV	3		25
Isopropanol	12.5	12.4	ppbV	1		25
Tertiary butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	2.07	2.04	ppbV	1		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
Freon-113	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25
2-Butanone	ND	ND	ppbV	NC		25
Ethyl Acetate	0.733	0.714	ppbV	3		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-16 QC Batch ID: WG1469435-5 QC Sample: L2108837-06 Client ID: IAQ-27RVR-021721						
Chloroform	ND	ND	ppbV	NC		25
Tetrahydrofuran	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	0.213	0.213	ppbV	0		25
Benzene	ND	ND	ppbV	NC		25
Cyclohexane	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Toluene	0.489	0.478	ppbV	2		25
2-Hexanone	ND	ND	ppbV	NC		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: TARRYTOWN FORMER MGP SITE

Project Number: 0134976-002

Lab Number: L2108837

Report Date: 03/02/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-16 QC Batch ID: WG1469435-5 QC Sample: L2108837-06 Client ID: IAQ-27RVR-021721						
p/m-Xylene	ND	ND	ppbV	NC		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: TARRYTOWN FORMER MGP SITE

Project Number: 0134976-002

Lab Number: L2108837

Report Date: 03/02/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01,03-04,06,08,10-11,13,15 QC Batch ID: WG1469436-5 QC Sample: L2108837-06 Client ID: IAQ-27RVR-021721						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Carbon tetrachloride	0.078	0.078	ppbV	0		25
Trichloroethene	ND	ND	ppbV	NC		25
Tetrachloroethene	0.034	0.036	ppbV	6		25

Project Name: TARRYTOWN FORMER MGP SITE

Serial_No:03022114:31
Lab Number: L2108837

Project Number: 0134976-002

Report Date: 03/02/21

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2108837-01	IAQ-25RVR-021621	01920	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	42.8	17
L2108837-01	IAQ-25RVR-021621	2204	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.1	-7.5	-	-	-	-
L2108837-02	SS-25RVR-021621	0365	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	37.4	4
L2108837-02	SS-25RVR-021621	2425	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.6	-5.5	-	-	-	-
L2108837-03	AA-25RVR-021621	01924	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	35.5	1
L2108837-03	AA-25RVR-021621	2310	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.1	-5.2	-	-	-	-
L2108837-04	IAQ-9RVR-021721	0806	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	38.3	6
L2108837-04	IAQ-9RVR-021721	234	2.7L Can	02/15/21	342834	L2106543-06	Pass	-28.5	-5.6	-	-	-	-
L2108837-05	SS-9RVR-021721	02104	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	35.6	1
L2108837-05	SS-9RVR-021721	2212	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.5	-2.9	-	-	-	-
L2108837-06	IAQ-27RVR-021721	01923	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	41.2	13
L2108837-06	IAQ-27RVR-021721	197	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.4	-5.8	-	-	-	-
L2108837-07	SS-27RVR-021721	01926	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	36.0	0
L2108837-07	SS-27RVR-021721	377	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.4	-3.8	-	-	-	-
L2108837-08	IAQ-4HUD-021821	01518	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	35.6	1



Project Name: TARRYTOWN FORMER MGP SITE

Serial_No:03022114:31
Lab Number: L2108837

Project Number: 0134976-002

Report Date: 03/02/21

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2108837-08	IAQ-4HUD-021821	2176	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.3	-5.7	-	-	-	-
L2108837-09	SS-4HUD-021821	0768	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	36.6	2
L2108837-09	SS-4HUD-021821	2298	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.5	-5.0	-	-	-	-
L2108837-10	AA-165WMAIN-022221	01690	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	36.9	2
L2108837-10	AA-165WMAIN-022221	2006	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.5	-4.5	-	-	-	-
L2108837-11	IAQ-165WMAIN-022221	0735	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	38.1	6
L2108837-11	IAQ-165WMAIN-022221	473	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.5	-6.2	-	-	-	-
L2108837-12	SS-165WMAIN-022221	0976	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	38.5	7
L2108837-12	SS-165WMAIN-022221	187	2.7L Can	02/15/21	342834	L2105926-01	Pass	-29.5	-5.5	-	-	-	-
L2108837-13	IAQ-4ORCH-022321	01730	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	35.8	1
L2108837-13	IAQ-4ORCH-022321	2033	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.5	-6.7	-	-	-	-
L2108837-14	SS-4ORCH-022321	0770	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	37.0	3
L2108837-14	SS-4ORCH-022321	2186	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.4	-5.4	-	-	-	-
L2108837-15	IAQ-18ORCH-022321	0647	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	37.3	4
L2108837-15	IAQ-18ORCH-022321	147B	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.5	-7.0	-	-	-	-



Project Name: TARRYTOWN FORMER MGP SITE

Serial_No:03022114:31
Lab Number: L2108837

Project Number: 0134976-002

Report Date: 03/02/21

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2108837-16	SS-18ORCH-022321	02106	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	37.2	3
L2108837-16	SS-18ORCH-022321	205	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.5	-5.7	-	-	-	-
L2108837-17	UNUSED CAN#2242	02110	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	38.5	7
L2108837-17	UNUSED CAN#2242	2242	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.5	0.0	-	-	-	-
L2108837-18	UNUSED CAN#132	01821	Flow 2	02/15/21	342834		-	-	-	Pass	36.0	37.9	5
L2108837-18	UNUSED CAN#132	132	2.7L Can	02/15/21	342834	L2106543-06	Pass	-29.7	-29.2	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2105926
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2105926-01
 Client ID: CAN 354 SHELF 19
 Sample Location:

Date Collected: 02/06/21 16:00
 Date Received: 02/08/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 02/08/21 16:55
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2105926
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2105926-01
 Client ID: CAN 354 SHELF 19
 Sample Location:

Date Collected: 02/06/21 16:00
 Date Received: 02/08/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2105926
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2105926-01
 Client ID: CAN 354 SHELF 19
 Sample Location:

Date Collected: 02/06/21 16:00
 Date Received: 02/08/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2105926
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2105926-01
 Client ID: CAN 354 SHELF 19
 Sample Location:

Date Collected: 02/06/21 16:00
 Date Received: 02/08/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2105926
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2105926-01
 Client ID: CAN 354 SHELF 19
 Sample Location:

Date Collected: 02/06/21 16:00
 Date Received: 02/08/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	95		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2105926
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2105926-01
 Client ID: CAN 354 SHELF 19
 Sample Location:

Date Collected: 02/06/21 16:00
 Date Received: 02/08/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 02/08/21 16:55
 Analyst: RY

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2105926
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2105926-01
 Client ID: CAN 354 SHELF 19
 Sample Location:

Date Collected: 02/06/21 16:00
 Date Received: 02/08/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2105926
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2105926-01
 Client ID: CAN 354 SHELF 19
 Sample Location:

Date Collected: 02/06/21 16:00
 Date Received: 02/08/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	95		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2106543
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2106543-06
 Client ID: CAN 2227 SHELF 3
 Sample Location:

Date Collected: 02/11/21 09:00
 Date Received: 02/11/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 02/11/21 20:21
 Analyst: EW

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2106543
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2106543-06
 Client ID: CAN 2227 SHELF 3
 Sample Location:

Date Collected: 02/11/21 09:00
 Date Received: 02/11/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2106543
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2106543-06
 Client ID: CAN 2227 SHELF 3
 Sample Location:

Date Collected: 02/11/21 09:00
 Date Received: 02/11/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2106543
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2106543-06
 Client ID: CAN 2227 SHELF 3
 Sample Location:

