TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF MONITORING AND TESTING PROGRAMS IN ACCORDANCE WITH CONSENT DECREE 83CV5357

2021 Annual Master Report

Prepared for:

Town of Oyster Bay
Department of Public Works
Syosset, New York

Prepared by:

RTP Environmental Associates, Inc.
400 Post Avenue
Westbury, New York

December 2021

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF MONITORING AND TESTING PROGRAMS IN ACCORDANCE WITH CONSENT DECREE 83CV5357

2021 Annual Master Report

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF FIGURES AND TABLES

APPENDICES

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF MONITORING AND TESTING PROGRAMS IN ACCORDANCE WITH CONSENT DECREE 83CV5357

2021 Annual Master Report

PREFACE

RTP Environmental Associates, Inc. (RTP) has prepared this annual summary report (Annual Report) of various air, soil gas, and landfill gas monitoring programs associated with the Old Bethpage Solid Waste Disposal Complex (OBSWDC) for the Town of Oyster Bay (Town) conducted in 2021. At present, there are seven (7) individual programs, conducted in accordance with Consent Decree 83CV5357, that are performed by RTP or the Town. The various OBSWDC monitoring programs have been modified over the years to accommodate both regulatory requirements as well as changing site conditions. These include the requirements of the 6NYCRR Part 360 Operating Permit Special Conditions (including permit renewals), the historical presence of landfill gas (LFG) in adjacent properties and structures, the subsequent phased construction of a LFG collection and control system (GCCS) to control offsite gas migration, the completion of the landfill capping and closure system, the requirements of the site Consent Decree 83CV5357 (1988), and additional correspondence between the Town and New York State Department of Environmental Conservation (NYSDEC). Specifically, the Consent Decree stipulates that:

> "*…the Town will conduct the monitoring program described in the Lockwood, Kessler and Bartlett April 1987 report entitled "1986 Annual Report: Summarizing the Status of Landfill Gas Monitoring Programs and the Establishment of the Zero Percent Gas Migration Limitation at the Old Bethpage Landfill", to be amended as necessary. In addition, the Town will conduct the Supplemental Gas Monitoring Program set forth in Attachment 2.*" (LKB, 1987)

In this report, Section 1.0 summarizes the varying requirements for monitoring at the site over the years, the facilities constructed to mitigate areas of concern and control offsite gas migration, and the modifications to the gas monitoring program to support both site conditions and facilities. Section 2.0 discusses the activities associated with each program or survey. Section 3.0 provides a summary of programs as conducted in 2021. Section 4.0 provides recommendations for future monitoring and operations.

Most of the historic information in this report has been provided by Lockwood, Kessler & Bartlett, Inc. (LKB), the engineer of record for the Town, on the OBSWDC and associated activities. RTP has been contracted to perform certain tasks required by the Consent Decree and the Part 360 permit, and to prepare this report.

1.0 BACKGROUND

1.1 General

The OBSWDC is located between Winding and Claremont Roads, south of Bethpage-Sweet Hollow Road, in the Town of Oyster Bay, Nassau County, New York. The OBSWDC consists of a total of 134 acres which contains a closed and capped landfill and a gas collection and control system (GCCS), inactive incinerators, an inactive compactor-baler facility, a Municipal Solid Waste (MSW) Transfer Facility, a Groundwater Treatment Facility, a Leachate Treatment Facility, a Landfill Gas Control System, an area periodically utilized for clean fill, scale house, recharge basins, stockpile areas, vehicle maintenance facilities, and offices. A map illustrating these facilities and adjoining areas is provided as Figure 1.1. Three (3) areas of the site are currently leased by others. Two (2) of these areas are on the northern and northeast portions of the site, which includes the inactive incinerators, a compactor-baler building, and a former white goods area. The third area is located at the southernmost portion of the site.

1.2 Legal Authority and Requirements

On March 7, 1979, pursuant to inspections performed by the Nassau County Fire Commissioner, a violation was issued to the Nassau County Fire Training Center (NCFTC) and an order was issued to remove all sources of ignition at the NCFTC because an explosive atmosphere was reported to exist in certain enclosed areas. The NCFTC borders the OBSWDC to the southeast. In order to prevent LFG from contributing to the creation of an explosive atmosphere at the NCFTC, the Town installed a landfill gas collection and control system (GCCS). Subsequently, the Town was required to conduct regular combustible gas monitoring at the NCFTC along the perimeter of the OBSWDC, in onsite buildings and at various offsite locations.

A permit was issued by NYSDEC to the Town as per the requirements of 6 NYCRR Part 360. The "SPECIAL CONDITIONS" category, attached to the Permit to Operate No. 0013, Application 30-S-l5, dated August 14, 1979, was created to address the presence of migrating landfill gases in the vicinity of the OBSWDC. The renewal permit conditions, in part, required the Town to develop a monthly monitoring program acceptable to the NYSDEC and the Nassau County Department of Health (NCDOH). The monitoring program was to be conducted along various boundaries of the OBSWDC and in various onsite facility structures. Monitoring results were required to be submitted in report form to the NYSDEC and the NCDOH.

Prepared by:
RTP Environmental Associates, Inc.
Westbury, New York

N

0 250 500 750 1,000 2,000 Feet

FIGURE 1.1

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX
AND SURROUNDING AREA MAP

OLD BETHPAGE, NEW YORK

A variety of orders, agreements, and operational permit renewals have been issued since the site's initial permit and these are discussed in previous annual reports. In April 1986, the Town ceased all landfilling operations at OBSWDC, and all MSW received at the complex has been subsequently hauled offsite for disposal or recycling. The site's operating permit was modified to reflect the operation of a solid waste transfer station instead of a landfill.

In 1988, the Town and the New York State Department of Law (NYSDOL) entered into a Final Consent Decree for the remediation of the Old Bethpage Landfill (83 *CV*. 5357). Incorporated into the Consent Decree was a Remedial Action Plan (RAP) which detailed the actions to be taken by the Town in compliance with the Final Consent Decree. Appendix A, Section I. (H) of the RAP required the Town to continue to operate and maintain the existing gas control systems in compliance with the requirements of 6 NYCRR Part 360. Attachment 2 of the RAP required the Town to supplement the monitoring programs with data obtained from the following:

- Quarterly ambient volatile organic compound (VOC) air sampling to be taken at three (3) selected locations during the first year of remediation and, if approved by the NYSDOL, annually thereafter.
- Quarterly subsurface VOC gas sampling to be collected at 14 selected sampling locations at a depth of 30 inches during the first year of remediation and, if approved by the NYSDOL, on an annual basis thereafter; and quarterly subsurface VOC gas sampling at location M9 at depths of 10 feet, 20 feet, 30 feet, and 40 feet during the initial year of remediation, and if approved by the NYSDOL, on an annual basis thereafter.
- Quarterly thermal oxidizer (TO) emissions sampling for VOC levels during the initial year of remediation (results obtained during the initial year of testing were to be related to the TO temperatures during the initial year of sampling. Thereafter, the oxidizer temperatures were to be monitored on a monthly basis to ensure that temperatures needed to combust the organics were maintained in the oxidizer. The oxidizer emissions were to be sampled on an annual basis for VOC content thereafter).
- Quarterly pressure readings at three (3) locations during the initial year of remediation and, if approved by the NYSDOL, on an annual basis thereafter.

In May 2008, the TO ceased operations due to declining gas quality and equipment malfunctions. Based on correspondence in October 2012 with the NYSDEC (NYSDEC, 2012), the decommissioning of the TO was approved. As part of this agreement, the program was modified to include weekly methane testing of the vent stack for the GCCS; this monitoring began in late 2012.

In early 2015, The Town petitioned NYSDEC to reduce the sampling frequency from quarterly to annually for the ambient air, soil gas, and pressure tests. Approval for this request was granted on March

24, 2016. Two (2) ambient air, soil gas and pressure monitoring efforts were conducted during 2016; one (1) during the 1st quarter prior to approval, and one after to represent a 2016 annual test during the 2nd quarter. In accordance with the approved modification to the Consent Decree, one (1) test was to be conducted in subsequent years. In accordance with the NYSDEC request, the 2021 annual test was conducted during the 3rd quarter. All subsequent testing will reflect the reduced frequency of the monitoring program, with each subsequent test to be performed annually at successive one year and 1-quarter intervals. The details of the 2021 monitoring for the ambient air, soil gas, and pressure tests are contained in Appendix A of this report.

The RAP further stated that, in order to demonstrate compliance with 6 NYCRR Part 360 and maintain a zero percent methane gas migration limitation at the landfill boundary, the Town shall conduct a monitoring program, as described in the LKB Report (LKB, 1987), to be amended, as necessary. The monitoring program results for 2021 are summarized in an annual engineering report addressing the status of all LFG monitoring programs, including the Perimeter Landfill Gas Well Test, the Building Survey, any Supplemental Tests, the Zero Percent Gas Migration Limitation Survey, and the Weekly Perimeter Landfill Gas Vent Tests. Also, 6 NYCRR Part 360 Solid Waste Management Facility Permit (#1-2824-00528/00005) contains a special condition stipulating quarterly monitoring of methane in the transfer station building, the maintenance building, and the office building. Monitoring for methane in the transfer station building, the maintenance building, and the office building will continue in accordance with 6 NYCRR Part 360; however, monitoring is to be conducted on a one year and 1- quarter basis, rather than quarterly, as of 2016. The details of all the 2021 LFG monitoring activities are contained in Appendix B of this report.

The final test program is the speciation of the VOC concentrations in the perimeter LFG vent stack, in addition to determining annual emission rates for each constituent. This was an added requirement by the NYSDEC to assure compliance with annual emission rates for specific VOC compounds for Title V Air Permit compliance. The results of the 2021 perimeter vent stack test are provided in Appendix C of this report.

The Town's current 6 NYCRR Part 360 Solid Waste Management Facility Permit (#1-2824-00528/00005) was renewed as of June 19, 2018 and expires on June 18, 2023. This Permit allows for the operation of a municipal solid waste transfer station serving the Town.

1.3 Background on Ambient Air, Soil Gas, and Pressure Monitoring

The sampling and analysis of ambient air and soil gases, as well as the pressure sampling in the areas at and surrounding the OBSWDC as part of the RAP Attachment 2, began in 1990. The program initially required quarterly testing of ambient air at three (3) locations surrounding the Landfill. The program was

modified slightly to include meteorological monitoring to assure upwind samples were representative of upwind sources, and downwind samples captured the impact of landfill activities. Soil gas samples have been collected quarterly from a group of pre-selected wells, when available. Unavailable access to soil gas wells, at times, has precluded sample collection. Soil gas pressures had been collected quarterly from a separate group of pre-selected wells. The results of these quarterly sampling efforts were analyzed and summarized in quarterly reports and then summarized in an annual report for submission to the NYSDEC.

As previously stated, the Town received NYSDEC approval in 2016 after the completion of the 1st quarter ambient air, soil gas, and pressure test, as well as the quarterly LFG survey, to reduce the sampling frequency to annual. As such, the first annual testing activities were scheduled and completed during the 2nd quarter of 2016. Therefore, the annual testing for 2017 was completed during the 3rd quarter of 2017, 2018 annual testing was conducted in the 4th quarter of 2018, 2019 annual testing was completed during the 1st quarter of 2019, and the 2020 annual testing was completed during the 2nd quarter of 2020. The most recent testing in 2021 was completed during the third quarter. The ambient air, soil gas, and pressure tests were all performed and analyzed and are included Appendix A of this report. The 2022 test will be performed during the 4th quarter.

1.4 Background on Landfill Gas Monitoring Programs

The Town initiated several LFG detection and control programs to monitor and prevent offsite migration of LFG in the vicinity of the OBSWDC in the late 1970s. Initially, the Town installed permanent sampling probes around the perimeter of the OBSWDC to detect potential offsite LFG migration. Based on the LKB Engineering Report dated June 1980 (LKB, 1980), actions were immediately undertaken by the Town to alleviate offsite LFG migration onto the NCFTC. The Phase 1 Gas Control and Recovery System became operational in June 1982. Eventually, three (3) additional Phases were added to fully encircle the Landfill. The overall intent of the system was to surround the Landfill with a negative pressure zone in the landfill perimeter soils. The negative pressure was supplied by the landfill blower station. The system was connected to a TO until gas quality sufficient to maintain continuous operations was no longer available. At that time, the Town then discontinued TO operations and exhausted the collected perimeter gas through a vent stack adjacent to the GCCS blower station. The Town monitors the methane leaving the vent stack on a weekly basis.

The 2021 LFG monitoring test surveys were all performed and analyzed and have been included in the summary of the LFG monitoring programs for 2021, as provided in Appendix B of this report.

1.5 Background on Stack Vent Monitoring and Testing

As previously stated, the landfill GCCS collects landfill gases along the perimeter of the Landfill and discharges the gases via an exhaust vent at the blower station located onsite. An annual test of the speciated constituents in the Perimeter Landfill Gas Stack Vent Exhaust was required by the NYSDEC as one additional condition within a Modified Order Consent for the facility. The Town provided the protocol, as approved by the NYSDEC, for conducting the tests. The vent stack test results and the protocol are included with the summary report in Appendix C. Emissions measurements of the exhaust vent stack for the perimeter collection system are used to determine if the Town is meeting NYSDEC stipulated emission requirements.

2.0 SAMPLING PROGRAMS

Historically, the sampling was performed in accordance with the procedures, protocols, and schedules recommended in the Annual Reports, as amended (per the Consent Decree), to reflect the modifications to the LFG system, revisions to operating permit special conditions, and changing LFG conditions at the site. The documented lack of sufficient combustible gas in previous efforts, the lack of offsite property owner reports of odors or combustible gas, the abandonment/removal of structures from service, and revisions to operating permit special conditions indicated that the majority of historical programs completed prior to 2008 were no longer warranted (LKB, 2009). Based on these findings, an amended monitoring program was developed and proposed for future surveys after 2008. Sampling schedules were further amended in the 2016 Modified Consent Order after discussions between the Town and NYSDEC reduced sampling frequency of several monitoring programs from quarterly to annually.

Table 2.1 provides the currently active monitoring survey programs that document LFG and other related conditions at the OBSWDC and in surrounding areas. The following sections describe the monitoring activities and equipment associated with required monitoring efforts for the 2021 calendar year.

TABLE 2.1

TOWN OF OYSTER BAY
OBSWDC MONITORING PROGRAM
SUMMARY OF 2021 LANDFILL GAS MONITORING PROGRAMS

Survey No.	Survey Description	Frequency of Monitoring	Monitoring Performed By
1.	OBSWDC Perimeter Gas Well Monitoring Survey	Annual*	RTP
2.	Building/Structure Gas Survey	Annual*	RTP
3.	Supplemental Gas Monitoring Program	As Necessary	TOB
4.	Ambient VOC Air Sampling, Subsurface VOC Gas Sampling, and Soil Gas Pressure Readings	Annual*	RTP
5.	Zero Gas Migration Limitation Survey	Annual*	RTP
6.	Perimeter Gas Collection System Vent Monitoring	Weekly	TOB
7.	Perimeter Landfill Gas Exhaust Vent Stack Testing	Annual*	RTP

Notes: RTP – RTP Environmental Associates, Inc.
TOB – Town of Oyster Bay staff
* In 2016, the monitoring frequency for these programs was reduced from quarterly to annually as part of an agreement between the Town and the NYSDEC. In addition, a Landfill Gas Exhaust Vent Stack Test was added as Survey No. 7.

Five (5) of the seven (7) monitoring surveys identified in Table 2.1 (Nos. 1, 2, 3, 5, and 6) are performed using a handheld portable combustible gas monitor. Survey Nos. 4 and 7 are performed using more specialized equipment. Supplemental gas surveying, specified as Survey No. 3, was not required in 2021. A detailed description of that equipment is provided in Appendices A and C, respectively.

2.1 Ambient Air, Soil Gas, and Pressure Well Monitoring Activities

The primary objective of the Ambient Air, Soil Gas, and Soil Gas Pressure Sampling Program (Survey No. 4) is to examine the ambient air concentrations of trace VOCs in the vicinity of the Old Bethpage Landfill. During the 2021 annual sampling event, five (5) ambient air Volatile Organic Sampling Train (VOST) samples were collected over a 24-hour period at three (3) locations; two (2) collocated samplers located at one (1) upwind location, two (2) collocated samplers located at one (1) downwind location, and another sampler located at an additional location downwind of the Old Bethpage Landfill. Short-term (approximately 10-minute) subsurface (30-inch depth or at various depths) soil gas samples were collected at 13 of 14 locations specified in the Consent Decree. Well M-21 was destroyed in 2003. Similar short-term samples are collected at Well M-9 that contain four (4) separate wells extending 10 feet, 20 feet, 30 feet and 40 feet below grade, respectively. Finally, soil gas pressure readings were taken at three (3) locations.