Date Collected: 02/11/21 09:00
 Date Received: 02/11/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2106543
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2106543-06
 Client ID: CAN 2227 SHELF 3
 Sample Location:

Date Collected: 02/11/21 09:00
 Date Received: 02/11/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	90		60-140



Project Name: BATCH CANISTER CERTIFICATION
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Lab Number: L2106543
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2106543-06
 Client ID: CAN 2227 SHELF 3
 Sample Location:

Date Collected: 02/11/21 09:00
 Date Received: 02/11/21
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 02/11/21 20:21
 Analyst: EW

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2106543
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2106543-06
 Client ID: CAN 2227 SHELF 3
 Sample Location:

Date Collected: 02/11/21 09:00
 Date Received: 02/11/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2106543
Report Date: 03/02/21

Air Canister Certification Results

Lab ID: L2106543-06
 Client ID: CAN 2227 SHELF 3
 Sample Location:

Date Collected: 02/11/21 09:00
 Date Received: 02/11/21
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	90		60-140



Project Name: TARRYTOWN FORMER MGP SITE**Lab Number:** L2108837**Project Number:** 0134976-002**Report Date:** 03/02/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
N/A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2108837-01A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L2108837-02A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L2108837-03A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L2108837-04A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2108837-05A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L2108837-06A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2108837-07A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L2108837-08A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L2108837-09A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L2108837-10A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2108837-11A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L2108837-12A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L2108837-13A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30),TO15-SIM(30)
L2108837-14A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L2108837-15A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-SIM(30),TO15-LL(30)
L2108837-16A	Canister - 2.7 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L2108837-17A	Canister - 2.7 Liter	N/A	NA			Y	Absent		CLEAN-FEE()
L2108837-18A	Canister - 2.7 Liter	N/A	NA			Y	Absent		CLEAN-FEE()

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report



Project Name: TARRYTOWN FORMER MGP SITE
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Report Date: 03/02/21

Data Qualifiers

the identification is based on a mass spectral library search.

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Project Name: TARRYTOWN FORMER MGP SITE
Project Number: 0134976-002

Lab Number: L2108837
Report Date: 03/02/21

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



AIR ANALYSIS

CHAIN OF CUSTODY

PAGE 1 OF 2

320 Forbes Blvd, Mansfield, MA 02048
 TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: HALET AND ALDRICH
 Address: 200 TOWN CENTRE DR SE#2
ROCHESTER, NY 14623-4264
 Phone: 585-370-9792
 Fax: 585-359-4650
 Email: VDICK@HALEYALDRICH.COM

Project Information

Project Name: TARRYTOWN FORMER MHP SITE
 Project Location: TARRYTOWN, NY
 Project #: 0134976-002
 Project Manager: VINCE DICK
 ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
 Date Due: _____ Time: _____

Date Rec'd in Lab: 2/24/21

Report Information - Data Deliverables

FAX
 ADEX
 Criteria Checker: _____
(Default based on Regulatory Criteria Indicated)
 Other Formats:
 EMAIL (standard pdf report)
 Additional Deliverables:
 Report to: (if different than Project Manager)

ALPHA Job #: L2108837

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

These samples have been previously analyzed by Alpha
 Other Project Specific Requirements/Comments:
 Project-Specific Target Compound List:

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION					Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-15	TO-15 SIM	APH	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
		End Date	Start Time	End Time	Initial Vacuum	Final Vacuum											
-01	IAQ-25RVR-021621	2/16/21	1352	1430	-29.02	-8.64	AA	DM/PF	2.7L	2204	01920	X					
-02	SS-25RVR-021621	2/16/21	1350	1440	-29.57	-6.98	SV	DM/PF	2.7L	2425	0365	X					
-03	AA-25RVR-021621	2/16/21	1501	1553	-29.71	-6.91	AA	DM/PF	2.7L	2310	01924	X					
-04	IAQ-9RVR-021721	2/17/21	0939	1031	-30.40	-7.15	AA	DM/PF	2.7L	234	0806	X					
-05	SS-9RVR-021721	2/17/21	0938	1022	-24.80	-6.22	SV	DM/PF	2.7L	2212	02109	X					
-06	IAQ-27RVR-021721	2/17/21	1333	1418	-30.02	-7.08	AA	DM/PF	2.7L	197	01923	X					
-07	SS-27RVR-021721	2/17/21	1332	1424	-30.28	-6.79	SV	DM/PF	2.7L	377	01926	X					
-08	IAQ-4HUD-021821	2/18/21	0912	1006	-30.68	-6.98	AA	DM/PF	2.7L	2176	01518	X					
-09	SS-4HUD-021821	2/18/21	0911	1005	-30.42	-6.95	SV	DM/PF	2.7L	2298	0768	X					
-10	AA-165WHAIN-02221	2/22/21	0855	0947	-30.22	-6.94	AA	DM/PF	2.7L	2033	01690	X					

***SAMPLE MATRIX CODES**

AA = Ambient Air (Indoor/Outdoor)
 SV = Soil Vapor/Landfill Gas/SVE
 Other = Please Specify

Container Type

Relinquished By: [Signature]

Date/Time: 2/23/21 17:50

Received By: [Signature]

Date/Time: 2/23/21 17:50

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



AIR ANALYSIS

CHAIN OF CUSTODY

PAGE 2 OF 2

320 Forbes Blvd, Mansfield, MA 02048
 TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: HALEY AND ALDRICH
 Address: 200 TOWN CENTER DR. ST#2
ROCHESTER, NY 14623-4264
 Phone: 585-370-9792
 Fax: 585-359-4650
 Email: DICK@HALEYALDRICH.COM

Project Information

Project Name: TARRYTOWN FORMER HAP SITE
 Project Location: TARRYTOWN, NY
 Project #: 0134976-002
 Project Manager: VINCE DICK
 ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: _____ Time: _____

Date Rec'd in Lab: 2/24/21

ALPHA Job #: L2108837

Report Information - Data Deliverables

FAX
 ADEX
 Criteria Checker: _____
(Default based on Regulatory Criteria Indicated)
 Other Formats:
 EMAIL (standard pdf report)
 Additional Deliverables:
 Report to: (if different than Project Manager)

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List:

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION					Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-15	TO-15 SIM	APH	Fixed Gases	Subsides & Metabolites by TO-15	Sample Comments (i.e. PID)
		End Date	Start Time	End Time	Initial Vacuum	Final Vacuum											
-11	IAQ-165 WMAIN-022221	2/22/21	1323	1415	-29.87	-6.80	AA	DH/PF	2.7L	473	0735	X					
-12	SS-165 WMAIN-022221	2/22/21	1322	1416	-29.90	-6.98	SV	DH/PF	2.7L	137	0976	X					
-13	IAQ-4ORCH-022321	2/23/21	1007	1101	-29.73	-7.52	AA	QZ	2.7L	2033	01730	X					
-14	SS-4ORCH-022321	2/23/21	1003	1056	-29.70	-6.93	SV	QZ	2.7L	2186	0770	X					
-15	IAQ-18ORCH-022321	2/23/21	1522	1615	-29.55	-7.48	SV	PJ	2.7L	1473	0647	X					
-16	SS-18ORCH-022321	2/23/21	1519	1616	-29.52	-6.91	AA	RF	2.7L	205	0216	X					

***SAMPLE MATRIX CODES**

AA = Ambient Air (Indoor/Outdoor)
 SV = Soil Vapor/Landfill Gas/SVE
 Other = Please Specify