One (1) double Tenax cartridge and one (1) Tenax/Charcoal cartridge combination were used for all sampled locations (USEPA Reference Method 0030) for the test conducted in 2021. The VOST Tenax and Tenax/Charcoal sorbent cartridges used in the modified sampling train are identical to those used in the VOST EPA Reference Method 0030 and two (2) traps per location that were previously used for quarterly tests.

The Target Compound List (TCL), based on the most recently modified DAR-1 Annual and Short-term Guideline Concentrations (AGCs and SGCs), was updated by the NYSDEC on February 12, 2021 (current as of December 2021). These values were used as a reference for all 2021 tests. Four (4) TCL compounds continue to have no assigned AGC values and, as such, an Interim AGC value was assigned to these compounds using NYSDEC DAR-1 policy guidance. The compounds benzaldehyde, 2-chloroethyl vinyl ether, dibromochloromethane, and 2/4-ethyltoluene (total) have been assigned an Interim AGC value of 0.1 $\mu g/m^3$, which represents a Moderate Toxicity "de minimus" limit. According to this policy, when no exposure limits are available from USEPA, NYSDOH, or the American Conference of Governmental Industrial Hygienists (ACGIH), and no analogies can be made, NYSDEC will assign a conservative de minimus limit as the AGC.

The NYSDEC strongly emphasizes that the AGCs are guideline values only, developed for screening and toxicity ranking, and are not standards or absolute limits of acceptable risk. With these limitations in mind, the AGCs are State-prescribed guidelines for comparison to the data recorded at the OBSWDC.

The ambient air monitoring program incorporates repositioning of sampling equipment to best define the overall contributions associated with the OBSWDC during each annual 24-hour test effort. Normally, two (2) collocated samples are taken at an upwind location, and three (3) samples are taken at two (2) locations downwind of the OBSWDC. A meteorological station is positioned onsite to measure local weather conditions during a 24-hour test event. In general terms, upwind concentrations can be compared directly to downwind concentrations to conservatively determine the impact of the OBSWDC on ambient air surrounding the site. The specific details of the 2021 sampling event are provided in Appendix A.

2.2 Landfill Gas Monitoring Activities

Landfill gas monitoring activities in 2021 consisted of four (4) individual surveys including:

1. Perimeter Gas Well Monitoring Survey (Survey No. 1)
2. Building/Structure Gas Survey (Survey No. 2)
3. Zero Gas Migration Limitation Survey (Survey No. 5)
4. Weekly Perimeter Gas Collection System Vent Monitoring (Survey No. 6)

Note: The survey number corresponds to the listing provided in Table 2.1.

The perimeter gas well monitoring survey includes a series of soil gas wells that extend around the perimeter of the OBSWDC, onsite wells, and wells offsite. These wells are specifically monitored for methane concentrations and the results are tabulated and analyzed in Appendix B of this report. The building/structure survey is performed to determine the methane concentrations in various onsite and offsite buildings and structures. Appendix B contains a listing of the areas sampled and the results of the 2021 monitoring activities. The zero-gas limitation survey is a detailed examination of the subsurface methane concentrations around the perimeter of the OBSWDC site and around the toe of slope for the Landfill. Samples are collected every 50 feet around the areas described, and the results of this testing are provided in Appendix B. Finally, the Town is required to collect weekly samples of methane throughout the year from the GCCS perimeter vent stack (Survey No. 6). The survey is conducted by Town personnel and the results are reported in Appendix B.

In October 2010, the NYSDEC requested that the Town take quarterly samples of LFG from the perimeter collection system vent for VOC speciation of LFG collected while the TO was out of service. This task was discontinued, as per an agreement with the Town and NYSDEC in October 2012. The Town, as discussed above, was then tasked with performing Survey No. 6, weekly perimeter gas collection system vent monitoring. Again, further details regarding this testing are provided in Appendix B.

2.3 Stack Vent Monitoring and Testing Activities

The GCCS contains an LFG vent stack for all gases collected by the perimeter system. Emission tests were performed on the perimeter gas vent stack to measure flow rates, moisture content, and concentrations of speciated VOCs only. Triplicate 60-minute emissions tests were conducted on the exhaust from the perimeter GCCS. One (1) blower was in operation during the entire test period. Samples of the exhaust gases were collected in SUMMA canisters using a 5-foot length of Teflon 1/4-inch tubing that was inserted into the middle of the exhaust stack via the west stack port. Each 6-Liter SUMMA canister was equipped with a dedicated flow controller configured to collect slightly less than 6-Liters of exhaust gas over the 1-hour sampling period. The test was conducted on August 11, 2021. Details regarding sampling equipment and procedures are included in Appendix C.

3.0 SUMMARY OF 2021 LANDFILL MONITORING PROGRAM RESULTS

3.1 Ambient Air, Soil Gas, and Pressure Well Testing Program

The 2021 annual ambient air, soil gas, and pressure well monitoring event was performed by RTP on September 14-15, 2021. Ambient air VOC concentrations and meteorology were monitored during the 24-

hour sampling period. In accordance with the monitoring protocol, ambient air VOC samples were collected at locations both upwind and downwind of the Landfill. The ambient air quality test results indicate that five (5) constituents on the program target compound list (TCL) exceeded their AGC values during the test. The exceeding compounds included: benzaldehyde, benzene, carbon tetrachloride, 1,2-dichloroethane, and 2/4-ethyltoluene (total). No tentatively identified compounds (TIC) exceeded their AGC or de minimus level. The measured compound concentrations in the ambient air were relatively similar in magnitude for samples collected both upwind and downwind of the Landfill. These results are based on 24-hour samples and, therefore, an exceedance of an AGC does not necessarily indicate an exceedance of a respective annual guideline value. No measured values exceeded their respective SGC values. Collectible quantities of condensate were not present in any of the ambient air sample impingers and, as such, no separate condensate samples were collected or analyzed.

The net Landfill impact values (averaged downwind concentrations minus averaged upwind concentrations) for the 2021 test have been calculated to approximate the actual impacts associated with the Landfill and other OBSWDC sources. In general, VOC concentrations in the ambient air for the 2021 test were consistent with a majority of the TCL constituents and observed TIC concentrations when the results were compared to previous tests. Because of analytical variation and the limited number of air samples collected in 2021, the VOC levels can only be estimates of true annual, short-term maximum, or average levels existing in the environment surrounding the OBSWDC.

The upwind and downwind values used to estimate air quality impacts associated with releases from the Landfill are intentionally conservative. Moreover, it should be noted that annual monitoring, in most cases, is intended to occur during generally falling barometric pressure conditions which tend to maximize observed impacts from any landfill source. In 2021 the barometric pressure fell during the first 19 hours of the test and then remained steady for the remainder of the test. The downwind sampling locations were also positioned in order to maximize the impact from landfill and associated sources. A comparison of data collected by the NYSDEC at other sites across the State indicated that the air quality in the area surrounding the OBSWDC may be improving slightly when compared to other areas of the State; however, some other areas of the State also seem to show signs of improvement.

As part of this continuing program, a database is being developed for both an uncapped and capped landfill. Since capping was completed, the data collected continues to show, for a limited set of compounds, exceedances of the NYSDEC ambient guideline values both upwind and downwind of the OBSWDC. Additionally, the TCL has been occasionally updated based on continuing reviews of TICs detected by enhanced analytical procedures.

Soil gas well concentrations were monitored at several locations surrounding the Landfill. All soil gas well samples were collected and analyzed successfully except for Well M21, which was covered by a cement

barrier. Soil gas sample results indicate the presence of a number of target compounds in the soil gas wells surrounding the Landfill. Although no applicable guidelines are currently available for soil gas concentration readings, New York State and EPA are considering introducing vadose zone limits. The number of soil gas well target compound constituents that exceeded the level of respective ambient air AGCs during 2021 testing is similar to the 2020 results.

TIC concentrations in soil gas samples for the 2021 annual test have slightly decreased when compared to the 2020 annual test with lower variety than what was observed in the soil gas wells during 2020. No target or TIC concentrations in the soil gas samples exceeded the level of respective ambient air SGC guideline values. Comparisons of soil gas concentrations with ambient AGCs are provided only as relative indicators since soil gas levels are not considered ambient air. Also, because of analytical variation and the limited number of soil samples collected in 2021, the levels provided can only be estimates of the true annual, short-term maximum, or average levels existing in the environment surrounding the OBSWDC.

Monitored soil gas pressures for 2021 have been fairly consistent. Soil gas pressures were measured at three (3) pressure well locations surrounding the Landfill during 2021 test. RTP conducted the pressure well tests from 07:40 hours through 08:31 hours on September 15, 2021. Zero pressure was recorded at all 10-foot depth pressure wells except for the positive readings at PW3. Slightly negative pressure was recorded at the 20-foot depth at PW3 while zero pressure was observed at pressure wells PW1 and PW2. The blower station had one blower operating during the time the pressure wells were tested. RTP will continue to monitor these locations and provide support to the Town to ensure the system is operating as designed.

In conclusion, aside from a few compounds, the ambient VOC concentrations measured during testing efforts conducted in 2021 in locations upwind and downwind of the facility appear to be similar to VOC constituents and VOC concentrations detected during previous monitoring efforts. However, some compounds have decreased while others have become more abundant. In 2021, the conservative net concentration differences between the averaged upwind and downwind samples did exhibit an exceedance of the NYSDEC ambient air AGC for one analyzed compound, benzene. No VOC compound concentrations, measured upwind or downwind of the Landfill, exceeded NYSDEC short-term air guidelines. Again, because of analytical variation and the limited number of samples collected during 2021 as compared to prior years, the above data only provide a limited estimate of the actual ambient air and soil gas concentrations impacting the areas surrounding the OBSWDC. The 2021 ambient air, soil gas, and pressure well monitoring report is provided in Appendix A.

3.2 Landfill Gas Monitoring Survey Programs for 2021

3.2.1 Perimeter Gas Well Monitoring Survey

In an effort to confirm LFG conditions in perimeter monitoring wells and make recommendations for future monitoring programs, RTP performs a perimeter gas well monitoring event following previously established monitoring survey protocols. The test is now conducted annually in accordance with the 2016 modifications to the monitoring requirements. The perimeter wells along the OBSWDC property boundary and at the NCFTC were monitored for the presence of methane gas. The actual surveys took place on September 21 & 22, 2021. The observed data indicates that none of the perimeter gas wells contained detectable amounts of methane gas (0% LEL) during the sampling events contained within this report. Therefore, the perimeter gas well monitoring data for 2021 indicates that the regulatory requirements are being met and the gas generated by the Landfill is being adequately contained by the LFG collection system. These findings are in general agreement with the 2021 Zero Gas Migration Limitation Survey.

3.2.2 Building/Structure Gas Survey

RTP performed combustible gas monitoring at several onsite facility locations that are still in existence and accessible. One (1) annual survey was conducted in conjunction with the perimeter gas well monitoring survey discussed in Section 3.2.1. The combustible gas data for the building/structure survey are presented in Appendix B. The observed data indicates that no structures exhibited measurable amounts of combustible gas above the minimum detection limit (MDL) of the analyzer. The 6NYCRR Part 363 limit for combustible gas in structures is less than 25% of the LEL. Thus, the building/structure surveys indicate that the regulatory requirements were being met.

3.2.3 Supplemental Gas Monitoring Survey

No supplemental monitoring was required for the 2021 period.

3.2.4 Zero Gas Migration Limitation Survey

The 2021 Zero Gas Migration Limitation Survey, designed to monitor the lateral migration of LFG around the outer boundary of the Landfill, was conducted by RTP personnel on September 21 & 22, 2021. The results of the 2021 survey demonstrate that LFG migration has been contained within the landfill perimeter and/or the OBSWDC boundary. The combustible gas concentrations for the line of well points were all zero or non-detect, except for four (4) locations where a low reportable amount of

combustible gas was detected. The protocol stipulates that when combustible gas is identified, additional readings should be taken further away from the landfill boundary until a less than 1% of the LEL is observed. One point where combustible gas was identified at the landfill perimeter during this 2021 test occurred along Winding Road and an outward point taken indicated non-detectable methane readings. This point was away from the landfill perimeter and below the 25% LEL limit for landfill property boundaries from 6 NYCRR Part 363 (which does not apply until the Consent Order expires) and located outside of points along the margin of the Landfill showing undetectable levels of combustible gases. Three (3) additional locations exhibited concentrations between 4%-18% LEL along the western edge of the retention pond. Additional samples several feet away, radially outward from the landfill, indicated concentrations of 0% LEL. Additionally, the original samples were near the base of a large dirt/compost pile which may have significantly influenced these samples. All well point locations are identified by NY State Plane coordinates and are provided within this report in Appendix B. Hourly meteorological data measured at Republic Airport in Farmingdale, NY during the survey dates are provided in Appendix B.

3.2.5 Weekly Perimeter Gas Collection System Vent Monitoring Survey

The Town first began collecting methane readings in September 2012 at the vent for the perimeter collection system near the blower station. The Town and NYSDEC revised the testing schedule from quarterly to annually beginning with the 2nd quarter of 2016. As such, the period reported herein covers the 3rd quarter 2020 through the 3rd quarter 2021 (5 total quarterly periods). Town personnel conducted the perimeter gas collection system vent survey on a weekly basis. The data was collected by Town staff using a Multi-Rae Lite Wireless Portable Multi-Gas monitor to check for methane.

In all, 66 weekly readings were observed. The data indicates the methane concentrations in the collected gas ranged from a minimum of 0.1% methane to a high of 1.8% methane with the annual average (based on 5 quarters of data) concentration of 0.54% methane. Based on the available previous year's observations, levels tended to be higher in October-December 2020 before falling and leveling off to around 0.3% methane in March 2021. All of the concentrations of methane noted are well below 5%, which is the LEL for methane. There were two (2) notable periods of missing data (22 missing readings) attributed to a gas leak and a power failure. The Town will continue to conduct these weekly tests throughout 2021 and 2022, in accordance with the NYSDEC request, unless further reductions in monitoring are approved. A summary of the 2021 gas monitoring results is provided in Appendix B, along with all other 2021 LFG monitoring surveys.

3.3 Perimeter Landfill Gas Exhaust Stack Vent Testing

Samples were collected from the landfill GCCS exhaust stack on August 11, 2021 to determine the constituent concentrations and the emission rates of speciated Volatile Organic Compounds (VOCs), and

then to compare those emission rates to State DAR – 1 short-term and annual guideline concentrations, and to Title V permit emission thresholds (Survey No. 7). Triplicate 60-minute samples were collected from the exhaust stack. Stack flowrates were measured and converted to standard conditions for direct comparison to the ambient guidelines and Title V thresholds; the results are provided in the report presented in Appendix C. The results show that the average emission rate during the test period was equivalent to just 2.55 pounds per year for speciated VOCs via EPA Method TO-15. This emission rate is well below the Title V permit threshold for non-category sources (25 tons per year), and well below the hazardous air pollutant (HAP) emission thresholds for individual air pollutants (10 tons per year) and combined HAPs (25 tons per year).

The test did not include the measurement of total non-methane VOCs via EPA Method 25 that is typically used for determining non-methane organic compound (NMOC) release rates from industrial stacks. Other NMOC release rates for other emission sources on the property were not included and, thus, the actual pound per year NMOC release rate for the entire facility was not calculated. However, it should be noted that there does not appear to be a significant stationary source of VOC emissions at the OBSWDC based on tested values.

The test results also indicate three (3) of the speciated VOCs detected via Method TO-15 in the vent stack exhaust gases were in excess of the level of the respective NYSDEC annual guideline concentrations (AGC) for individual compounds. The compounds exceeding the level of the AGC were benzene, naphthalene, and vinyl chloride. No compounds exceeded the level of the respective NYSDEC short-term guideline concentration (SGC) threshold for individual compounds. These values are in-stack concentration levels and not ambient air concentrations. Using the calculated average release rate of each of the constituents with values above the reporting limit and other parameters measured during sampling, the modeled maximum off-property annual and 1-hour concentrations were computed to demonstrate compliance with the respective NYSDEC AGC and SGC values. The model results indicate all of the compounds over the laboratory reporting limit are well below their respective AGC and SGC values at the nearest property fence line. The LFG exhaust stack vent test is documented in Appendix C.

4.0 RECOMMENDATIONS

4.1 General

The OBSWDC LFG monitoring surveys have been modified over the years to accommodate both regulatory and permit requirements as well as changing site conditions. The most recent modifications were based on the findings contained in the annual reports and the generally assumed diminishing LFG levels generated by the Old Bethpage Landfill as it ages. As previously stated, one major change has been the monitoring frequency for these programs. In general, the sampling frequency for most surveys was

reduced from quarterly to annually during the early part of 2016 as part of an agreement between the Town and the NYSDEC. In addition, an annual landfill gas exhaust vent stack test, Survey No. 7, was added in 2016. All programs are scheduled to be performed on a one test per year, sequential quarterly, basis until further notice. The next test program is scheduled for the 4th quarter 2022. The following discussion provides the recommended OBSWDC monitoring programs for the 2022 calendar year.

4.2 Recommended 2022 Monitoring Programs

As the Old Bethpage Landfill continues to age, LFG production continues to decrease. Landfill gas production rate decreases have been confirmed by several findings including: the shutdown of the ET power generating facility in 2003, the closure of the Thermal Oxidizer, the decrease in high quality gas mined (high percent methane) from the Landfill; the reductions in combustible gas concentrations in perimeter collection system wells; and the decrease in areas where LFG is migrating beyond the footprint of the Landfill (LKB, 2013).

Although additional locations were identified with elevated concentrations of methane during the 1st quarter 2019, the monitoring conducted during the 2020 & 2021 calendar years indicated that there have been no significant expansions of areas containing combustible gas. Based on the above, it is recommended that the monitoring program identified in Table 4.1, that includes modifications initiated in 2013 and 2016, be continued for 2022, as detailed below.

TABLE 4.1
2022 MONITORING PROGRAM
ACTIVITY SCHEDULE

Survey No.	Survey Description	Frequency of Monitoring	Monitoring Performed By	To Be Performed
1.	OBSWDC Perimeter Gas Well Monitoring Survey	Annually	RTP	4th Quarter 2022
2.	Building/Structure Gas Survey	Annually	RTP	4th Quarter 2022
3.	Supplemental Gas Monitoring Program	As Needed	TOB	TBD
4.	Ambient VOC Air Sampling, Subsurface VOC Gas Sampling, and Soil Gas Pressure Readings	Annually	RTP	4th Quarter 2022
5.	Zero Gas Migration Limitation Survey	Annually	RTP	4th Quarter 2022
6.	Perimeter Gas Collection System Vent Monitoring	Weekly	TOB	Weekly
7.	Perimeter Landfill Gas Exhaust Vent Stack Testing	Annually	RTP	4th Quarter 2022

Notes: RTP – RTP Environmental Associates, Inc.
TOB – Town of Oyster Bay staff
TBD – To be determined

1. OBSWDC Perimeter Gas Monitoring Well Survey: A combustible gas survey will be performed annually at the available OBSWDC perimeter gas monitoring wells identified in Appendix B and will occur concurrently with the Building/Structure Survey, scheduled to be conducted during the 4th Quarter 2022 in accordance with the annual interval requested by the NYSDEC.

2. Building Structure Survey: An annual combustible gas survey will be conducted in 2022 at the following onsite structures: scale house, guard house, Town offices, leachate treatment building, transfer station, maintenance garage, LFG blower station, and groundwater treatment building, although the groundwater treatment building is no longer owned by the Town; NYSDEC has not instructed OBSWDC to discontinue monitoring. As a courtesy, this monitoring shall remain part of the Recommended Monitoring Program for 2022 until instructed otherwise. This monitoring will be coordinated concurrently with the Perimeter Gas Monitoring Well Survey (Survey No. 1), scheduled to be conducted during the 4th Quarter 2022 in accordance with the annual interval requested by the NYSDEC.

3. Supplemental Gas Monitoring Program: The Town and/or NYSDEC are responsible for deciding on supplemental monitoring tasks. Depending on the task, the Town will specify the monitoring protocol. Should any other specific data needs arise in the future, those monitoring efforts will be included under this survey.

4. Ambient VOC Air Sampling, Soil Gas VOC Sampling, and Soil Gas Pressure Readings: This survey is performed annually and as noted above, the next test shall be completed during the 4th Quarter 2022. The data and analysis specific to this survey will be included as an Appendix to the 2022 summary report.

5. Zero Gas Migration Limitation Survey: The annual monitoring of the zero-gas migration limit will continue. The primary focus of the effort is along the edge of the landfill liner to ensure subsurface gas migration is contained within the limits of the Landfill footprint. This annual survey has been extended to cover areas along the property boundary and the borders of some leased areas. The annual survey of the common border of the Nassau County Campground, other areas, and the Landfill will be performed as part of this survey and shall be completed during the 4th Quarter of 2022.

6. Weekly Perimeter Gas Collection System Vent Monitoring: The NYSDEC requested that a weekly monitoring program be performed to test the methane content of the perimeter gas at the collection system vent. This survey is expected to continue throughout 2021 and 2022 as a condition of NYSDEC approval to permanently shut down the Thermal Oxidizer. This work will continue to be performed by Town personnel.

7. Perimeter Landfill Gas Exhaust Vent Stack Testing: The perimeter LFG collection system exhaust vent stack test will be conducted in accordance with the approved protocol on the revised schedule during the 4th Quarter of 2022.

4.3 Gas Extraction System Condensate Discharge

The Town has been permitted by the Nassau County Department of Public Works to discharge leachate and condensate from the gas extraction system and equalization basin to the Nassau County Sewer System (LKB, 2018).

4.4 Future Operations of the Landfill Gas Collection and Control System

After 34 years of operation, the quantity and quality (methane content) of gas generated by the Landfill have diminished significantly over the years of operation. The LFG system facilities and equipment continue to be maintained as necessary to assure reliable operation (LKB, 2021). Stack testing to measure speciated VOC concentrations from the collection system stack vent (Item 7 under Section 4.2) is anticipated to be completed during the 4th Quarter of 2022.

REFERENCES

LKB, 1980 — Preliminary Engineering Design Report: Phase 1 Gas Control and Recovery Program. Lockwood, Kessler & Bartlett, Inc., One Aerial Way, Syosset, New York, June, 1980.
Submitted to: Town of Oyster Bay, Syosset, New York.

LKB, 1987 — 1986 Annual Report Summarizing the Status of Landfill Gas Monitoring Programs and the Establishment of the Zero Percent Gas Migration Limitation at the Old Bethpage Landfill. Lockwood, Kessler & Bartlett, Inc., One Aerial Way, Syosset, New York, April 1987.
Submitted to: Town of Oyster Bay, Syosset, New York.

LKB, 2009 — Communications with LKB Staff.

NYSDEC, 2012 — Letter dated October 17, 2012 approving the Town of Oyster Bay's request to cease operation of the Thermal Oxidizer at the Old Bethpage Landfill.

LKB, 2013 — Communications with LKB Staff.

LKB, 2018 — Communications with LKB Staff.

LKB, 2021 — Communications with LKB Staff.

APPENDIX A

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR QUALITY SURVEY
AND
SOIL GAS QUALITY SURVEY

2021 Annual Report

APPENDIX A

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR QUALITY SURVEY
AND
SOIL GAS QUALITY SURVEY

2021 Annual Report

Prepared for:

Town of Oyster Bay
Department of Public Works
Syosset, New York

Prepared by:

RTP Environmental Associates, Inc.
400 Post Avenue
Westbury, New York

December 2021

APPENDIX A

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR QUALITY SURVEY AND SOIL GAS QUALITY SURVEY

2021 Annual Report

TABLE OF CONTENTS

APPENDIX A

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR QUALITY SURVEY AND SOIL GAS QUALITY SURVEY

2021 Annual Report

LIST OF TABLES

LIST OF FIGURES

APPENDIX A

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR QUALITY SURVEY AND SOIL GAS QUALITY SURVEY

2021 Annual Report

1.0 INTRODUCTION

RTP Environmental Associates, Inc. (RTP) was contracted by the Town of Oyster Bay (Town) to perform the sampling and analysis of ambient air, soil gas, and soil gas pressure in areas at and surrounding the Old Bethpage Landfill (Landfill) at the Old Bethpage Solid Waste Disposal Complex (OBSWDC). The general scope of the program was defined in the Remedial Action Plan (RAP) Attachment 2 of the Final Consent Decree. Since the Consent Decree was not explicit as to the specific methodology and testing protocols to be followed, RTP, in conjunction with the Town, Lockwood, Kessler & Bartlett (LKB), the New York State Department of Environmental Conservation (NYSDEC) and analytical laboratories, developed a complete protocol and analysis strategy for meeting the general requirements stipulated by the Consent Decree.

As stipulated in the Consent Decree, the ambient air quality, soil gas quality, and soil gas pressure were to be monitored at several positions around the Landfill. The ambient air and soil gas samples were to be analyzed for volatile organic compounds (VOCs) according to the protocol, and the results were to be tabulated. Four (4) sampling events were conducted during each of the previous years of the program until 2015. During the 2015 monitoring year, the Town requested the NYSDEC consider modifying the Consent Decree 83CV 5357, executed in 1998, by reducing the quarterly ambient air, soil gas, and pressure testing to an annual basis. On March 24, 2016, the Town received approval from NYSDEC to reduce the frequency of the monitoring program from quarterly to annually officially modifying the previously modified Consent Decree. All subsequent testing will reflect the reduced frequency from four (4) times per year to once per year. Each subsequent test is to be held at one year and one quarter interval anniversary. This report provides the results for the 24-hour field test completed during the 3rd quarter of 2021. The report is contained within an annual test report that includes other NYSDEC mandated tests in addition to this air, soil gas, and pressure test. The next set of tests is scheduled to occur during the 4th quarter of 2022.

This report contains the results obtained from sampling that occurred from September 14-15, 2021, when the forecasted meteorology was expected to be within protocol requirements. Section 2.0 of this report contains the sampling protocol and investigation methodology for air and soil gas. Section 3.0 includes

sample collection, sample handling, and analytical procedures applied for this program. Section 4.0 provides a discussion of results. Section 5.0 contains the soil gas pressure sampling procedures and test results. Section 6.0 contains a summary and conclusions for this sampling effort. Attachments containing supporting data and analyses are attached.

2.0 METHODOLOGY AND PROTOCOLS

2.1 Program Definition

In conformance with the RAP Attachment 2 of the Consent Decree (83 CIV 5357), the Town of Oyster Bay initiated an investigation of the ambient air quality and soil gas quality in the vicinity of the Old Bethpage Landfill. This report provides data and analyses for four (4) of the components listed in the RAP: (1) ambient air sampling; (2) 30-inch deep subsurface gas sampling; (3) subsurface gas sampling at various depths; and (4) soil gas pressure readings. The ambient air, soil gas, and well pressure sampling procedures used during the field event, in general, follow those developed during the second year of sampling.

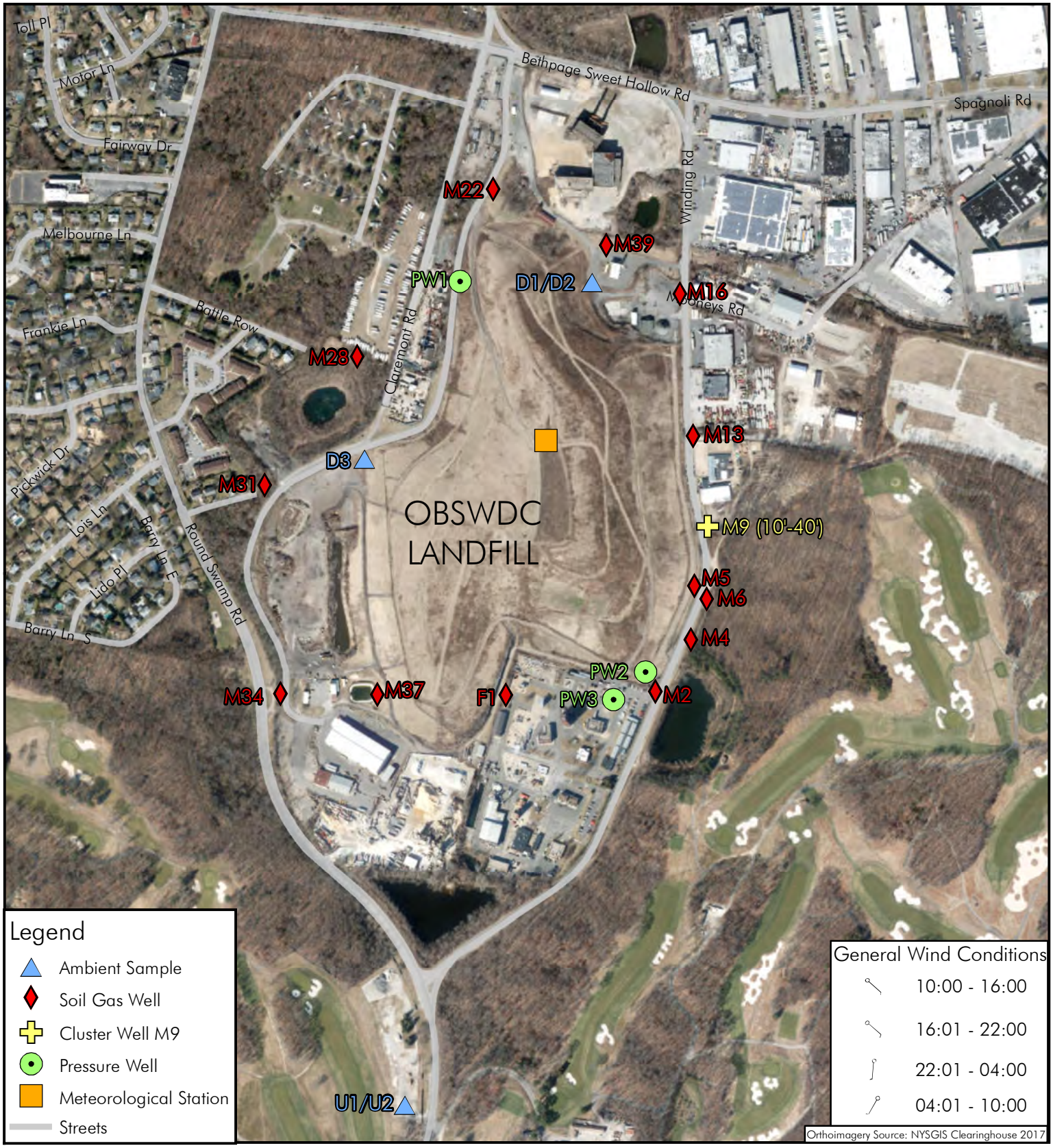
The primary objective of the Ambient Air and Soil Gas portions of the sampling program is to examine the ambient air concentrations of trace VOCs in the vicinity of the Old Bethpage Landfill. During the 2021 annual sampling event, five (5) ambient air Volatile Organic Sampling Train (VOST) samples were collected over a 24-hour period at three (3) locations; two (2) collocated samplers located at one (1) upwind location, two (2) collocated samplers located at one (1) downwind location, and another sampler located at an additional location downwind of the Old Bethpage Landfill. Short-term (approximately 10-minute) subsurface (30-inch depth or at various depths) soil gas samples were to be collected at 15 locations specified in the Consent Decree. In addition, soil gas pressure readings were taken at three (3) locations. Sampling locations are provided in Figure 2.1.

The Ambient Air and Soil Gas Program also involves the collection of meteorological data at two (2) locations; one (1) station is set up onsite atop the Landfill; and the second location was the meteorological station located at the local area airport at Farmingdale, New York. This data is used to define the meteorological conditions existing during ambient air and subsurface soil gas sampling events, and during the soil gas pressure measurement period. Information regarding meteorological data is provided as Section 2.3 of this report.