Container Type

Relinquished By: <u>Vince Dick</u>	Date/Time: <u>2/23/21 17:50</u>	Received By: <u>[Signature]</u>	Date/Time: <u>2/23/21 17:50</u>
Relinquished By: <u>[Signature]</u>	Date/Time: <u>2/24/21 01:20</u>	Received By: <u>[Signature]</u>	Date/Time: <u>2/24/21 01:30</u>

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

APPENDIX F

Soil Disposal Records and Air Monitoring Data

Department of General Services
CITY OF ALBANY
525 Rapp Road Waste Management
Albany, NY, 12205

CLAR HILL TRUCKING, INC.
RIVER ROAD • SELKIRK, NEW YORK 12158
(518) 767-9608 FAX (518) 767-0900

No. 5005

HAZARDOUS WASTE MANIFEST

Weighed: BRENDA
Deposit: BRENDA
BILL TO: 6047
Cedar Hill Trucking
1021 River Road
Selkirk NY 12158

Resources
Way
11059

Shipping Location Samp

Address _____

Phone No. _____

HAULER: Cash Customer
Vehicle ID: 8001
Reference: 6527-P
Grid: NON SHRED
NOTE: 485 W. PUTNAM AVE/CT
CHECK #: 29249

oleum
oil
ulated

_____	GROSS
_____	TARE
_____	NET
_____	TONNAGE

Origin: CONNECTICUT
DATE IN: 03/16/2021 TIME IN: 08:41:07
DATE OUT: 03/16/2021 TIME OUT: 09:16:02

INBOUND TICKET Number: 02-00731456

SCALE 1 GROSS WT. 52200 LB
SCALE 2 TARE WT. 42780 LB
NET WEIGHT 9420 LB

material does not contain free liquid as defined by 40 CFR Part 260.10 or any
defined by 40 CFR Part 261 or any applicable state law, has been properly described,
and is in proper condition for transportation according to applicable regulations.

DISIBENDU MUKHERJEE [Signature] 3/9/2021
Generator Authorized Agent Name (FOR NATIONAL RESOURCES) Signature Shipment Date
TRANSPORTER

Transporter Name Cedar Hill Trucking Driver Name Travis Heath
Address 1021 River Rd Vehicle License No./State 2631 C4
Selkirk NY Truck Number #777

I hereby certify that the above named material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination below.

[Signature] 3/9/21
Driver Signature Shipment Date

[Signature] 3/10/21
Driver Signature Delivery Date

DESTINATION

Site Name Albany Landfill Phone No. _____
Address 525 Rapp Rd Albany NY

I hereby certify that the above named material has been accepted and to the best of my knowledge the forgoing is true and accurate.

Name of Authorized Agent _____ Signature [Signature] Receipt Date _____

No. 5005

485 W PUTNAM AVE
GREENWICH, CT 06830
NYS D.E.C. PERMIT
#4A-314

CEDAR HILL TRUCKING, INC.
1021 RIVER ROAD • SELKIRK, NEW YORK 12158
PHONE (518) 767-9608 FAX (518) 767-0900

NON-HAZARDOUS WASTE MANIFEST

Generator Name National Resources
Address 2 Hudson View Way
Tarrytown NY 10591
Phone No. 203 491-0719

Shipping Location SamP
Address _____
Phone No. _____

Approval Number
5261

Description of Material
Non-Regulated Petroleum Contaminated Soil
Non DOT/RCRA Regulated

_____	GROSS
_____	TARE
_____	NET
_____	TONNAGE

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified & packaged, and is in proper condition for transportation according to applicable regulations.

Generator Authorized Agent Name DISHENDU MUKHERJEE
(FOR NATIONAL RESOURCES)

Signature [Signature]
Shipment Date 3/9/21

Transporter Name Cedar Hill Trucking
Address 1021 River Rd
Selkirk NY

Driver Name Travis Heath
Vehicle License No./State 2631 C4
Truck Number #777

I hereby certify that the above named material was picked up at the generator site listed above.

Driver Signature [Signature]
Shipment Date 3/9/21

I hereby certify that the above named material was delivered without incident to the destination below.
Driver Signature _____
Delivery Date 3/10/21

DESTINATION

Site Name Albany Landfill Phone No. _____
Address 525 Rupp Rd Albany NY

I hereby certify that the above named material has been accepted and to the best of my knowledge the forgoing is true and accurate.

Name of Authorized Agent _____ Signature _____ Receipt Date _____

AIR MONITORING DATA

Note: Due to the large volume of data collected during dust monitoring, two data plots (upwind and downwind) are provided comprising a summary of all data collected.

CAMP DATA

UPWIND**Test 002**

Instrument		Data Properties	
Model	DustTrak II	Start Date	03/09/2021
Instrument S/N	8530122602	Start Time	07:44:31
		Stop Date	03/09/2021
		Stop Time	11:50:31
		Total Time	0:04:06:00
		Logging Interval	60 seconds

Statistics	
	AEROSOL
Avg	0.014 mg/m ³
Max	0.037 mg/m ³
Max Date	03/09/2021
Max Time	11:24:31
Min	0.012 mg/m ³
Min Date	03/09/2021
Min Time	11:16:31
TWA (8 hr)	0.007
TWA Start Date	03/09/2021
TWA Start Time	07:44:31
TWA End Time	11:50:31

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
1	03/09/2021	07:45:31	0.020
2	03/09/2021	07:46:31	0.030
3	03/09/2021	07:47:31	0.018
4	03/09/2021	07:48:31	0.017
5	03/09/2021	07:49:31	0.016
6	03/09/2021	07:50:31	0.015
7	03/09/2021	07:51:31	0.015
8	03/09/2021	07:52:31	0.015
9	03/09/2021	07:53:31	0.014
10	03/09/2021	07:54:31	0.015
11	03/09/2021	07:55:31	0.014
12	03/09/2021	07:56:31	0.015
13	03/09/2021	07:57:31	0.014
14	03/09/2021	07:58:31	0.014
15	03/09/2021	07:59:31	0.014
16	03/09/2021	08:00:31	0.015
17	03/09/2021	08:01:31	0.016
18	03/09/2021	08:02:31	0.014
19	03/09/2021	08:03:31	0.014
20	03/09/2021	08:04:31	0.014
21	03/09/2021	08:05:31	0.014

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
22	03/09/2021	08:06:31	0.014
23	03/09/2021	08:07:31	0.014
24	03/09/2021	08:08:31	0.014
25	03/09/2021	08:09:31	0.015
26	03/09/2021	08:10:31	0.015
27	03/09/2021	08:11:31	0.014
28	03/09/2021	08:12:31	0.014
29	03/09/2021	08:13:31	0.014
30	03/09/2021	08:14:31	0.014
31	03/09/2021	08:15:31	0.013
32	03/09/2021	08:16:31	0.013
33	03/09/2021	08:17:31	0.013
34	03/09/2021	08:18:31	0.013
35	03/09/2021	08:19:31	0.013
36	03/09/2021	08:20:31	0.013
37	03/09/2021	08:21:31	0.014
38	03/09/2021	08:22:31	0.013
39	03/09/2021	08:23:31	0.014
40	03/09/2021	08:24:31	0.014
41	03/09/2021	08:25:31	0.014
42	03/09/2021	08:26:31	0.014
43	03/09/2021	08:27:31	0.014
44	03/09/2021	08:28:31	0.014
45	03/09/2021	08:29:31	0.014
46	03/09/2021	08:30:31	0.014
47	03/09/2021	08:31:31	0.014
48	03/09/2021	08:32:31	0.014
49	03/09/2021	08:33:31	0.014
50	03/09/2021	08:34:31	0.014
51	03/09/2021	08:35:31	0.014
52	03/09/2021	08:36:31	0.014
53	03/09/2021	08:37:31	0.014
54	03/09/2021	08:38:31	0.014
55	03/09/2021	08:39:31	0.014
56	03/09/2021	08:40:31	0.014
57	03/09/2021	08:41:31	0.014
58	03/09/2021	08:42:31	0.014
59	03/09/2021	08:43:31	0.014
60	03/09/2021	08:44:31	0.014
61	03/09/2021	08:45:31	0.014
62	03/09/2021	08:46:31	0.014
63	03/09/2021	08:47:31	0.014
64	03/09/2021	08:48:31	0.014
65	03/09/2021	08:49:31	0.014
66	03/09/2021	08:50:31	0.014
67	03/09/2021	08:51:31	0.014