2.2 Ambient Air and Soil Gas Sampling

2.2.1 General Scope

The first three (3) components of the RAP relate to air quality and soil gas quality. The fourth (4)



N

0 500 1,000 2,000 Feet

FIGURE 2.1

2021 ANNUAL
AMBIENT AIR AND SOIL GAS
MONITORING LOCATIONS
September 14-15, 2021

TOWN OF OYSTER BAY LANDFILL
BETHPAGE, NEW YORK

Prepared by:
RTP Environmental Associates, Inc.
Westbury, New York

component is soil gas pressure and it is covered in Section 5.0 of this report. The first RAP component states that ambient air samples are to be collected over a 24-hour period at three (3) locations around the Landfill. Additionally, the RAP states that samples should be collected quarterly during the initial year of the program and be analyzed for VOCs.

Over time, the sample collection program has been modified as discussed in the previous quarterly reports. Changes were made to the ambient air sampling scope stated in the RAP to account for site geometry. Also, sampling normally was to continue on a quarterly basis; however, NYSDEC approved modifications to the Consent Decree on March 24, 2016. These modifications allowed testing to transition to an annual basis on a rotating quarterly schedule. In general, all ambient air samplers were set to run continuously and concurrently for a 24-hour period. Samplers U1 and U2 (U1/2) were collocated upwind of the Landfill; Samplers D1 and D2 (D1/2) were collocated downwind of the Landfill; and, Sampler D3 was located at an alternate location, downwind of the Landfill. The selected ambient air sampling locations for this test (U1/2, D1/2 and D3) are shown in Figure 2.1. The samplers were all set at a volumetric sampling rate of 0.25 liters per minute (Lpm) to minimize problems related to potential breakthrough and mass loading limits on the sorbent cartridges. This sampling rate also provides an acceptable analytical sensitivity for target compounds relative to the ambient air guideline values.

The second RAP component of the modified Consent Decree requires the collection and analysis of subsurface gas samples from 30-inch deep wells at individual locations surrounding the Landfill on an annual basis. All 30-inch wells listed in the Consent Decree were sampled during this 2021 annual sampling event except M21, which was covered by a concrete barrier. The sampled well locations included F1, M2, M4, M5, M6, M13, M16, M22, M28, M31, M34, M37, and M39, as identified in Figure 2.1. The same sampling methodology used in previous sampling events was utilized for this effort.

The third RAP component of the modified Consent Decree requires subsurface gas samples to be collected from 10, 20, 30 and 40-foot depths at the M9 cluster well shown in Figure 2.1. Sampling has been required on an annual basis from the four (4) depths at the cluster well. All four (4) depths at cluster Well M9 were sampled during this 2021 annual sampling event.

As in the initial year of sampling, a modified VOST sampler has been applied as the sampling method and is described below.

The modified VOST sampler approach was elected for several reasons:

- Due to the volatility of many organic compounds, standard absorbent cartridges for ambient air sampling may miss several compounds at ambient temperatures. By cooling the absorbent cartridges to less than 68°F, the modified method would likely allow the cartridges to capture compounds that

might normally go undetected.

- Using a VOST cartridge series would provide data directly compatible within the Supplemental Gas Monitoring Program being performed as part of the Consent Decree.

- A methodology for the collection of large air volumes was developed to identify low VOC concentrations in ambient air.

- Large volumes of ambient air are necessary because of the analytical limitations posed by standard gas chromatograph-mass spectrographic (GC/MS) methods.

- Evacuated canister methods were reviewed in the initial year and deemed unacceptable because of low total volume capacity, potential leaks, and possible contamination.

- The potential problems associated with whole-air sample bags and glass bulb methods were deemed unacceptable and, therefore, were avoided.

- The VOST series cartridges are applicable for both ambient air and soil gas monitoring.

The target compound list (TCL) of VOCs that can be evaluated using the modified VOST methodology are presented in Table 2.1, along with the corresponding NYSDEC ambient short-term and annual air guideline concentrations (SGC and AGC, respectively) that are updated regularly.

Currently, all TCL compounds have assigned AGC values. The AGC/SGC guidelines were updated by the NYSDEC on February 12, 2021 and represent the most up-to-date values (as of December 2021); the current values are provided in Table 2.1 and have been applied in this report.

2.2.2 Modified VOST Sampler

The VOST method is one of three (3) EPA methods identified to collect VOCs from point sources. The principal reason for using this method for the ambient and soil gas tests is the minimum level of detection is below the lowest AGC/SGC values represented in the TCL. A schematic diagram of the principal components of the standard VOST is shown in Figure 2.2. The VOST consists of a quartz or glass lined probe with a glass wool particulate plug, an isolation valve, an ice water cooled gas coiled condenser with a

TABLE 2.1

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

PROGRAM TARGET COMPOUND LIST
AND NYSDEC AMBIENT AIR GUIDELINE CONCENTRATIONS

2021 ANNUAL REPORT

CHEMICAL NAME	CAS NUMBER	AIRS CODE	SGC µg/m³	W (SGC)	AGC µg/m³	W (AGC)	T	CODES						
								1	2	3	4	5	6	7
Acetone	00067-64-1	4	180,000	Z	30,000	H	L							
Benzaldehyde	00100-52-7	4	----		0.10	d								
Benzene	00071-43-2	4	27	D	0.13	E	H	U	H	A				
Bromodichloromethane	00075-27-4	4	---		70.0	D	M							
Bromoform	00075-25-2	4	---		0.91	E	M	U	H					
Bromomethane	00074-83-9	4	3,900	D	5.0	E	M		H					
2-Butanone	00078-93-3	4	13,000	D	5,000	E	M							
Carbon Disulfide	00075-15-0	6	6,200	D	700	E	M		H					
Carbon Tetrachloride	00056-23-5	4	1,900	D	0.17	E	H	U	H	B				
Chlorobenzene	00108-90-7	4	---		60	H	M		H					
Chloroethane	00075-00-3	4	---		10,000	E	L		H					
2-Chloroethyl Vinyl Ether	00110-75-8		----		0.10	d								
Chloroform	00067-66-3	4	150	D	14.7	H	M	U	H					
Chloromethane	00074-87-3	4	22,000	D	90	E	M		H					
Decane	00124-18-5	4	---		700	A	M				R			
Dibromochloromethane	00124-48-1	4	---		0.10	d	M							
1,2-Dichlorobenzene (o)	00095-50-1	4	30,000	Z	200	H	M							
1,3-Dichlorobenzene (m)	00541-73-1	4	---		10	H	M							
1,4-Dichlorobenzene (p)	00106-46-7	4	---		0.09	D	M	U	H					
1,1-Dichloroethane	00075-34-3	4	---		0.63	D	L	U	H					
1,2-Dichloroethane	00107-06-2	4	---		0.038	E	M	U	H					
1,1-Dichloroethene	00075-35-4	4	---		200	H	M		H					
cis-1,2-Dichloroethene	00156-59-2	4	---		63	D	M							
trans-1,2-Dichloroethene	00156-60-5	4	----		63	D	M							
1,2-Dichloropropane	00078-87-5	4	----		4.0	E	M		H					
1,3-Dichloropropene,cis & trans isomers	00542-75-6	4	---		0.25	E		U	H					
Ethylbenzene	00100-41-4	4	---		1,000	E	M		H					
2/4 Ethyltoluene (total)	611-14-3/622-96-8		----		0.10	d								
Freon 13	00075-72-9	4	9,000	A	5,000	A	L				R	R		
2-Hexanone	00591-78-6	4	4,000	Z	30	E								
Methylene Chloride	00075-09-2	6	14,000	D	60.0	E	M	U	H					
4-Methyl-2-Pentanone	00108-10-1	4	31,000	Z	3,000	E	M		H					
Styrene	00100-42-5	4	17,000	Z	1,000	E	M		H					
1,1,2,2-Tetrachloroethane	00079-34-5	4	---		16	T	M		H					
Tetrachloroethene	00127-18-4	4	300	H	4.0	E	H	U	H					
Toluene	00108-88-3	4	37,000	D	5,000	E	L		H					
1,1,1-Trichloroethane	00071-55-6	6	9,000	E	5,000	E	L		H					
1,1,2-Trichloroethane	00079-00-5	4	---		1.40	D	M		H					
Trichloroethene	00079-01-6	4	20	H	0.20	E	H	U	H	B				
Trichlorofluoromethane	00075-69-4	6	9,000	A	5,000	A	L				R	R		
Vinyl Chloride	00075-01-4	4	180,000	D	0.11	E	H	U	H	A				
Xylenes (Total)	01330-20-7	4	22,000	D	100	E	M		H					

TABLE 2.1
(Continued)

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

PROGRAM TARGET COMPOUND LIST
AND NYSDEC AMBIENT AIR GUIDELINE CONCENTRATIONS

2021 ANNUAL REPORT

NOTES:
* AGC/SGC Values updated February 2021 and still current as of December 2021.

TOXICITY (T):
(H) HIGH Toxicity Contaminant.
(M) MODERATE Toxicity Contaminant.
(L) LOW Toxicity Contaminant.

WHO (W), Source of AGC/SGC Assignment:
(A) AGC/SGC based upon NYSDEC "Analogy"
(D) NYSDEC derived AGC/SGC
(E) AGC based upon EPA IRIS data (RfC or Unit Risk)
(H) NYSDOH derived AGC/SGC
(S) AGC/SGC listed is FEDERAL or NYS Standard.
(T) AGC based upon AGCIH TLV.
(Y) SGC is based on AGCIH TLV Ceiling Value
(Z) SGC is based on AGCIH STEL.
(d) No AGC is available, and therefore, the DAR-1
(*) AGC assigned High Toxicity "de minimis" limit.
Moderate Toxicity "de minimis" limit was assigned.
(----) There is no SGC for this compound.
(s) AGC/SGC based upon Equivalent FEDERAL or NYS Standard
(X) There is no AGC/SGC value for this contaminant

CODES:
Position 1: (U) AGC equivalent to one in a million excess cancer risk

Position 2: (H) Federal HAP

Position 3: (A) ACGIH Human Carcinogen
(B) ACGIH Suspected Human Carcinogen

Position 4: (R) AGC Assigned to REFERENCE Compound

Position 5: (R) SGC Assigned to REFERENCE Compound

Position 6: (Q) AGC Assigned as different Element(s) & Adjusted

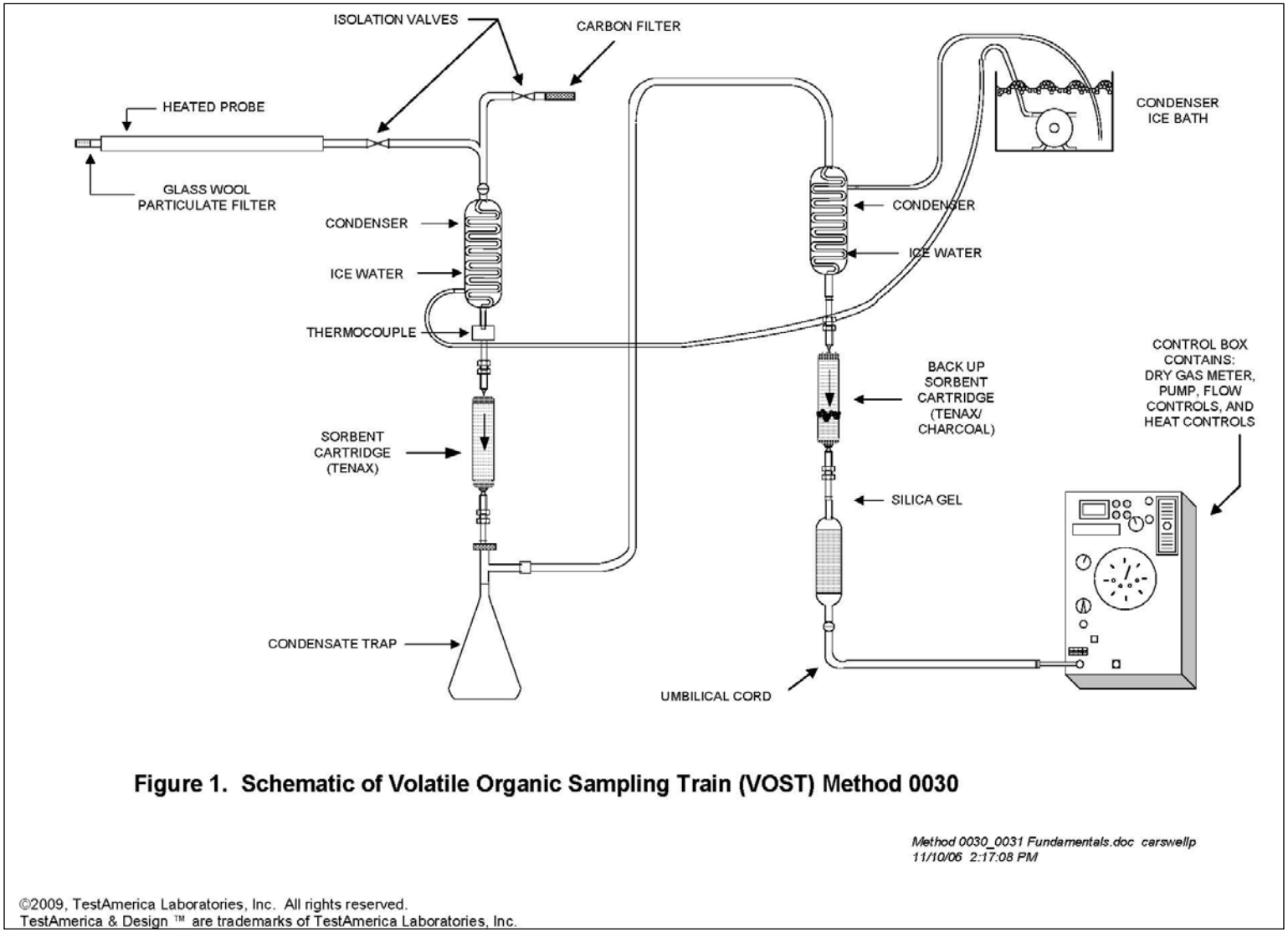
Position 7: (Q) SGC Assigned as different Element(s) & Adjusted

FIGURE 2.2

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SCHEMATIC OF EPA REFERENCED VOLATILE ORGANIC SAMPLING TRAIN (VOST)

2021 ANNUAL



RTP Environmental Associates, Inc.

thermocouple placed at the outlet to monitor gas stream temperature, a pre-conditioned primary sorbent cartridge containing Tenax, an empty impinger for potential condensate collection, an ice water cooled glass straight condenser, a pre-conditioned secondary sorbent cartridge containing Tenax and Charcoal, (3:1 by volume; approximately 1 gram of each), a silica gel drying tube, a calibrated rotameter, a sampling pump, a dry gas meter, and a water circulation pump.

The standard VOST is not designed for field portable ambient air monitoring. It is designed to extract and concentrate VOCs with boiling points less than or equal to 100 degrees Centigrade (°C) from stack gas effluents. The major difficulties with using a standard VOST in the field for ambient air quality work are the power requirements, setup and assembly problems, and the potential breakage of glassware. As such, RTP modified the EPA standard VOST unit to make it portable and with air flow volumes necessary to achieve the analytical sensitivity required in ambient air sampling programs required by the Consent Decree. These VOST modifications include the use of a Teflon lined sampling cane, a pre-conditioned primary sorbent Tenax cartridge, an empty glass impinger for potential condensate collection, a pre-conditioned secondary sorbent Tenax and petroleum-based carbon (Tenax/Charcoal) cartridge, a sealed T-connection port for monitoring back-pressure across the sorbent cartridges, an in-line calibrated rotameter, a flow splitter, a personal sampling pump, a gel cell power supply, an insulated container, an ice pack, and a high-low thermometer to measure the temperature extremes. Figure 2.3 illustrates the RTP modified VOST. An SKC sampling pump, portable battery backup, and rotameter were used instead of the standard VOST flow controlled sampling pump and dry gas meter. Packed ice and a condensate impinger were used instead of the circulating ice water through two (2) condensers in the EPA reference method.

During the 2021 annual field test, pre-conditioned Tenax cartridge and Tenax/Charcoal cartridges in series were used in the ambient air samplers and as previously stated, were set to run at a nominal flowrate of 0.25 Lpm. The VOST Tenax and Tenax/Charcoal sorbent cartridges used in the modified sampling train are similar to those used in the VOST EPA Reference Method 0030.