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
68	03/09/2021	08:52:31	0.014
69	03/09/2021	08:53:31	0.014
70	03/09/2021	08:54:31	0.014
71	03/09/2021	08:55:31	0.015
72	03/09/2021	08:56:31	0.015
73	03/09/2021	08:57:31	0.014
74	03/09/2021	08:58:31	0.014
75	03/09/2021	08:59:31	0.015
76	03/09/2021	09:00:31	0.015
77	03/09/2021	09:01:31	0.014
78	03/09/2021	09:02:31	0.015
79	03/09/2021	09:03:31	0.015
80	03/09/2021	09:04:31	0.016
81	03/09/2021	09:05:31	0.015
82	03/09/2021	09:06:31	0.015
83	03/09/2021	09:07:31	0.015
84	03/09/2021	09:08:31	0.015
85	03/09/2021	09:09:31	0.015
86	03/09/2021	09:10:31	0.015
87	03/09/2021	09:11:31	0.015
88	03/09/2021	09:12:31	0.015
89	03/09/2021	09:13:31	0.015
90	03/09/2021	09:14:31	0.015
91	03/09/2021	09:15:31	0.015
92	03/09/2021	09:16:31	0.015
93	03/09/2021	09:17:31	0.015
94	03/09/2021	09:18:31	0.015
95	03/09/2021	09:19:31	0.015
96	03/09/2021	09:20:31	0.015
97	03/09/2021	09:21:31	0.015
98	03/09/2021	09:22:31	0.015
99	03/09/2021	09:23:31	0.015
100	03/09/2021	09:24:31	0.015
101	03/09/2021	09:25:31	0.015
102	03/09/2021	09:26:31	0.015
103	03/09/2021	09:27:31	0.015
104	03/09/2021	09:28:31	0.015
105	03/09/2021	09:29:31	0.015
106	03/09/2021	09:30:31	0.015
107	03/09/2021	09:31:31	0.015
108	03/09/2021	09:32:31	0.015
109	03/09/2021	09:33:31	0.015
110	03/09/2021	09:34:31	0.015
111	03/09/2021	09:35:31	0.015
112	03/09/2021	09:36:31	0.015
113	03/09/2021	09:37:31	0.015

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
114	03/09/2021	09:38:31	0.015
115	03/09/2021	09:39:31	0.014
116	03/09/2021	09:40:31	0.014
117	03/09/2021	09:41:31	0.014
118	03/09/2021	09:42:31	0.014
119	03/09/2021	09:43:31	0.015
120	03/09/2021	09:44:31	0.015
121	03/09/2021	09:45:31	0.015
122	03/09/2021	09:46:31	0.014
123	03/09/2021	09:47:31	0.015
124	03/09/2021	09:48:31	0.014
125	03/09/2021	09:49:31	0.015
126	03/09/2021	09:50:31	0.015
127	03/09/2021	09:51:31	0.014
128	03/09/2021	09:52:31	0.014
129	03/09/2021	09:53:31	0.014
130	03/09/2021	09:54:31	0.014
131	03/09/2021	09:55:31	0.014
132	03/09/2021	09:56:31	0.014
133	03/09/2021	09:57:31	0.014
134	03/09/2021	09:58:31	0.014
135	03/09/2021	09:59:31	0.014
136	03/09/2021	10:00:31	0.014
137	03/09/2021	10:01:31	0.014
138	03/09/2021	10:02:31	0.013
139	03/09/2021	10:03:31	0.014
140	03/09/2021	10:04:31	0.013
141	03/09/2021	10:05:31	0.013
142	03/09/2021	10:06:31	0.013
143	03/09/2021	10:07:31	0.013
144	03/09/2021	10:08:31	0.014
145	03/09/2021	10:09:31	0.014
146	03/09/2021	10:10:31	0.032
147	03/09/2021	10:11:31	0.020
148	03/09/2021	10:12:31	0.019
149	03/09/2021	10:13:31	0.018
150	03/09/2021	10:14:31	0.016
151	03/09/2021	10:15:31	0.016
152	03/09/2021	10:16:31	0.015
153	03/09/2021	10:17:31	0.015
154	03/09/2021	10:18:31	0.015
155	03/09/2021	10:19:31	0.015
156	03/09/2021	10:20:31	0.014
157	03/09/2021	10:21:31	0.014
158	03/09/2021	10:22:31	0.013
159	03/09/2021	10:23:31	0.014

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
160	03/09/2021	10:24:31	0.014
161	03/09/2021	10:25:31	0.014
162	03/09/2021	10:26:31	0.014
163	03/09/2021	10:27:31	0.016
164	03/09/2021	10:28:31	0.015
165	03/09/2021	10:29:31	0.015
166	03/09/2021	10:30:31	0.014
167	03/09/2021	10:31:31	0.014
168	03/09/2021	10:32:31	0.014
169	03/09/2021	10:33:31	0.014
170	03/09/2021	10:34:31	0.013
171	03/09/2021	10:35:31	0.013
172	03/09/2021	10:36:31	0.013
173	03/09/2021	10:37:31	0.013
174	03/09/2021	10:38:31	0.013
175	03/09/2021	10:39:31	0.013
176	03/09/2021	10:40:31	0.013
177	03/09/2021	10:41:31	0.014
178	03/09/2021	10:42:31	0.014
179	03/09/2021	10:43:31	0.014
180	03/09/2021	10:44:31	0.014
181	03/09/2021	10:45:31	0.014
182	03/09/2021	10:46:31	0.014
183	03/09/2021	10:47:31	0.014
184	03/09/2021	10:48:31	0.014
185	03/09/2021	10:49:31	0.014
186	03/09/2021	10:50:31	0.014
187	03/09/2021	10:51:31	0.014
188	03/09/2021	10:52:31	0.014
189	03/09/2021	10:53:31	0.014
190	03/09/2021	10:54:31	0.014
191	03/09/2021	10:55:31	0.014
192	03/09/2021	10:56:31	0.014
193	03/09/2021	10:57:31	0.014
194	03/09/2021	10:58:31	0.014
195	03/09/2021	10:59:31	0.014
196	03/09/2021	11:00:31	0.014
197	03/09/2021	11:01:31	0.013
198	03/09/2021	11:02:31	0.013
199	03/09/2021	11:03:31	0.013
200	03/09/2021	11:04:31	0.013
201	03/09/2021	11:05:31	0.013
202	03/09/2021	11:06:31	0.013
203	03/09/2021	11:07:31	0.013
204	03/09/2021	11:08:31	0.013
205	03/09/2021	11:09:31	0.013