2.2.3 VOST Sample Volume Selection

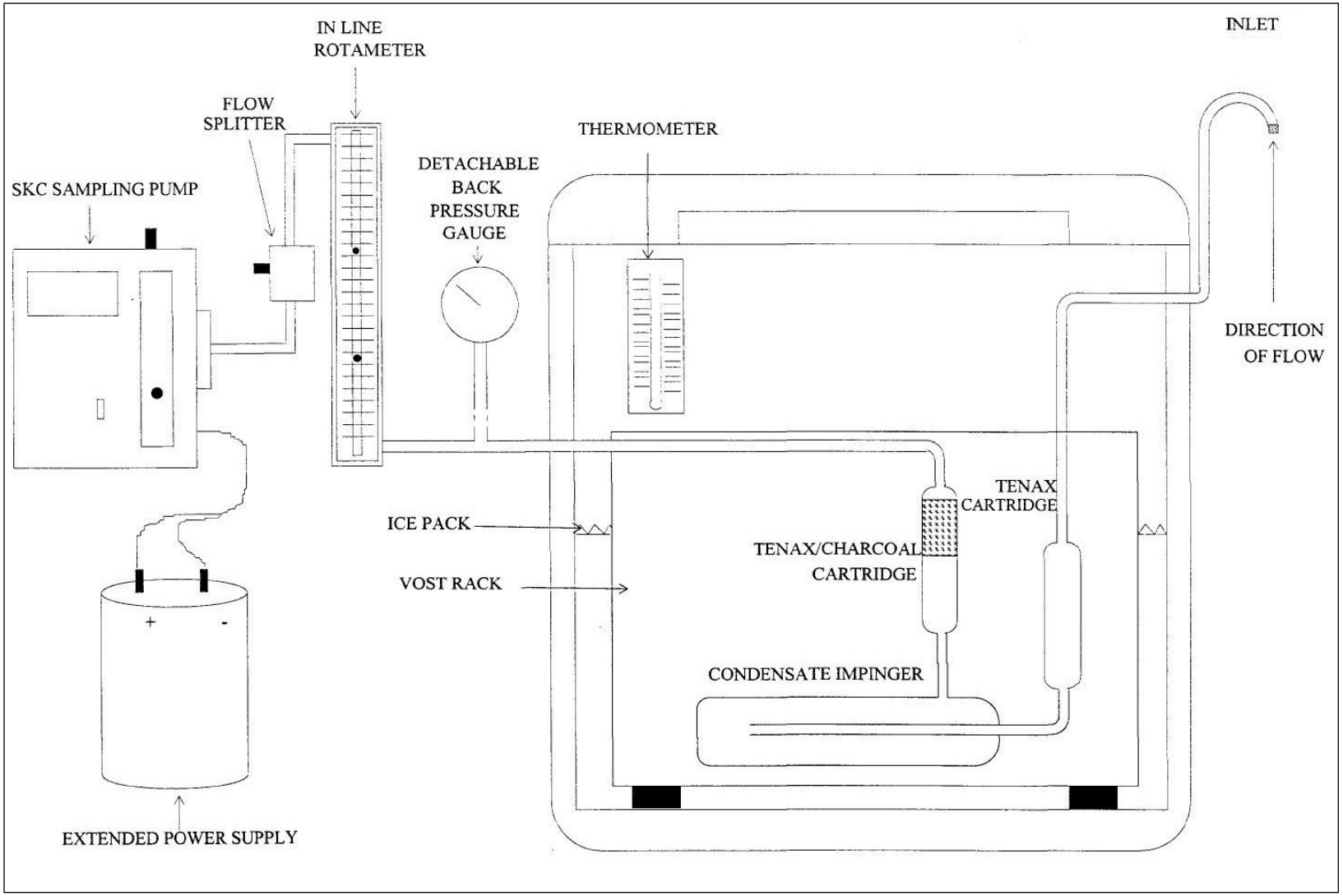
The selection of sample volumes for the ambient air and soil gas samples for this study were investigated. In general, the sample volume or sample size is limited by the analytical instrumentation being applied at the host laboratory and by the period of sampling required in the Consent Decree. Since sample quantitation is based on nanogram concentrations of constituents, appropriate sample volumes are necessary to provide the desired analytical sensitivity. The analytical laboratory for this event was Pace Analytical Services Inc. (Pace).

FIGURE 2.3

TOWN OF OYSTER BAY

OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

MODIFIED PORTABLE VOST SAMPLER



RTP Environmental Associates, Inc.

In general, analytical instruments can detect between a few nanograms to thousands of nanograms of individual constituents in a sample. The analytical instrument's lower quantitation limit (LQL) was set at 5 nanograms (ng) for the majority of TCL constituents in the ambient VOST sand soil gas VOST samples. Five (5) TCL constituents (acetone, bromoform, 2-butanone, 2-hexanone, and 4-methyl-2-pentanone) in both ambient and soil gas VOST samples were analyzed at an 8 ng LQL due to the poor responses generally given by these constituents during laboratory analysis. Methylene chloride has a MDL of 10 ng. Additional TCL's, such as chlorotrifluoromethane (Freon 13), 2-chloroethylvinyl ether, benzaldehyde, and n-decane were analyzed at levels equivalent to or greater than 25 ng, based on low responses for these compounds. The upper quantitation limit (calibration limit) for a splitless analysis was nominally set at 1,000 ng for both ambient and soil gas VOST samples for TCL and TIC constituents. Therefore, in order to provide the correct mass loading of constituents on the sample substrate, sample volumes were approximated based on the history of compound constituent identifications and corresponding concentrations detected at these locations.

Photoionization Detectors (PIDs) were used to determine the ambient VOC concentration prior to sampling. The PID readings indicate if an adjustment in sample volume was needed for sample mass loading purposes. If PID readings indicated that a sample volume adjustment was necessary, the sample volume was modified, as per the PID reading, to sample volume relationship as presented in Table 2.2. However, please note that the PID has a lower limit of detection of 0.1 parts per million (ppm), and it was not always possible to specify the exact sample volume required to consistently achieve the proper mass loading on each sampling cartridge. Therefore, to minimize constituent non-detection because of insufficient sample volume for ambient air samples, a moderate sample volume (approximately 360 liters) was commonly selected. It has been estimated that a maximum 10-liter sample volume (based on the approximate volume contained in the soils surrounding a 30-inch soil gas well) was appropriate for sampling shallow soil gas wells. Removing more than a 10-liter sample would potentially introduce ambient air from the surface into the well being sampled. Further, 10-liter sample volumes have also been selected for the 10-, 20-, 30-, and 40-foot-deep subsurface wells at the M9 sampling location to allow for a direct comparison to other soil gas well concentrations.

2.2.4 Other Sampling Equipment

The SKC sampling pumps used in this study were Model 224-PCXR7/8 universal exhaust pumps. These pumps will automatically shut down for low battery voltage or excessive back pressure. The accuracy of the sampling pumps is about ±5% of the set nominal flowrate.

SKC sampling pumps can be programmed to operate continuously or intermittently. They can be used to

TABLE 2.2

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

GENERAL RELATIONSHIP BETWEEN PHOTOIONIZATION DETECTOR (PID) READINGS AND SAMPLE VOLUME

2021 ANNUAL REPORT

PID READINGS (ppm)	SAMPLE VOLUME (liters)
<0.1 to 0.5	1,000 to 10
0.5 to 2	10 to 1
2 to 5	1
5 to 10	0.5
10 to 15	0.1
15 to 20	0.05
>20	0.01

Notes:

- ppm: parts per million
- Actual sample volumes collected may not correspond to their respective PID readings listed above when a history of constituent concentrations at the sampling site has been established.

collect different total sample volumes at different flowrates. The pumps can be programmed to continuously draw samples at a desired flowrate over a preassigned time period. This capability is particularly important in the ambient air sampling event. It is possible to collect ambient air samples over a 24-hour total elapsed time period to give an integrated 24-hour average VOC concentration as specified in the Consent Decree. The only factor that limits the overall sampling time is the pump battery capacity. This capacity has been expanded by attaching a 6-volt gel cell battery to the pump battery, thus providing a longer lasting power source.

A Bios DryCal® DC Lite digital flow calibrator (Model DCL-MH) was used before and after this sampling event to calibrate nine (9) Supelco rotameters in conjunction with the SKC sampling pumps to a desired nominal flowrate. This was performed to establish a relationship between actual pump volume flowrates and the corresponding rotameter readings. Inconsistencies between pre-test and post-test rotameter calibrations could reveal a leak in a rotameter. The calibration data, together with the Supelco rotameter readings recorded during sampling, were then used to establish the precise sample volumes collected during each test. The Bios flow calibrator is a digital air flowmeter consisting of a piston and a precision encoder system (two finely collimated infrared light beams). The piston rises at the rate of evacuation (or pressurization); once the piston travels past the two infrared light beams, a flow reading is calculated. The Bios flow calibrator has been checked against a NIST traceable standard and was last calibrated on March 16, 2021. The flow calibration sheets and the calibration certificate for the Bios unit are located in Attachment E. The combined accuracy of this calibrator and the Supelco rotameters used for the 2021 annual event is ±1%.

Ashcroft analog pressure gauges were used to check pre- and post-test back pressures on the VOST cartridges prior to initiating sampling and at the end of the sampling period. Back pressure readings were recorded on the field datasheets and reviewed after the test. The calibrations for the pressure gauges, provided in Attachment E, were within tolerance limits and were valid for the 3rd quarter test.

A calibrated PID was generally used during the monitoring program before and after each sampling event to measure the total ambient and soil gas VOC concentration. It is a hand-held, instantaneous reading analyzer that measures the total concentration of all ionizable compounds in ppm. The PID can be used to verify or adjust sample volumes according to the general relationship between PID readings and sample volumes, as shown in Table 2.2. Since sample volumes have been established based on compound constituent identifications and corresponding concentrations, PIDs were used to assess the need for sample volume adjustments were not necessary based on higher than normal VOC levels in the ambient air. PID readings were taken at each ambient sampling location and 16 soil gas wells sampled (12 30” wells and the four (4) wells at M9). Well M21 could not be sampled due to offsite construction. PID measurements were taken at the initiation and at the culmination of the effort at all ambient samplers. Based on the PID readings, no sample volume adjustments were deemed necessary.

2.3 Meteorological Data

Meteorological data was continuously collected onsite in conjunction with the monitoring program. A portable meteorology station was temporarily installed and operated during the ambient air quality, soil gas, and pressure well tests. Meteorological instruments provide localized information on ambient weather conditions during a test. The meteorological parameters of interest for this program include: wind speed, wind direction, temperature, relative humidity, turbulence, barometric pressure, and precipitation. During this effort, meteorological data was continuously collected onsite in conjunction with the monitoring program. A portable meteorology station was temporarily installed and operated during the ambient air quality, soil gas, and pressure well tests. The main meteorological station, which is typically located atop the Landfill, consists of a Climatronics wind vane and cup anemometer, a temperature sensor, a capacitive relative humidity sensor, and a barometric pressure sensor. In addition, a tipping bucket rain gauge and vertical wind sensor (propeller type) were also part of this weather station. All data was recorded using a Campbell Scientific CR850 datalogger. The CR850 data logger was enclosed inside a portable instrument case while the remainder of the equipment was mounted on an 8-foot tripod. Usually, the same meteorological parameters are collected at an upwind meteorological station that is collocated with the upwind ambient air samplers; however, due to budget issues, this upwind meteorological station was not utilized during this 2021 annual effort. Corroborating meteorological data presented in this report was instead from Republic Airport in Farmingdale, NY, which is approximately two (2) miles southeast of the Landfill.

Weather conditions for the September 14-15, 2021 annual sampling event were forecasted by the National Weather Service to include southeasterly winds at light speeds starting midday on the 14th gradually shifting to southwesterly by the morning of the 15th, with falling barometric pressure during the entirety of the test. The actual wind conditions recorded onsite during the 24-hour test were similar to those forecasted. Wind speeds were light-moderate and fairly consistent for most of the testing period, ranging from as low as 3.7 mph to as high as 8.4 mph atop the Landfill. Average wind speed atop the Landfill was approximately 5.6 mph over the course of the testing period. Meteorological conditions recorded atop the Landfill during this annual test compared reasonably well with station observations recorded at Republic Airport.

The barometric pressure decreased for approximately the first 19 hours of the testing period. The pressure then remained steady for the remainder of the testing period. In all, there was a net decrease in pressure of 0.12 inches of mercury from the beginning to the end of the 24-hour test period of the ambient air test based on the meteorological data recorded atop of the Landfill.

Onsite wind direction records during the sampling period confirm the downwind samplers (D1/2 and D3) as under the influence of landfill sources for the entire 24-hour test period. The meteorological monitoring data for the sampling period from Republic Airport and top of Landfill meteorological stations are provided in Attachment A.

3.0 SAMPLING AND ANALYSIS

3.1 Background

The program scope of work for sampling and analysis of ambient VOC levels in the vicinity of the Old Bethpage Landfill is principally guided by the Consent Decree. The scope of work for sampling and analysis of perimeter gas methane levels has been determined through discussions with the Town, NYSDEC, and LKB. As mentioned in Section 2.0, the EPA reference sampling method for ambient air and soil gas sampling was modified to account for site conditions and monitoring requirements. The sampling locations specified in the Consent Decree were adjusted slightly to account for expected meteorological conditions during the 24-hour sampling period.

Analytical laboratory services provided mass loading levels on specific substrates within the sampling cartridges and flow data measured continuously were used to provide sample volumes. Thus, the pollutant mass contained in each sample from both soil gas wells and ambient air locations were used to calculate sample concentrations for direct comparisons to ambient guidelines. Historical data were also used to estimate specific ambient VOC levels that were to be expected at the soil gas and ambient air sampling locations.

3.2 Ambient Air Sampling

The 2021 annual ambient air sampling event was conducted on September 14-15, 2021. Three (3) locations at the Old Bethpage Landfill were selected for monitoring ambient level concentrations, as illustrated on Figure 2.1, based on weather forecast data that indicated winds from a southwesterly direction and site accessibility. All ambient air samples were collected using modified VOST samplers at a calibrated flowrate of approximately 0.25 Lpm. The critical sampling parameters for the ambient VOST samplers and subsurface soil gas samplers are summarized in Table 3.1.

TABLE 3.1

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF AMBIENT AIR AND SUBSURFACE SOIL GAS SAMPLING

2021 ANNUAL REPORT

SITE ID[1]	SAMPLE ID	TESTING DATE	DURATION (minutes)	SAMPLE HEIGHT (inches)	NOMINAL FLOWRATE (Lpm)	DESIRED QUANTITY (liter)	SAMPLE VOLUME[2] ($liter_{STD}$)
U1	OBL21_Annual:U1	9/14/21 - 9/15/21	1,440	40	0.25	360	324
U2	OBL21_Annual:U2	9/14/21 - 9/15/21	931	40	0.25	360	208
D1	OBL21_Annual:D1	9/14/21 - 9/15/21	1,315	40	0.25	360	226
D2	OBL21_Annual:D2	9/14/21 - 9/15/21	1,406	40	0.25	360	320
D3	OBL21_Annual:D3	9/14/21 - 9/15/21	1,425	40	0.25	360	354

SUMMARY OF SUBSURFACE SOIL GAS SAMPLING

SITE ID[1]	SAMPLE ID	TESTING DATE	DURATION (minutes)	WELL DEPTH (inches)	NOMINAL FLOWRATE (Lpm)	DESIRED QUANTITY (liter)	SAMPLE VOLUME[2] ($liter_{STD}$)
F1	OBL21_Annual:F1	9/14/21	10	30	1.0	10	9.91
M2	OBL21_Annual:M2	9/14/21	10	30	1.0	10	9.66
M4	OBL21_Annual:M4	9/14/21	10	30	1.0	10	9.65
M5	OBL21_Annual:M5	9/14/21	10	30	1.0	10	10.04
M6	OBL21_Annual:M6	9/14/21	10	30	1.0	10	9.80
M9 (10')	OBL21_Annual:M9(10)	9/14/21	10	120	1.0	10	9.74
M9 (20')	OBL21_Annual:M9(20)	9/14/21	10	240	1.0	10	9.75
M9 (30')	OBL21_Annual:M9(30)	9/14/21	10	360	1.0	10	9.66
M9 (40')	OBL21_Annual:M9(40)	9/14/21	10	480	1.0	10	9.76
M13	OBL21_Annual:M13	9/14/21	10	30	1.0	10	10.10
M16	OBL21_Annual:M16	9/14/21	10	30	1.0	10	10.09
M21	OBL21_Annual:M21	NA	NA	NA	NA	NA	NA
M22	OBL21_Annual:M22	9/14/21	10	30	1.0	10	9.94
M28	OBL21_Annual:M28	9/14/21	10	30	1.0	10	10.01
M31	OBL21_Annual:M31	9/14/21	10	30	1.0	10	10.02
M34	OBL21_Annual:M34	9/14/21	10	30	1.0	10	9.86
M37	OBL21_Annual:M37	9/14/21	10	30	1.0	10	10.08
M39	OBL21_Annual:M39	9/14/21	10	30	1.0	10	10.18

NOTES:

[1] See Figure 2.1 for ambient air and soil gas sampling locations.