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
206	03/09/2021	11:10:31	0.013
207	03/09/2021	11:11:31	0.013
208	03/09/2021	11:12:31	0.013
209	03/09/2021	11:13:31	0.013
210	03/09/2021	11:14:31	0.013
211	03/09/2021	11:15:31	0.013
212	03/09/2021	11:16:31	0.012
213	03/09/2021	11:17:31	0.012
214	03/09/2021	11:18:31	0.012
215	03/09/2021	11:19:31	0.013
216	03/09/2021	11:20:31	0.016
217	03/09/2021	11:21:31	0.017
218	03/09/2021	11:22:31	0.017
219	03/09/2021	11:23:31	0.016
220	03/09/2021	11:24:31	0.037
221	03/09/2021	11:25:31	0.020
222	03/09/2021	11:26:31	0.018
223	03/09/2021	11:27:31	0.019
224	03/09/2021	11:28:31	0.015
225	03/09/2021	11:29:31	0.014
226	03/09/2021	11:30:31	0.014
227	03/09/2021	11:31:31	0.017
228	03/09/2021	11:32:31	0.015
229	03/09/2021	11:33:31	0.014
230	03/09/2021	11:34:31	0.013
231	03/09/2021	11:35:31	0.014
232	03/09/2021	11:36:31	0.013
233	03/09/2021	11:37:31	0.013
234	03/09/2021	11:38:31	0.013
235	03/09/2021	11:39:31	0.013
236	03/09/2021	11:40:31	0.013
237	03/09/2021	11:41:31	0.012
238	03/09/2021	11:42:31	0.012
239	03/09/2021	11:43:31	0.012
240	03/09/2021	11:44:31	0.012
241	03/09/2021	11:45:31	0.012
242	03/09/2021	11:46:31	0.012
243	03/09/2021	11:47:31	0.014
244	03/09/2021	11:48:31	0.012
245	03/09/2021	11:49:31	0.012
246	03/09/2021	11:50:31	0.012

DOWNWIND**Test 002**

Instrument		Data Properties	
Model	DustTrak II	Start Date	03/09/2021
Instrument S/N	8530153804	Start Time	08:48:06
		Stop Date	03/09/2021
		Stop Time	12:38:06
		Total Time	0:03:50:00
		Logging Interval	60 seconds

Statistics	
	AEROSOL
Avg	0.017 mg/m ³
Max	0.062 mg/m ³
Max Date	03/09/2021
Max Time	08:50:06
Min	0.013 mg/m ³
Min Date	03/09/2021
Min Time	12:35:06
TWA (8 hr)	0.008
TWA Start Date	03/09/2021
TWA Start Time	08:48:06
TWA End Time	12:38:06

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
1	03/09/2021	08:49:06	0.046
2	03/09/2021	08:50:06	0.062
3	03/09/2021	08:51:06	0.018
4	03/09/2021	08:52:06	0.018
5	03/09/2021	08:53:06	0.018
6	03/09/2021	08:54:06	0.017
7	03/09/2021	08:55:06	0.018
8	03/09/2021	08:56:06	0.018
9	03/09/2021	08:57:06	0.018
10	03/09/2021	08:58:06	0.018
11	03/09/2021	08:59:06	0.017
12	03/09/2021	09:00:06	0.017
13	03/09/2021	09:01:06	0.018
14	03/09/2021	09:02:06	0.018
15	03/09/2021	09:03:06	0.018
16	03/09/2021	09:04:06	0.018
17	03/09/2021	09:05:06	0.018
18	03/09/2021	09:06:06	0.018
19	03/09/2021	09:07:06	0.017
20	03/09/2021	09:08:06	0.018
21	03/09/2021	09:09:06	0.018

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
22	03/09/2021	09:10:06	0.018
23	03/09/2021	09:11:06	0.018
24	03/09/2021	09:12:06	0.018
25	03/09/2021	09:13:06	0.017
26	03/09/2021	09:14:06	0.017
27	03/09/2021	09:15:06	0.017
28	03/09/2021	09:16:06	0.017
29	03/09/2021	09:17:06	0.017
30	03/09/2021	09:18:06	0.018
31	03/09/2021	09:19:06	0.017
32	03/09/2021	09:20:06	0.018
33	03/09/2021	09:21:06	0.017
34	03/09/2021	09:22:06	0.017
35	03/09/2021	09:23:06	0.017
36	03/09/2021	09:24:06	0.017
37	03/09/2021	09:25:06	0.018
38	03/09/2021	09:26:06	0.018
39	03/09/2021	09:27:06	0.018
40	03/09/2021	09:28:06	0.042
41	03/09/2021	09:29:06	0.019
42	03/09/2021	09:30:06	0.019
43	03/09/2021	09:31:06	0.018
44	03/09/2021	09:32:06	0.018
45	03/09/2021	09:33:06	0.018
46	03/09/2021	09:34:06	0.018
47	03/09/2021	09:35:06	0.018
48	03/09/2021	09:36:06	0.018
49	03/09/2021	09:37:06	0.018
50	03/09/2021	09:38:06	0.018
51	03/09/2021	09:39:06	0.019
52	03/09/2021	09:40:06	0.018
53	03/09/2021	09:41:06	0.018
54	03/09/2021	09:42:06	0.018
55	03/09/2021	09:43:06	0.018
56	03/09/2021	09:44:06	0.018
57	03/09/2021	09:45:06	0.018
58	03/09/2021	09:46:06	0.018
59	03/09/2021	09:47:06	0.018
60	03/09/2021	09:48:06	0.018
61	03/09/2021	09:49:06	0.018
62	03/09/2021	09:50:06	0.018
63	03/09/2021	09:51:06	0.018
64	03/09/2021	09:52:06	0.018
65	03/09/2021	09:53:06	0.018
66	03/09/2021	09:54:06	0.018
67	03/09/2021	09:55:06	0.018

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
68	03/09/2021	09:56:06	0.018
69	03/09/2021	09:57:06	0.018
70	03/09/2021	09:58:06	0.018
71	03/09/2021	09:59:06	0.018
72	03/09/2021	10:00:06	0.018
73	03/09/2021	10:01:06	0.018
74	03/09/2021	10:02:06	0.018
75	03/09/2021	10:03:06	0.018
76	03/09/2021	10:04:06	0.018
77	03/09/2021	10:05:06	0.018
78	03/09/2021	10:06:06	0.018
79	03/09/2021	10:07:06	0.018
80	03/09/2021	10:08:06	0.018
81	03/09/2021	10:09:06	0.018
82	03/09/2021	10:10:06	0.019
83	03/09/2021	10:11:06	0.018
84	03/09/2021	10:12:06	0.018
85	03/09/2021	10:13:06	0.018
86	03/09/2021	10:14:06	0.018
87	03/09/2021	10:15:06	0.018
88	03/09/2021	10:16:06	0.018
89	03/09/2021	10:17:06	0.019
90	03/09/2021	10:18:06	0.018
91	03/09/2021	10:19:06	0.018
92	03/09/2021	10:20:06	0.018
93	03/09/2021	10:21:06	0.018
94	03/09/2021	10:22:06	0.018
95	03/09/2021	10:23:06	0.018
96	03/09/2021	10:24:06	0.018
97	03/09/2021	10:25:06	0.018
98	03/09/2021	10:26:06	0.018
99	03/09/2021	10:27:06	0.018
100	03/09/2021	10:28:06	0.018
101	03/09/2021	10:29:06	0.018
102	03/09/2021	10:30:06	0.018
103	03/09/2021	10:31:06	0.018
104	03/09/2021	10:32:06	0.018
105	03/09/2021	10:33:06	0.018
106	03/09/2021	10:34:06	0.018
107	03/09/2021	10:35:06	0.018
108	03/09/2021	10:36:06	0.018
109	03/09/2021	10:37:06	0.018
110	03/09/2021	10:38:06	0.018
111	03/09/2021	10:39:06	0.018
112	03/09/2021	10:40:06	0.018
113	03/09/2021	10:41:06	0.018