U1/U2: Adjoining the east fence of the 15th hole fairway of the Bethpage State Park Black Golf Course, approximately 200 feet west of Round Swamp Road.

D1/D2: Approximately 75 feet southwest of the southwest corner of the Groundwater Treatment Building.

D3: West side of the landfill, 50 feet north of the green waste (plant) processing exit.

[2] Corrected to standard conditions; 25^{o} C and 29.92 in. Hg.

NA sample location was inaccessible

The ambient air sampling trains were partially assembled at the RTP Westbury office according to protocol prior to taking the five (5) ambient air VOST samplers to preselected field locations. The Supelco rotameters were calibrated on July 29, 2021, and the SKC sampling pumps and gel cell battery packs were recharged. The VOST cartridges were removed from their protective cases and the end caps and fittings were removed. The sample cartridges were installed, the inlet/exhaust points were sealed, and the samplers were then taken to the positions shown in Figure 2.1. The pumps and battery packs were positioned and connected, aluminum cartridge holders were positioned, sampling canes were mounted onto the coolers, and the sampling train inlets and exhausts were unsealed. Leak checks were performed prior to sample initiation and these data were recorded on individual field datasheets located in Attachment D. The samplers for Locations U1/2 were collocated near the east fence of the 15th hole fairway of the Bethpage State Park Black Golf Course, approximately 200 feet west of Round Swamp Road. Samplers for Locations D1/2 were collocated approximately 75 feet southwest of the southwest corner of the Groundwater Treatment Building. Sampler D3 was located by the west side of the landfill, 50 feet north of the green waste (plant) processing exit. The ambient air samplers were set to continuously collect air samples at a 0.25 Lpm nominal flowrate over the 24-hour test period. The rotameters were set at 0.25 Lpm in order to allow for the collection of a total air volume of approximately 360 liters over the 24-hour period. To achieve this low flow, an in-line sampling manifold was constructed and installed with two (2) SKC single port flow splitters, used to stabilize flow for each ambient sampler because of the low flow sampling rates (as shown in Figure 2.3). A Supelco low flow rotameter was installed in-line, downstream of the sorbent cartridges, prior to the flow splitter and SKC pump inlet. The flow splitter was positioned in-line, upstream of the SKC pump and downstream of the Supelco rotameter, with the port open to the atmosphere. The adjustment pod to the flow splitter port was adjusted to register the desired 0.25 Lpm flowrate on the in-line rotameter. The remaining flow splitter port was adjusted to maintain the total flow within the pump operating range. This normally allows for the continuous collection of an integrated nominal 360 liter sample over the 24-hour sampling period. Sample run times and volumes are presented in Table 3.1. Samplers for Locations U1 & U2 achieved 90.0% & 57.8% of the targeted sample quantity, respectively. Samplers for Locations D1 & D2 sampled 62.8% and 88.9% of the desired quantities, respectively. The sampler for Location D3 collected 98.3% of the desired sample volume. The sampling rate of rotameters 1 and 9, used for Sample Locations D1 and U2, did slow during the early morning hours, which sometimes occurs as ambient temperatures decline and impact the operation of the pumps. Additionally, the pumps sometimes shutdown due to back pressure issues cause by condensation forming in the pore space of the sample cartridges as ambient temperatures cool overnight. This added to the reduction in volumes for these samples.

The chronology provided in Attachment B contains details on sampler operations during the course of the test. Periodic checks were made at all ambient air sampling locations. Pump operations were monitored and VOST train integrity and flowrates at the samplers were also checked. For quality assurance, each sampler was checked at regular intervals during the sampling period. Rotameter readings during these site checks were either within established ranges or adjusted to be within the operating window for all ambient

samplers. All ambient samplers were operating at the conclusion of the sampling period. Pump elapsed runtime readings were recorded throughout the sampling period for all sites.

Upon completion of the ambient air sampling, leak checks were performed. All ambient air samples passed final leak checks. The VOST cartridges were then removed from the VOST units, sealed, and placed in the respective labeled shipping tubes. All ambient air samples were recovered normally. All sorbent cartridges were inventoried, packed, and delivered to the Pace Analytical laboratory (Pace), as per established protocol. No separate condensate samples were collected from the condensers of any ambient samplers.

The laboratory received all ambient sorbent cartridges in good condition. The analytical results, along with the data observed during the sampling event, will be discussed in Section 4.0. The Pace analytical report is provided in Attachment C. Field data forms and equipment calibrations are provided in Attachments D and E, respectively.

3.3 Soil Gas Sampling

The soil gas sampling elements of the Consent Decree require soil gas samples to be extracted from multiple 30-inch deep subsurface gas wells, and from 10, 20, 30, and 40-foot depths at one (1) cluster well location (M9). The Consent Decree does not specify the sample volume, constituents to be analyzed, time period for collection, conditions for collection, analytical instrumentation, minimum level of detection, or other parameters necessary to define the nature of the tests and the applicability of test results. Based on the elements of the work scope in the Consent Decree and RAP Attachment 2, RTP developed the protocols and procedures outlined in Section 2.2 of this report, which were based on protocols approved by the NYSDEC.

The first step in the soil gas test was to assemble the sampling trains onsite. The sampler design used for the soil gas samples is similar to that used for the ambient air samples. However, the design differs slightly because flow splitters are not used in parallel with the rotameter, and back pressure readings are not taken. This design is used to achieve a nominal flowrate of 1 Lpm. Furthermore, the sample probe was modified to include a 36-inch long, ¼-inch diameter, stainless steel probe attached to a Teflon sampler inlet line in place of the sampling cane. Prior to use, the stainless steel sample probes were heated to +500˚F to decontaminate the probes. They were then individually wrapped in aluminum foil and sealed to prevent inadvertent exposure to traces of VOCs. The rotameters, in conjunction with the sampling pumps, were calibrated for specific flowrates at each soil gas sampling point based on data obtained from previous quarterly tests.

Soil gas well VOC concentrations were measured using a PID before and after the collection of a soil gas sample; RTP uses two (2) PID units to accomplish this. Recording VOC concentrations within the wells assists with interpreting sample results if soil gas concentrations are abnormally high. In addition, VOC concentrations were measured in the ambient air at various soil gas well locations. These measurements

assist with determining if the samples were contaminated by high levels of VOCs in the ambient air while they were being handled prior to and/or following the sampling period. VOC concentrations in the ambient air that are greater than inside the well may indicate the potential for contamination of soil gas samples by contaminants in the ambient air. PID readings did indicate the presence of low levels of VOCs at one of the soil gas wells. The soil gas wells that had detectable levels of VOC's using the PID included M13 (9.3 ppm initial, 5.8 ppm final) and M22 (1.3 ppm initial, 0.7 final).

In previous sampling events, RTP noted that the PIDs may have been reacting to the level of humidity in the atmosphere or within the soil gas well when registering abnormally high readings. RTP, as in past sampling events, elected to use an anhydrous calcium sulfate (DRIERITE®) filter as a desiccant to remove humidity prior to the sample entering the PID during this sampling event to minimize the effect of moisture on PID readings. This has helped to reduce drift values and false-positive VOC readings when humidity levels are above 90%.

Soil gas samples were collected at Locations F1, M2, M4, M5, M6, M13, M16, M22, M28, M31, M34, M37, M39, and M9 (10, 20, 30, and 40-foot depths), as shown on Figure 2.1 and summarized in Table 3.1. All 30-inch soil gas wells were temporarily sealed with a Tygon tubing/metal plug at least 24 hours prior to the collection of the soil gas samples. The M9 wells have individual shut-off valves which are closed at least 24 hours prior to the sampling event.

RTP developed a site specific procedure for collecting a soil gas sample. First, the soil gas well seal is removed from the well and the well is purged of stagnant gases. This is accomplished by using a pump operated at 1 Lpm for 30 seconds to extract the stagnant well gases in the 30-inch well. An SKC pump is used to extract stagnant gases from the M9 wells and runs at longer intervals than the other wells. The duration of pump operation at the M9 cluster well depends on the depth of each soil gas well. The stainless-steel sampling probe is attached to the inlet of the VOST train. A leak check is performed. The probe is then inserted into the well to a depth of approximately 24-inches and sealed from the atmosphere using a Teflon screw-on nut and ferrule. Sampling commences when the sampling pump attached to the outlet of the VOST sampling train is activated. Two (2) VOST sampling trains were used during this effort to sample a total of 17 soil gas wells.

The sampling pumps during soil gas sample collection were nominally set at a rate of 1 Lpm and ran for 10 minutes at each well site. This procedure resulted in approximately 10 liters of soil gas being drawn through the VOST cartridges at each well. At the beginning and end of the sampling period at each well, initial and final leak checks were performed.

Following the sampling of a well, the VOST cartridges were removed from the train, labeled, and packed for delivery to the analytical laboratory. The laboratory received all soil gas sorbent cartridges in good

condition. The results are reported in Section 4.0. A chronology of the soil gas sampling is presented in Attachment B. The Pace analytical summary for the soil gas samples is provided in Attachment C. Field data forms and equipment calibrations are provided in Attachments D and E, respectively.

3.4 Analytical Laboratory Procedures

Pace provided the GC/MS analytical services that identify and quantify all constituents listed on the TCL, plus additional TICs. Pace applied EPA SW846 Method 5041 in conjunction with EPA SW846 Method 8260 for analyzing the collected samples. Method 5041 provides the methodology for determining VOCs collected on Tenax and Tenax/Charcoal sorbent cartridges. Method 8260 is used to quantify VOCs with boiling points below 200°C and is based on purge-and-trap GC/MS procedures. Further details of the analyses are provided in the analytical results in Attachment C.

Newly desorbed VOST cartridges were supplied by Sigma-Aldrich® (Sigma-Aldrich) for use in this study. Upon receipt at RTP, the sampling cartridges were examined for breakage and stored at the RTP Westbury Office. Pace was forwarded a target compound list of VOCs for this monitoring program. RTP established an analytical protocol to be followed by Pace. After the samples are delivered, RTP forwards a laboratory letter to Pace suggesting sample splitting and breakthrough protocols for a limited set of VOST cartridge pairs to be reported prior to analyzing the remaining samples. Splitless (non-dilution) analyses are performed on field blank samples FB1, FB2, and FB3, prior to any other sample analyses, to determine the presence of any unforeseen contamination. RTP also monitors blank cartridge concentrations for contamination and Quality Assurance/Quality Control (QA/QC) purposes. In addition, RTP recommended a separate front and back cartridge analysis of ambient Samples U2, D2, and D3; soil gas Well M9(30); and M39, to assist in assessing breakthrough and mass loading.

Based on the initial results, RTP recommended that Pace perform a non-dilution combined front and back sample analysis for all remaining ambient air and soil gas samples. Typically, trip blanks TB1 and TB2 are held for contingency, but RTP recommended that both blank samples be analyzed for this sampling event. Pace then provided RTP with a complete data package for review and comment prior to issuing a report of the test. RTP submitted the annual samples on September 15, 2021, and they were analyzed by Pace on four (4) separate days spanning September 25-28, 2021. Pace noted that all surrogate recoveries met the control limits for this annual test. The Pace laboratory summary report is contained in Attachment C.

4.0 DISCUSSION OF RESULTS

The ambient air and soil gas concentration results are discussed in this Section. The results of the soil gas pressure tests are discussed in Section 5.0.

4.1 Ambient Air Concentrations

For the 2021 annual sampling event at the Old Bethpage Landfill, ambient air concentrations were monitored for a targeted 24 consecutive hours at selected sites beginning on September 14 and concluding on September 15, 2021. The sites have been identified and the monitoring and analytical methods were discussed in preceding sections of this report. Laboratory analytical results provided by Pace are combined with other field data and translated into ambient air concentrations in this Section. The analytical results for all ambient air, soil gas, and blank samples are presented in Attachment C.

Table 4.1 contains a summary of the analytical results for the air samples. The values are in micrograms per standard cubic meter (µg/std-m^3) and have been adjusted for flow volume (as calibrated against a digital flow meter), temperature, and barometric pressure. Table 4.1 also includes the lower quantitation limit (LQL) for each sample, and the current AGCs and SGCs (revised in February 2021 and current as of December 2021). Shaded values in Table 4.1 indicate an exceedance of the level of the assigned AGC based on 24-hour sample results. A total of five (5) TCL constituents exceeded the level of assigned AGC value in one or more samples, as shown in Table 4.1. Exceeding compounds included benzaldehyde, benzene, carbon tetrachloride, 1,2-dichloroethane, and 2/4-ethyltoluene (total). For benzene and carbon tetrachloride, the respective AGC values were exceeded in all ambient samples. Ambient samples U2, D1, D2, and D3 exceeded the AGC values for 2/4-ethyltoluene (total). The AGC values were exceeded for benzaldehyde at Locations U1, U2, D1, D2, and D3. Ambient samples U2 and D2 exceeded the AGC values for 1,2-dichloroethane. No TICs were found to exceed their respective AGC values.

It is important to note that a single 24-hour average value greater than an AGC should not be interpreted as an exceedance of the respective state annual ambient air guideline. Concentrations of all exceeding compounds were similar in both the upwind and downwind samples.

The SGCs are also provided in Table 4.1 for all TCL constituents and additional TICs (as appropriate). In order to compare the observed 24-hour concentrations to the SGC values, the 24-hour values must be multiplied by an adjustment factor of 4.0. No calculated short-term values exceed the SGC guidelines when the observed values are adjusted to represent worst-case one-hour concentrations. RTP reviewed field blank sample results for contamination. One (1) target compound, acetone, was detected in the ambient field blank (FB3). Because of the field blank concentrations, RTP required Pace to analyze the trip blanks for

TABLE 4.1

TOWN OF OYSTER BAY

OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR VOST SAMPLE RESULTS

2021 ANNUAL REPORT

	24-HOUR AMBIENT AIR SAMPLE					BLANK			
SAMPLE IDENTIFICATION[1]	U1	U2	D1	D2	D3	FB3	TB1	CURRENT AGC	1-HOUR SGC[4]
LOWER QUANTITATION LIMIT (LQL)	0.0154	0.0481	0.0221	0.0313	0.0282	5	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.0247	0.0769	0.0354	0.0500	0.0452	8	8		
TARGETED TIC LQL	0.0772	0.2404	0.1106	0.1563	0.141	25	25		
VOC COMPOUND NAME	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(ng)	(ng)	(µg/m^3)	(µg/m^3)
Acetone[2]	0.90	0.78	0.45	1.47	0.28	39	10	30,000	180,000
Benzaldehyde[3]	**0.97**	**< 1.25**	**1.17**	**0.26**	**< 0.94**			0.10	----
Benzene	**0.25**	**< 0.28**	**0.57**	**0.70**	**< 0.60**			0.13	27
Bromodichloromethane								70.0	---
Bromoform[2]								0.91	---
Bromomethane								5.00	3,900
2-Butanone[2]	0.40	< 0.46	0.59	0.87	< 1.64			5,000	13,000
Carbon Disulfide								700.0	6,200
Carbon Tetrachloride	**0.28**	**< 0.27**	**0.24**	**0.34**	**< 0.18**			0.17	1,900
Chlorobenzene								60.0	---
Chloroethane								10,000	---
2-Chloroethyl Vinyl Ether[3]								0.10	----
Chloroform	0.09	< 0.09	0.05	0.09	< 0.04			14.7	150
Chloromethane	0.02	< 0.08						90.0	22,000
Dibromochloromethane								0.10	---
1,2-Dichlorobenzene (o)								200.0	30,000
1,3-Dichlorobenzene (m)								10.0	---
1,4-Dichlorobenzene (p)	0.02				< 0.03			0.09	---
1,1-Dichloroethane								0.63	---
1,2-Dichloroethane	0.027	**< 0.050**	0.027	**< 0.046**	< 0.033			0.038	---
1,1-Dichloroethene								200.0	---
cis-1,2-Dichloroethene								63.0	---
trans-1,2-Dichloroethene								63.0	----
1,2-Dichloropropane								4.00	----
1,3-Dichloropropene, cis & trans isomers								0.25	---
Ethylbenzene	0.07	< 0.10		< 0.10	< 0.11			1,000	---
2/4-Ethyltoluene (total)	0.09	**< 0.14**	**0.15**	**< 0.14**	**< 0.19**			0.10	----
Freon 13[3]								5,000	9,000
2-Hexanone[2]								30.0	4,000
Methylene Chloride	0.14	< 0.08	0.15	< 0.17	< 0.29			60.0	14,000
4-Methyl-2-Pentanone[2]				< 1.23				3,000	31,000
Styrene								1,000	17,000
1,1,2,2-Tetrachloroethane								16.0	---
Tetrachloroethene	0.10	< 0.14	0.19	< 0.21	< 0.11			4.00	300
Toluene	0.48	< 0.61	0.63	0.64	< 0.58			5,000	37,000
1,1,1-Trichloroethane								5,000	9,000
1,1,2-Trichloroethane								1.40	---
Trichloroethene								0.20	20
Trichlorofluoromethane	1.02	< 0.19	0.72	0.97	0.36			5,000	9,000
Vinyl Chloride								0.11	180,000
Xylenes (Total)	0.26	< 0.34	0.37	< 0.36	< 0.42			100.0	22,000
Decane[3]				< 0.21	< 0.25			700.0	---