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
114	03/09/2021	10:42:06	0.018
115	03/09/2021	10:43:06	0.018
116	03/09/2021	10:44:06	0.018
117	03/09/2021	10:45:06	0.018
118	03/09/2021	10:46:06	0.018
119	03/09/2021	10:47:06	0.017
120	03/09/2021	10:48:06	0.017
121	03/09/2021	10:49:06	0.017
122	03/09/2021	10:50:06	0.017
123	03/09/2021	10:51:06	0.017
124	03/09/2021	10:52:06	0.017
125	03/09/2021	10:53:06	0.017
126	03/09/2021	10:54:06	0.017
127	03/09/2021	10:55:06	0.017
128	03/09/2021	10:56:06	0.021
129	03/09/2021	10:57:06	0.018
130	03/09/2021	10:58:06	0.017
131	03/09/2021	10:59:06	0.017
132	03/09/2021	11:00:06	0.017
133	03/09/2021	11:01:06	0.017
134	03/09/2021	11:02:06	0.017
135	03/09/2021	11:03:06	0.017
136	03/09/2021	11:04:06	0.017
137	03/09/2021	11:05:06	0.017
138	03/09/2021	11:06:06	0.016
139	03/09/2021	11:07:06	0.016
140	03/09/2021	11:08:06	0.016
141	03/09/2021	11:09:06	0.016
142	03/09/2021	11:10:06	0.016
143	03/09/2021	11:11:06	0.016
144	03/09/2021	11:12:06	0.016
145	03/09/2021	11:13:06	0.016
146	03/09/2021	11:14:06	0.015
147	03/09/2021	11:15:06	0.016
148	03/09/2021	11:16:06	0.015
149	03/09/2021	11:17:06	0.016
150	03/09/2021	11:18:06	0.016
151	03/09/2021	11:19:06	0.016
152	03/09/2021	11:20:06	0.016
153	03/09/2021	11:21:06	0.016
154	03/09/2021	11:22:06	0.016
155	03/09/2021	11:23:06	0.016
156	03/09/2021	11:24:06	0.015
157	03/09/2021	11:25:06	0.016
158	03/09/2021	11:26:06	0.015
159	03/09/2021	11:27:06	0.015

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
160	03/09/2021	11:28:06	0.015
161	03/09/2021	11:29:06	0.015
162	03/09/2021	11:30:06	0.015
163	03/09/2021	11:31:06	0.015
164	03/09/2021	11:32:06	0.016
165	03/09/2021	11:33:06	0.016
166	03/09/2021	11:34:06	0.015
167	03/09/2021	11:35:06	0.016
168	03/09/2021	11:36:06	0.016
169	03/09/2021	11:37:06	0.016
170	03/09/2021	11:38:06	0.016
171	03/09/2021	11:39:06	0.017
172	03/09/2021	11:40:06	0.016
173	03/09/2021	11:41:06	0.016
174	03/09/2021	11:42:06	0.016
175	03/09/2021	11:43:06	0.017
176	03/09/2021	11:44:06	0.016
177	03/09/2021	11:45:06	0.016
178	03/09/2021	11:46:06	0.017
179	03/09/2021	11:47:06	0.017
180	03/09/2021	11:48:06	0.016
181	03/09/2021	11:49:06	0.017
182	03/09/2021	11:50:06	0.016
183	03/09/2021	11:51:06	0.016
184	03/09/2021	11:52:06	0.017
185	03/09/2021	11:53:06	0.016
186	03/09/2021	11:54:06	0.016
187	03/09/2021	11:55:06	0.016
188	03/09/2021	11:56:06	0.015
189	03/09/2021	11:57:06	0.015
190	03/09/2021	11:58:06	0.015
191	03/09/2021	11:59:06	0.015
192	03/09/2021	12:00:06	0.015
193	03/09/2021	12:01:06	0.015
194	03/09/2021	12:02:06	0.015
195	03/09/2021	12:03:06	0.015
196	03/09/2021	12:04:06	0.015
197	03/09/2021	12:05:06	0.015
198	03/09/2021	12:06:06	0.015
199	03/09/2021	12:07:06	0.015
200	03/09/2021	12:08:06	0.015
201	03/09/2021	12:09:06	0.015
202	03/09/2021	12:10:06	0.015
203	03/09/2021	12:11:06	0.015
204	03/09/2021	12:12:06	0.015
205	03/09/2021	12:13:06	0.015

Test Data			
Data Point	Date	Time	AEROSOL mg/m ³
206	03/09/2021	12:14:06	0.015
207	03/09/2021	12:15:06	0.015
208	03/09/2021	12:16:06	0.015
209	03/09/2021	12:17:06	0.015
210	03/09/2021	12:18:06	0.015
211	03/09/2021	12:19:06	0.015
212	03/09/2021	12:20:06	0.015
213	03/09/2021	12:21:06	0.015
214	03/09/2021	12:22:06	0.015
215	03/09/2021	12:23:06	0.015
216	03/09/2021	12:24:06	0.015
217	03/09/2021	12:25:06	0.015
218	03/09/2021	12:26:06	0.015
219	03/09/2021	12:27:06	0.015
220	03/09/2021	12:28:06	0.015
221	03/09/2021	12:29:06	0.015
222	03/09/2021	12:30:06	0.015
223	03/09/2021	12:31:06	0.015
224	03/09/2021	12:32:06	0.014
225	03/09/2021	12:33:06	0.014
226	03/09/2021	12:34:06	0.014
227	03/09/2021	12:35:06	0.013
228	03/09/2021	12:36:06	0.013
229	03/09/2021	12:37:06	0.013
230	03/09/2021	12:38:06	0.013

VOC DATA

Note: Due to the large volume of raw data collected during VOC monitoring, two data plots (upwind and downwind) are provided.