TABLE 4.1
(Continued)

TOWN OF OYSTER BAY

OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

AMBIENT AIR VOST SAMPLE RESULTS

2021 ANNUAL REPORT

SAMPLE TYPE	24-HOUR AMBIENT AIR SAMPLE					BLANK		CURRENT AGC	1-HOUR SGC[4]
SAMPLE IDENTIFICATION[1]	U1	U2	D1	D2	D3	FB3	TB1		
ADDITIONAL TIC LQL	0.077	0.240	0.111	0.156	0.141	25	25		
VOC COMPOUND NAME	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(ng)	(ng)	(µg/m^3)	(µg/m^3)
Nonanal	0.41	< 0.53	0.89	< 0.26	< 0.82			---	---
Decanal		< 0.27	0.40		< 0.43			---	---
Octanal		< 0.32		< 0.24	< 0.48			---	---
Unknown Aromatic Hydroc			0.51					---	---
Unknown Petroleum Alkane		< 0.38			< 0.60			---	---
2-Methyl-butane				< 0.70				70,250	---
Hexane		< 0.39		< 0.38				700.0	---
Undecane				< 0.24	< 0.29			---	---
Hexanal				< 0.23	< 0.23			---	---
Heptanal		< 0.29						---	---
.alpha.-Pinene				< 0.35	< 0.58			270.0	---
Dodecane		< 0.30		< 0.38	< 0.38			---	---
Isobutane					< 0.51			---	---
Naphthalene					< 0.23			3	7,900
Unknown Cycloalkane				< 0.31				---	---
Benzene, 1,2,4-trimethyl				< 0.20				60	---
.beta.-Pinene					< 0.36			270.0	---
Unknown		< 0.40		< 0.41	< 0.53			---	---

NOTES:

[1] See Figure 2.1 for ambient air sampling locations.

[2] An 8 (splitless) nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.

[3] Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.

[4] An estimated 24-hour guideline concentration can be calculated by dividing the current SGC value (last revised February 2021 and still current as of December 2021) by 4 (EPA averaging time adjustment factor).

U1/U2: Adjoining the east fence of the 15th hole fairway of the Bethpage State Park Black Golf Course, approximately 200 feet west of Round Swamp Road.
D1/D2: Approximately 75 feet southwest of the southwest corner of the Groundwater Treatment Building.
D3: West side of the landfill, 50 feet north of the green waste (plant) processing exit.

- All values are reported in micrograms per standard cubic meter (mg/std-m^3) except for the field blank and trip blank mass loading results which are reported in nanograms (ng).
- Blank values:
  Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL two (2) times the targeted TIC LQL.
  Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where fewer than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.
- Values in shaded areas are at or exceed the level of the current (last revised February 2021 and still current as of December 2021) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.
- Freon 13 is listed as Chlorotrifluoromethane in the analytical results, Appendix C.
- (mg/std-m^3): micrograms per standard cubic meter
- (ng): nanograms

this annual effort. Like FB3, acetone was also present in TB1. The field and verification blank concentrations are also reported in Attachment C.

In general, the levels detected in FB3 were not high enough to significantly affect the ambient air results presented. The source of the acetone in FB3 could not be identified, but possible sources could be from media contamination, contamination at the analytical laboratory, or from contamination present at the RTP office. Media contamination and/or Pace Laboratory contamination is the likely source, especially since it was also detected in TB1. Acetone and methylene chloride are known laboratory contaminants often found in ambient air and soil gas samples, including field blanks, during quarterly monitoring events. As in previous testing, acetone was again present in FB3 for this annual test, though methylene chloride was not. Although acetone and methylene chloride were each detected in all five (5) ambient samples, each sample showed concentrations well below the respective AGC values.

Collectible condensate was not present in any of the ambient air sample impingers for this annual test. When present in trace amounts, condensate is recovered and placed on the front traps to avoid influencing the sample MDLs. Otherwise, it is collected in separate condensate vials and analyzed by the analytical laboratory.

If any other LQLs exceeded the value of respective AGCs; therefore, in addition to those noted above, other concentrations could have exceeded the level of the ambient air AGC for compounds with an AGC value lower than the highest practical quantitation limit (PQL) (0.0769 µg/std-m^3). The collection of an ambient sample volume significantly greater than 360 liters would be required to reduce this PQL. However, a significantly larger sample volume greater than 360 liters is not recommended due to sampling media issues.

The upwind concentrations are taken to represent the general background in the area upwind of the Landfill on the day of sampling; however, there is diffusion (dilution) of those concentrations as the wind moves from an upwind sample point to a downwind sample point. Simply stated, diffusion is a process that reduces higher atmospheric concentrations to lower concentrations. Diffusion rates can vary depending on, for example, the source release characteristics, as well as ambient turbulence. Therefore, because of diffusion, the downwind sample concentrations should be lower when compared to coincident upwind values if the Landfill was not there. Thus, the concentrations as reported in the downwind sample data should be conservative estimates of the actual impact of landfill sources on surrounding areas because they also include impacts from background sources.

From the ambient data collected during the 2021 annual sampling event, background TCL, and TIC constituent concentrations (upwind samples averaged TCL constituent concentrations) were subtracted from the average TCL and TIC constituent concentrations recorded at locations downwind of the Landfill. This was completed to provide an estimate of the net impact the Landfill and all other OBSWDC activities taken

together, have on ambient VOC levels. This analysis is done only for the constituents that exceeded the respective guideline values and compared upwind versus downwind station data. The net impact analysis showed that one (1) of the exceeding five (5) compounds (Benzene) continued to exceed its assigned AGC value after subtracting the average upwind concentration from the average downwind concentration.

A more detailed comparison of the two (2) different downwind locations (again only for TCLs that exceeded the respective AGC value) was also prepared to determine the net impacts. This comparison demonstrated that one (1) of the exceeding compounds exceeded the assigned AGC value when comparing downwind locations D1/2 and D3 individually to the average concentration in U1/2. For this annual sampling event, the D1/2 and D3 readings exceeded the U1 & U2 averaged value by 0.370 and 0.330 $\mu g/m^3$ respectively for benzene, which has an AGC limit of 0.13 $\mu g/m^3$. Most of the concentrations detected in the upwind samples U1 and U2 are similar to the concentrations detected in the downwind samples D1, D2, and D3. Therefore, some of the other constituents detected in excess of their AGC standards during this annual test may not necessarily be attributed to the landfill complex but could be from nearby background sources. They could also just be attributed to analytical variation or analytical error.

In general, VOC concentrations in the ambient air for this 2021 annual test were on par to slightly lower than those values recorded during 2020 testing for a majority of the target compounds. Compared to 2020, fewer locations upwind and downwind exhibited levels that exceeded the AGC (the AGC was already exceeded at one or more locations for a particular compound in 2020). The variety of TICs detected when compared to the annual test of 2020 is much lower. The variation in TIC identification is lower when compared to historical quarterly tests, with eighteen (18) different TICs being identified and others unidentified. Compared to 2020, nine (9) new TICs were detected in 2021 but previously detected hexanal were no longer measured. In general, the total number of target compounds exceeding the respective AGC standard has remained consistent when compared to previous annual and quarterly tests.

It is important to note that the impact of the Landfill, as determined by the recorded concentrations, is only an approximation. Many of the sample concentrations are in line with standard estimates for background concentrations in large urban areas according to the 2015 Environmental Protection Agency (EPA) National-Scale Air Toxics Assessments.

4.2 New York State VOC Monitoring Summary

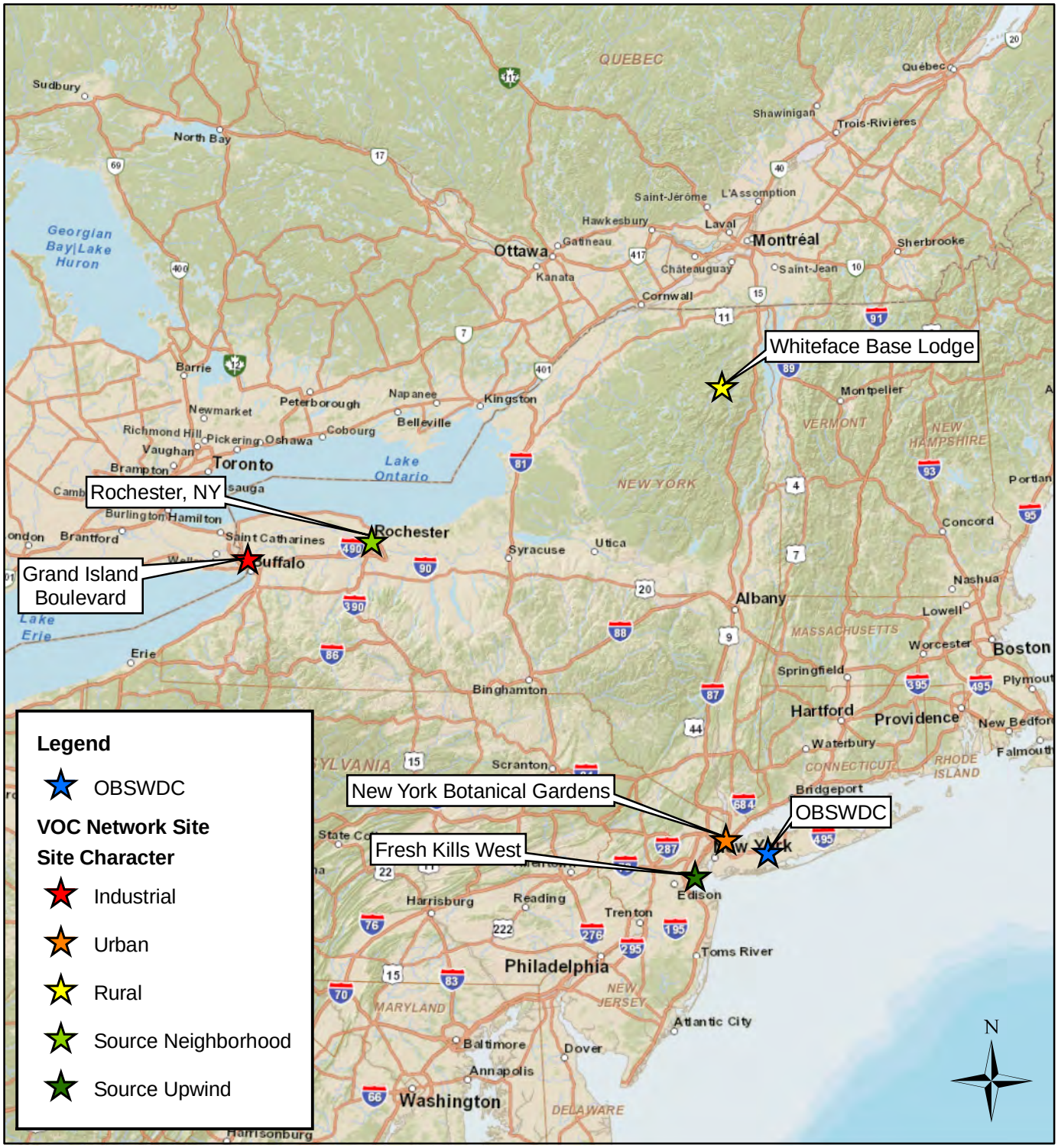
Beginning with the 2007 annual report, RTP developed a comparison of the OBSWDC VOC results to state-wide VOC ambient air quality levels. This section summarizes VOC monitoring data collected by the NYSDEC. A comparison between State collected data and the OBSWDC 2021 annual average are also provided for all compounds that were detected in the VOST 2021 samples.

The NYSDEC first established the ambient air toxics monitoring program in 1985 as part of the Governor's Air Monitoring Modernization Capital Budget Program. This monitoring network measures VOCs throughout the State. The initial development of the network and analytical capabilities was part of a joint Staten Island/New Jersey Urban Air Toxics Assessment Project (SI/NJ Study) coordinated with USEPA Region II from 1987 through 1989. The network expanded in 1990 to a statewide network. In 2003, there were 15 monitoring locations throughout the State measuring over 40 VOCs. The goal of the NYSDEC monitoring program is to monitor air quality related to toxics in urban, industrial, residential, and rural areas. The latest available data from the State for these locations is for years 2019 and 2020.

There are several land use characteristics immediately surrounding the OBSWDC Landfill including industrial, urban, and suburban; and therefore, it is difficult to classify the results collected in the vicinity of the Landfill as appropriate for any one land use type. As such, it is important to compare the results with State monitoring data representing several different site characteristics. As shown in Figure 4.1, five (5) locations, based on several site characteristics represented at the Landfill and a control (rural site), have been chosen for comparison to average concentration levels. A location at the New York Botanical Gardens in Bronx, NY was chosen to represent an urban area. Previously, data obtained from Troy Atrium in Troy, NY was used for comparison to industrial sites, but current data was no longer available for that location. Similarly, Grand Island Boulevard (from the Tonawanda Study) was changed from Lackawanna in Erie County, NY and now represents an industrial site. Whiteface Base Lodge located in Adirondack Park, Essex, NY continues to be used as a rural site for control comparison. Rochester represents a suburban neighborhood (LaTourette Golf Course in Richmond, NY was previously used), and finally, Fresh Kills Landfill (West) in Staten Island, NY was selected and continues to represent releases from another landfill. The nearest monitoring site to the OBSWDC Landfill is located at the New York Botanical Gardens in Bronx, NY; that site is approximately 33 miles west-northwest of OBSWDC.

Table 4.2.1 provides NYSDEC annual average air toxic VOC concentrations data for 25 compounds for the most recently reported years (2018 and 2017) at the urban, industrial, suburban/residential, landfill, and rural state monitoring sites, along with the VOC concentrations from the OBSWDC 2021 ambient air tests.