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21/03/08 15:26

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-912821
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Menu Mode

Site ID 12345678
User ID 12345678

Begin 3/8/2021 15:26
End 3/8/2021 15:27
Sample Period(s) 60
Number of Records 1

Sensor PID(ppm)
Sensor SN S023030084R6
Measure Type Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutylene
Calibration Time 1/22/2021 12:26
Peak 0
Min 0
Average 0

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	3/8/2021 15:27	0	0	0
Peak		0	0	0
Min		0	0	0
Average		0	0	0

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
1	3/8/2021 15:27		0 ---

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21/03/08 15:28

Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-912821
Unit Firmware Ver	V2.20A

Running Mode	Hygiene Mode
Datalog Mode	Auto
Diagnostic Mode	No
Stop Reason	Power Down

Site ID	12345678
User ID	12345678

Begin	3/8/2021 15:28
End	3/8/2021 15:28
Sample Period(s)	1
Number of Records	10

Sensor	PID(ppm)
Sensor SN	S023030084R6
Measure Type	Avg; Max; Real
Span	100
Span 2	1000
Low Alarm	50
High Alarm	100
Over Alarm	15000
STEL Alarm	25
TWA Alarm	10
Measurement Gas	Isobutylene
Calibration Time	1/22/2021 12:26
Peak	0
Min	0
Average	0

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
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1	3/8/2021 15:28	0	0	0
2	3/8/2021 15:28	0	0	0
3	3/8/2021 15:28	0	0	0
4	3/8/2021 15:28	0	0	0
5	3/8/2021 15:28	0	0	0
6	3/8/2021 15:28	0	0	0
7	3/8/2021 15:28	0	0	0
8	3/8/2021 15:28	0	0	0
9	3/8/2021 15:28	0	0	0
10	3/8/2021 15:28	0	0	0
Peak		0	0	0
Min		0	0	0
Average		0	0	0

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
1	3/8/2021 15:28	0	---
2	3/8/2021 15:28	0	---
3	3/8/2021 15:28	0	---
4	3/8/2021 15:28	0	---
5	3/8/2021 15:28	0	---
6	3/8/2021 15:28	0	---
7	3/8/2021 15:28	0	---
8	3/8/2021 15:28	0	---
9	3/8/2021 15:28	0	---
10	3/8/2021 15:28	0	---

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21/03/09 08:10

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-912821
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Event Full

Site ID 12345678
User ID 12345678

Begin 3/9/2021 8:10
End 3/9/2021 9:10

Sample Period(s) 1
Number of Records 3600

Sensor PID(ppm)
Sensor SN S023030084R6
Measure Type Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutylene
Calibration Time 1/22/2021 12:26
Peak 0
Min 0
Average 0

Datalog

Index	Date/Time	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	3/9/2021 8:10	0	0	0
2	3/9/2021 8:10	0	0	0
3	3/9/2021 8:10	0	0	0
4	3/9/2021 8:10	0	0	0
5	3/9/2021 8:10	0	0	0
6	3/9/2021 8:10	0	0	0
7	3/9/2021 8:10	0	0	0
8	3/9/2021 8:10	0	0	0
9	3/9/2021 8:10	0	0	0
10	3/9/2021 8:10	0	0	0
11	3/9/2021 8:10	0	0	0
12	3/9/2021 8:10	0	0	0
13	3/9/2021 8:10	0	0	0
14	3/9/2021 8:10	0	0	0
15	3/9/2021 8:10	0	0	0
16	3/9/2021 8:10	0	0	0
17	3/9/2021 8:10	0	0	0
18	3/9/2021 8:10	0	0	0
19	3/9/2021 8:10	0	0	0
20	3/9/2021 8:10	0	0	0
21	3/9/2021 8:10	0	0	0
22	3/9/2021 8:10	0	0	0
23	3/9/2021 8:10	0	0	0
24	3/9/2021 8:10	0	0	0

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21/03/08 15:20

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-912330
Unit Firmware Ver V1.20

Running Mode Hygiene Mode
Measure Type Avg; Max; Real
Datalog Mode Continuous
Datalog Type Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID 12345678
User ID 12345678

Begin 3/8/2021 15:20
End 3/8/2021 15:20
Sample Period(s) 1
Number of Records 18

Sensor VOC(ppm)
Span 100
Span 2 N/A
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutylene
Calibration Time 2/22/2021 15:22
Peak 0
Min 0
Average 0

Datalog

Index	Date/Time	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
1	3/8/2021 15:20	0	0	0
2	3/8/2021 15:20	0	0	0
3	3/8/2021 15:20	0	0	0
4	3/8/2021 15:20	0	0	0
5	3/8/2021 15:20	0	0	0

6	3/8/2021 15:20	0	0	0
7	3/8/2021 15:20	0	0	0
8	3/8/2021 15:20	0	0	0
9	3/8/2021 15:20	0	0	0
10	3/8/2021 15:20	0	0	0
11	3/8/2021 15:20	0	0	0
12	3/8/2021 15:20	0	0	0
13	3/8/2021 15:20	0	0	0
14	3/8/2021 15:20	0	0	0
15	3/8/2021 15:20	0	0	0
16	3/8/2021 15:20	0	0	0
17	3/8/2021 15:20	0	0	0
18	3/8/2021 15:20	0	0	0

Peak 0 0 0
Min 0 0 0
Average 0 0 0

TWA/STEL

Index	Date/Time	VOC(ppm) (TWA)	VOC(ppm) (STEL)
1	3/8/2021 15:20	0 ---	
2	3/8/2021 15:20	0 ---	
3	3/8/2021 15:20	0 ---	
4	3/8/2021 15:20	0 ---	
5	3/8/2021 15:20	0 ---	
6	3/8/2021 15:20	0 ---	
7	3/8/2021 15:20	0 ---	
8	3/8/2021 15:20	0 ---	
9	3/8/2021 15:20	0 ---	
10	3/8/2021 15:20	0 ---	
11	3/8/2021 15:20	0 ---	
12	3/8/2021 15:20	0 ---	
13	3/8/2021 15:20	0 ---	
14	3/8/2021 15:20	0 ---	
15	3/8/2021 15:20	0 ---	
16	3/8/2021 15:20	0 ---	
17	3/8/2021 15:20	0 ---	
18	3/8/2021 15:20	0 ---	

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21/03/09 07:57

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-912330
Unit Firmware Ver V1.20

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Running Mode      Hygiene Mode
Measure Type     Avg; Max; Real
Datalog Mode     Continuous
Datalog Type     Auto
Diagnostic Mode   No
Stop Reason      Power Down
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-----
Site ID          12345678
User ID         12345678
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-----
Begin           3/9/2021 7:57
End            3/9/2021 12:03
Sample Period(s) 1
Number of Records 14725
-----

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-----
Sensor          VOC(ppm)
Span            100
Span 2         N/A
Low Alarm       50
High Alarm      100
Over Alarm      15000
STEL Alarm      25
TWA Alarm       10
Measurement Gas Isobutylene
Calibration Time 2/22/2021 15:22
Peak            0.375
Min             0
Average         0.188
-----

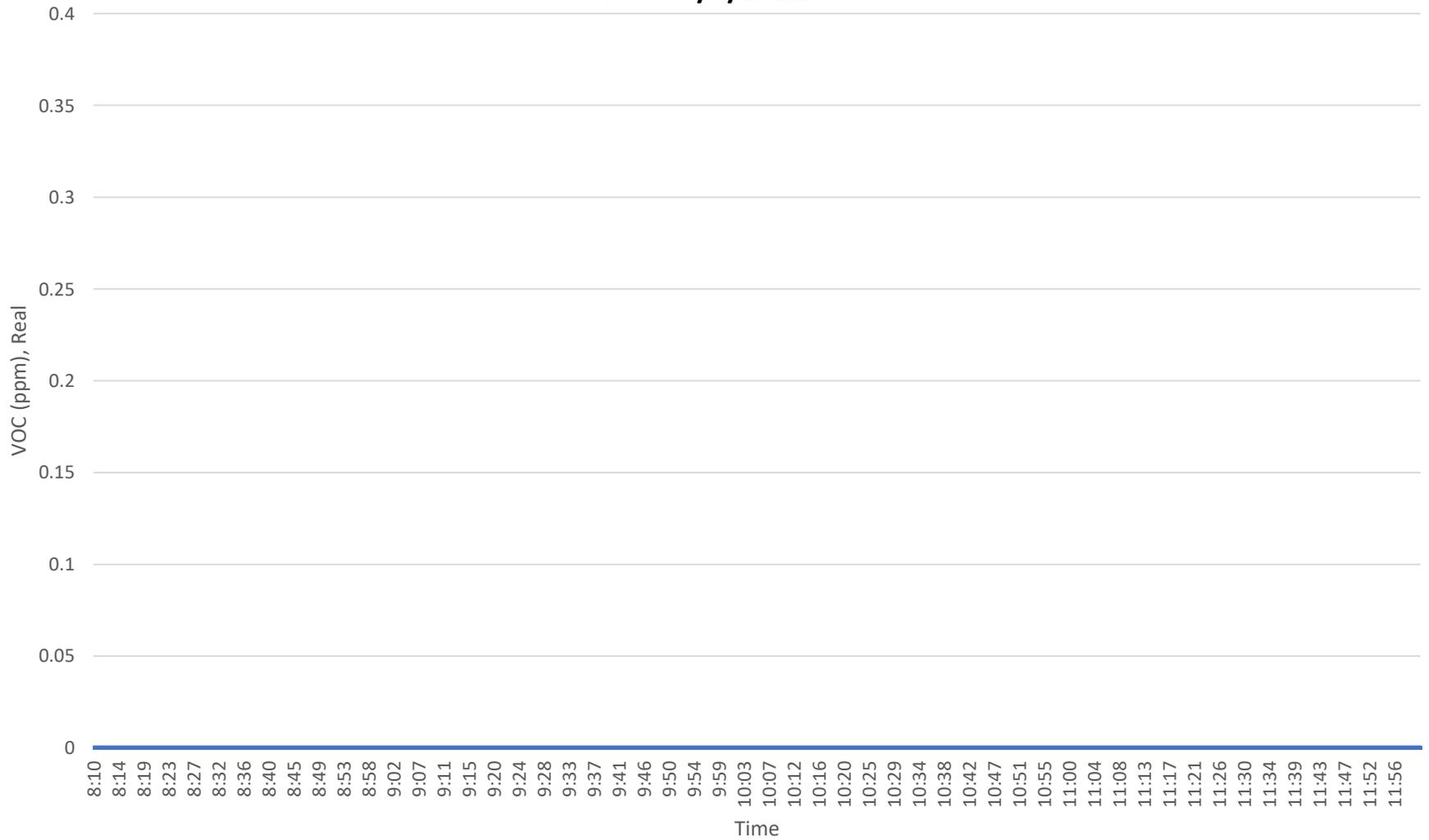
```

Datalog

Index	Date/Time	VOC(ppm) (Avg)	VOC(ppm) (Max)	VOC(ppm) (Real)
1	3/9/2021 7:57	0	0	0
2	3/9/2021 7:57	0	0	0
3	3/9/2021 7:58	0	0	0
4	3/9/2021 7:58	0	0	0
5	3/9/2021 7:58	0	0	0
6	3/9/2021 7:58	0	0	0
7	3/9/2021 7:58	0	0	0
8	3/9/2021 7:58	0	0	0
9	3/9/2021 7:58	0	0	0
10	3/9/2021 7:58	0	0	0
11	3/9/2021 7:58	0	0	0
12	3/9/2021 7:58	0	0	0
13	3/9/2021 7:58	0	0	0

VOC Air Monitoring - UPWIND

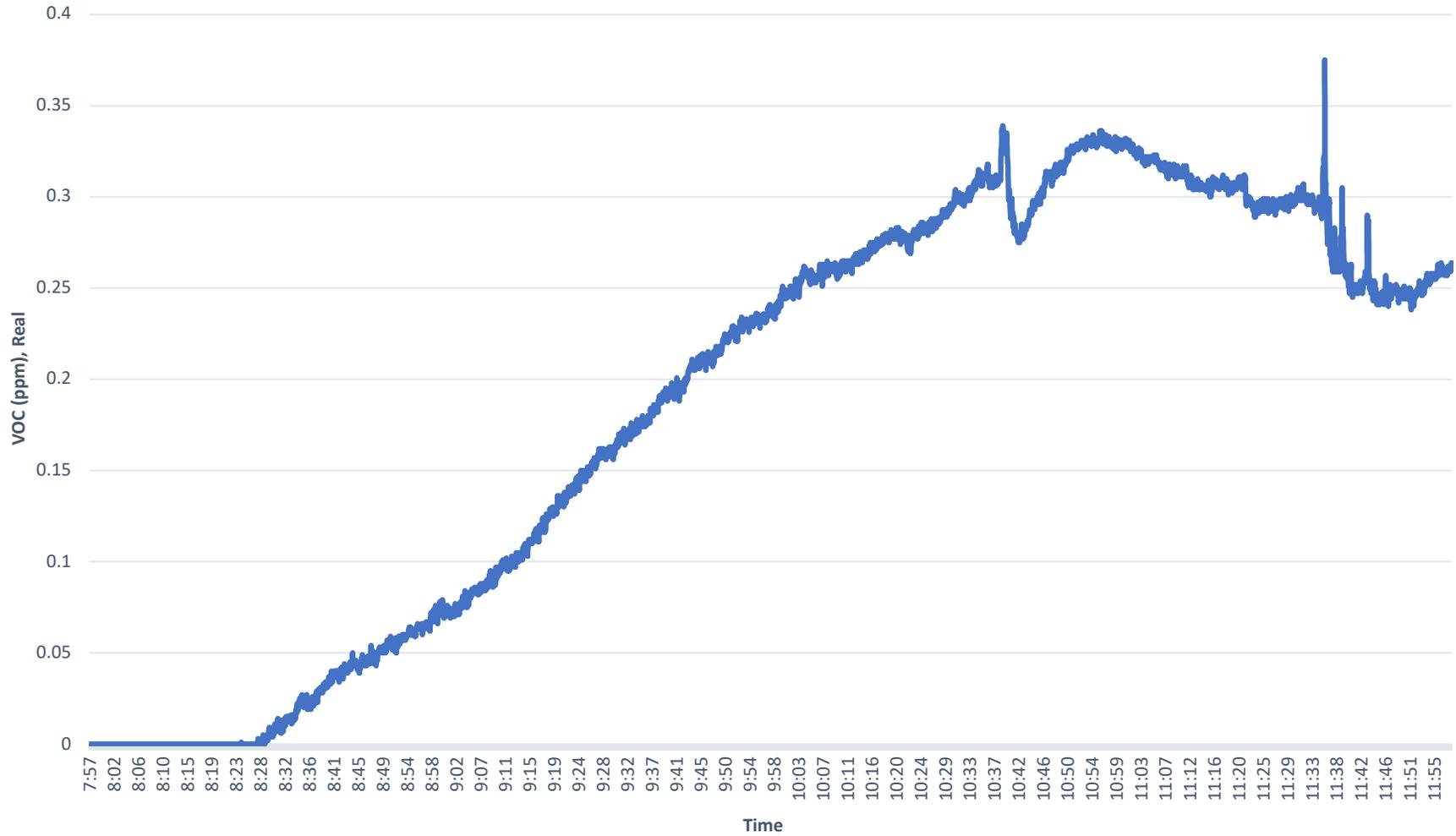
Date: 3/9/2021



Note: Per Site Management Plan, the response level for VOCs is 5ppm per a running mean of 15 minutes at the downwind site.

VOC Air Monitoring - DOWNWIND

Date: 3/9/2021



Note: Per the Site Management Plan, the response level for VOCs is 5ppm per a running mean of 15 minutes at the downwind site.