The data for the only ten (10) compounds available from the NYSDEC sites are provided in Table 4.2.2 for the most current years available. Upwind and downwind sample results for the OBSWDC tests represent the average concentrations for the 2021 sampling event using both upwind and downwind samples (five (5) total samples for each compound). LQLs were used for all compounds that did not detect concentrations over the MDL in order to provide the most conservative



BASE MAP SOURCE:
ESRI World Street Map

RTP Environmental Associates, Inc.
Westbury, New York

FIGURE 4.1

NYSDEC STATEWIDE VOLATILE ORGANICS NETWORK

TOWN OF OYSTER BAY LANDFILL
BETHPAGE, NEW YORK

TABLE 4.2.1

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

NYSDEC AIR TOXIC CONCENTRATIONS AT VARIOUS STATE MONITORING SITES (µg/m^3)

Compounds Presented for Comparison to OBSWDC Quarterly Concentrations	New York Botanical Gardens *Urban*		Grand Island Blvd (Tonawanda Study) *Industrial*		Whiteface Mt. Base *Rural*		Fresh Kills Landfill West *Landfill*		Rochester *Neighborhood*		TOB-OBSWDC *Landfill*	NYSDEC AGCs	NYSDEC 1-HOUR SGCs
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2020 Avg.	*Revised Feb. 2021*	
Benzene	0.598	0.582	**1.082**	0.903	0.214	0.224	0.663	0.624	0.367	0.426	0.4802	0.13	27
Bromodichloromethane	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	< *0.0277*	70.0	---
Bromomethane	0.031	0.031	0.031	0.027	0.027	0.027	**0.043**	0.031	0.031	0.027	0.0247	5.0	3,900
Carbon Tetrachloride	0.541	0.503	0.522	0.497	0.503	0.490	0.516	0.497	**0.547**	0.497	0.2615	0.17	1,900
Chlorobenzene	0.000	0.005	0.000	0.000	0.000	0.000	0.005	0.005	0.000	0.000	< *0.0277*	60.0	---
Chloroethane	0.003	0.003	0.005	0.003	0.000	0.016	0.011	0.011	0.003	0.000	< *0.0277*	10,000	---
Chloroform	**0.146**	**0.146**	0.107	0.098	0.073	0.083	0.117	0.117	0.112	0.122	0.0716	14.7	150
Chloromethane	1.042	1.030	1.024	0.968	0.997	0.968	**1.050**	1.013	1.019	0.999	0.0195	90.0	22,000
1,2-Dichlorobenzene (o)	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	< *0.0277*	200	30,000
1,3-Dichlorobenzene (m)	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	< *0.0277*	10.0	---
1,4-Dichlorobenzene (p)	**0.138**	0.102	0.006	0.006	0.000	0.006	0.036	0.030	0.018	0.018	*0.0159*	0.09	---
1,2-Dichloroethane	0.102	0.084	0.102	0.078	0.090	0.078	**0.114**	0.090	0.102	0.078	0.0368	0.038	---
1,1-Dichloroethene	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	< *0.0277*	200	---
1,2-Dichloropropane	0.014	0.014	0.014	0.009	0.009	0.014	0.014	0.014	0.014	0.014	< *0.0277*	4.00	----
Ethylbenzene	0.156	0.152	0.117	0.126	0.022	0.026	**0.213**	0.204	0.095	0.108	0.0762	1,000	---
Styrene	0.034	0.034	0.043	0.047	0.004	0.013	0.047	**0.051**	0.026	0.021	< *0.0277*	1,000	17,000
1,1,2,2-Tetrachloroethane	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	< *0.0277*	16.0	---
Tetrachloroethene	**0.197**	0.169	0.054	0.061	0.020	0.020	0.108	0.102	0.061	0.088	0.1525	4.00	300
Toluene	0.911	0.855	0.908	0.968	0.154	0.595	1.397	1.213	0.580	**1.781**	0.5885	5,000	37,000
1,1,1-Trichloroethane	0.004	0.011	0.000	0.004	0.000	0.004	0.011	0.019	0.011	0.015	**0.0213**	5,000	9,000
1,1,2-Trichloroethane	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	< *0.0277*	1.40	---
Trichloroethene	0.021	0.016	0.016	0.016	0.000	0.005	0.016	0.016	**0.145**	0.021	0.0096	0.20	20
Trichlorofluoromethane	1.168	1.213	1.140	1.168	1.112	1.157	1.140	1.179	1.173	**1.224**	0.6498	5,000	9,000
Vinyl Chloride	0.000	0.003	0.000	0.003	0.000	0.003	0.000	0.003	0.000	0.003	< *0.0277*	0.11	180,000
Xylenes (Total)	0.564	0.586	0.477	0.577	0.065	0.108	0.798	*0.855*	0.330	0.412	0.3490	100	22,000

Notes:

- TOB-OBSWDC site is presented for comparison with the NYSDEC monitoring data. The TOB sites are not an official part of the NYSDEC Air Toxic Program.
- The NYSDEC data is only available up to 2018 for all NYSDEC monitoring sites. As such, the two most current annual data averages were presented for comparison with the 2021 average data from OBSWDC.
- Values in red represent the highest individual average annual compound concentration for the monitoring sites presented in this comparison.
- Values in shaded areas are equal to or exceed the level of the current (revised in February 2021 and current as of December 2021) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Concentrations in italics represent the inferred values based on the LQLs for 2020 . Although the concentrations of some of the compounds noted in **red** are technically the highest for all locations, these concentrations represent the values include the average of the respective LQLs for each sample location, and are therefore not necessarily present at OBSWDC.
- Values have been converted from ppm using the conversion formula from the *Air Pollution Control Association Directory and Resource Book (1981).* Formula assumes standard pressure and temperature (25°C and 1 atmosphere).
- The samples for the locations above were taken by 24 passivated SUMMA canisters collected every 6th day. Annual average values presented in table above.

TABLE 4.2.2

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

NYSDEC AIR TOXIC CONCENTRATIONS AT VARIOUS STATE MONITORING SITES (µg/m^3)

Compounds Presented for Comparison to OBSWDC Quarterly Concentrations	New York Botanical Gardens *Urban*		192 Brookside Terrace W (Tonawanda) *Industrial*		Whiteface Mt. Base *Rural*		Fresh Kills Landfill West *Landfill*		Rochester *Neighborhood*		TOB-OBSWDC *Landfill*	NYSDEC AGCs	NYSDEC 1-HOUR SGCs
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2021 Avg.	*Revised Feb. 2021*	
Benzene	**0.626**	0.624	0.345	0.360	0.199	0.199	0.607	0.539	0.371	0.351	0.4802	0.13	27
Carbon Tetrachloride	**0.629**	**0.629**	**0.629**	**0.629**	**0.629**	**0.629**	**0.629**	**0.629**	**0.629**	**0.629**	0.2615	0.17	1,900
Chloroform	0.016	0.042	0.008	0.033	0.000	0.000	0.008	0.018	0.008	0.000	**0.0716**	14.7	150
Chloromethane	1.042	1.030	1.024	0.968	0.997	0.968	**1.050**	1.013	1.019	0.999	0.0195	90.0	22,000
1,3-Dichloropropene, cis & trans isomers	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	< **0.0277**	0.3	---
1,2-Dichloroethane	0.003	0.000	0.003	0.000	0.000	0.000	0.010	0.004	0.000	0.000	**0.0368**	0.038	---
1,1,2,2-Tetrachloroethane	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	< **0.0277**	16.0	---
Tetrachloroethene	**0.153**	0.135	0.011	0.006	0.000	0.000	0.045	0.038	0.011	0.000	0.1525	4.00	300
Trichloroethene	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.0096**	0.20	20
Vinyl Chloride	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	< **0.0277**	0.11	180,000

Notes:

- TOB-OBSWDC site is presented for comparison with the NYSDEC monitoring data. The TOB sites are not an official part of the NYSDEC Air Toxic Program.
- The NYSDEC data is only available up to 2018 for all NYSDEC monitoring sites. As such, the two most current annual data averages were presented for comparison with the 2020 average data from OBSWDC.
- Values in red represent the highest individual average annual compound concentration for the monitoring sites presented in this comparison.
- Values in shaded areas are equal to or exceed the level of the current (revised in February 2021 and current as of December 2021) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Concentrations in italics represent the inferred values based on the LQLs for 2021 . Although the concentrations of some of the compounds noted in **red** are technically the highest for all locations, these concentrations represent the values include the average of the respective LQLs for each sample location, and are therefore not necessarily present at OBSWDC.
- Values have been converted from ppm using the conversion formula from the *Air Pollution Control Association Directory and Resource Book (1981).* Formula assumes standard pressure and temperature (25°C and 1 atmosphere).
- The samples for the locations above were taken by 24 passivated SUMMA canisters collected every 6th day. Annual average values presented in table above.

estimation. OBSWDC data for both upwind and downwind samplers were used to compare with the NYSDEC data more closely since the NYSDEC does not differentiate samplers as upwind or downwind of specific sources. OBSWDC samples have been presented as the total annual average of combined upwind and downwind results in order to provide a better value for comparison. It is important to note, however, that 2021 OBSWDC values presented here are representative of the annual average concentrations taken under conservative meteorological conditions on only one (1) 24 hour test period for a total of five (5) sample results per compound. Because of the limited number of air samples collected in 2021, the levels provided can only be estimates of the true annual, or short-term maximum, or average levels existing in the environment surrounding the OBSWDC. More precise estimates of annual and short-term maximum concentrations can be obtained with the collection of more samples. By comparison, the NYSDEC VOC values have been taken once every six (6) days regardless of meteorological conditions for the entire year amounting to roughly 60 samples per site.

Two (2) compounds: benzene, carbon tetrachloride, exceeded the respective AGC guideline value at various sites throughout NYS in 2019 and/or 2020, and at OBSWDC sites from the average of the 2021 tests. In previous years, the compounds bromodichloromethane and chloroform, also exceeded the respective AGC guideline level; however, in 2021 (as in 2017-2020), these compounds were measured below the respective guideline values at the OBSWDC complex. For 2021, OBSWDC had the highest average annual concentration for 11 of the 25 listed compounds (bromodichloromethane, chlorobenzene, chloroethane, 1,2-Dichlorobenzene (o), 1,3-dichlorobenzene (m), 1,1-dichloroethane, 1,2-dichloropropane, 1,1,2,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane, and vinyl chloride), when comparing the average 2021 values to the 2018 and 2017 concentrations for the other five (5) sites. However, ten (10) of these compounds are each represented as an average of the respective LQLs and not actual recorded values. Although these compounds (as presented in Table 4.2.1) are technically the highest value for all locations, these concentrations are represented as the averages of the respective LQLs for 2021; they are therefore not necessarily present at the OBSWDC. The majority of the OBSWDC samples were actually much lower than their respective AGCs (due to the level of detection being insufficient to determine the actual concentration) and are therefore not a concern with respect to protection of public health.

The urban site in Troy, New York has historically detected the highest concentrations for the majority of the listed compounds. The Fresh Kills Landfill West site, used for comparison to the OBSWDC 2021 values, detected the highest concentrations of the majority of the listed compounds with six (6) compounds from 2018 and 2017 monitoring. Further, it is worth noting that many of the concentration values detected at OBSWDC did not exceed the respective NYSDEC AGC values, and the other sites that exceeded the AGC detected concentrations of the reported compounds are similar to those found at the OBSWDC.

According to the NYSDEC, benzene is the one compound that shows significant annual average concentrations above the AGC at several of the sites monitored across the State, indicating numerous sources of this compound are active throughout the State. The principal emitters of benzene are mobile sources, both from direct emissions and emissions related to gasoline storage and handling. Benzene is also emitted during fire training exercises at the adjacent Nassau Country Fire Service Academy and was upwind of the downwind samplers during part of the 2021 test period. The concentrations of benzene observed may actually reflect the relative amounts of automobile traffic at the various sites, and therefore, may only partially relate to the emissions from the Landfill. The 2021 OBSWDC concentration for benzene was comparable to the other selected locations. Also, carbon tetrachloride has similar annual concentrations exceeding the AGC at all compared sites in New York. Carbon tetrachloride is a common cleaning solvent. The concentration for carbon tetrachloride is slightly lower at OBSWDC in 2021 when compared to the other selected locations.

4.3 Soil Gas Concentrations

Soil gas concentrations were monitored on September 14, 2021 at the soil gas well sites identified in the Consent Decree. Table 4.3 provides a summary of soil gas well VOC concentrations. These concentration values are reported in µg/std-m^3 of soil gas. Table 4.3 also includes the LQL for each sample. All soil gas well sample cartridges were delivered to Pace Analytical Services for analytical analysis. There are currently no State or Federal guidelines for permissible soil gas concentrations of VOCs; however, New York State and EPA are considering introducing vadose zone limits. Nassau County does not have guidelines or standards at this time. For a relative comparison, Table 4.3 provides the AGCs and SGCs for ambient air. Soil gas concentrations that exceed the respective level of the current NYSDEC AGC for ambient air are shaded. A value in excess of the level of the AGC or SGC should not be interpreted as an exceedance of the ambient air guideline since the measured values are soil gas concentrations, not ambient air concentrations.

TABLE 4.3

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS
2021 ANNUAL REPORT

SOIL GAS WELL ID	F1	M2	M4	M5	M6	M9(10)	M9(20)	M9(30)	M9(40)	FB1	Current	Current
LOWER QUANTITATION LIMIT (LQL)	1.009	0.518	0.518	0.498	0.510	0.513	0.513	1.035	0.512	5	AGC	SGC
PRACTICAL QUANTITATION LIMIT (PQL)	1.615	0.828	0.829	0.797	0.816	0.821	0.821	1.656	0.820	8	---	---
TARGETED TIC LQL	5.05	2.59	2.59	2.49	2.55	2.57	2.56	5.18	2.56	25	---	---
VOC COMPOUND NAME	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	(ng)	($\mu g/m^3$)	($\mu g/m^3$)
Acetone*	3.69	2.11	2.82	2.44	3.00	2.75	3.92	2.44	2.17	16	30,000	180,000
Benzaldehyde**	**< 12.31**		**5.64**			**5.60**	**5.47**		**2.70**		0.10	----
Benzene											0.13	27
Bromodichloromethane											70.0	---
Bromoform*											0.91	---
Bromomethane											5.00	3,900
2-Butanone*		2.91									5,000	13,000
Carbon Disulfide											700	6,200
Carbon Tetrachloride											0.17	1,900
Chlorobenzene											60.0	---
Chloroethane											10,000	---
2-Chloroethyl Vinyl Ether**											0.10	----
Chloroform	< 3.44	5.92	0.56	1.76				< 1.05	0.57		14.7	150
Chloromethane	< 1.10										90.0	22,000
Dibromochloromethane											0.10	---
1,2-Dichlorobenzene (o)											200	30,000
1,3-Dichlorobenzene (m)											10.0	---
1,4-Dichlorobenzene (p)											0.09	---
1,1-Dichloroethane											0.63	---
1,2-Dichloroethane											0.038	---
1,1-Dichloroethene											200	---
cis-1,2-Dichloroethene											63.0	---
trans-1,2-Dichloroethene											63.0	----
1,2-Dichloropropane											4.00	----
1,3-Dichloropropene, cis & trans isomers											0.25	---
Ethylbenzene											1,000	---
2/4-Ethyltoluene (total)											0.10	----
Freon 13**											5,000	9,000
2-Hexanone*											30.0	4,000
Methylene Chloride											60.0	14,000
4-Methyl-2-Pentanone*											3,000	31,000
Styrene											1,000	17,000
1,1,2,2-Tetrachloroethane											16.0	---
Tetrachloroethene	**< 10.00**	**4.16**	0.55	3.69	0.97	**20.84**	**21.85**	**48.02**	**53.38**		4.00	300
Toluene						0.75			0.87		5,000	37,000
1,1,1-Trichloroethane								< 1.08	0.77		5,000	9,000
1,1,2-Trichloroethane											1.40	---
Trichloroethene									**0.85**		0.20	20
Trichlorofluoromethane	< 3.32	0.93	0.80	1.19	0.94	4.00	3.11	3.47	3.31		5,000	9,000
Vinyl Chloride											0.11	180,000
Xylenes (Total)											100	22,000
Decane**											700	---

TABLE 4.3
(Continued)

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS
2021 ANNUAL REPORT

SOIL GAS WELL ID	F1	M2	M4	M5	M6	M9(10)	M9(20)	M9(30)	M9(40)	FB1	Current	Current
ADDITIONAL TIC LQL	5.05	2.59	2.59	2.49	2.55	2.57	2.56	5.18	2.56	25	AGC	SGC
VOC COMPOUND NAME	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	(ng)	($\mu g/m^3$)	($\mu g/m^3$)
Ethane, 1,2-dichloro-1,1				20.52		40.35	111.79	125.57	139.34		17,000	---
Undecane											---	---
Dichlorodifluoromethane						27.21	57.44	69.60	76.95		12,000	---
Cyclotrisiloxane, hexame								< 5.43			---	---

TABLE 4.3
(Continued)

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS
2021 ANNUAL REPORT

SOIL GAS WELL ID	M13	M16	M21	M22	M28	M31	M34	M37	M39	FB2	Current AGC	Current SGC
LOWER QUANTITATION LIMIT (LQL)	0.495	0.496	ND	0.503	0.500	0.499	0.507	0.496	0.982	5		
PRACTICAL QUANTITATION LIMIT (PQL)	0.792	0.793	ND	0.805	0.799	0.80	0.811	0.794	1.572	8		
TARGETED TIC LQL	2.48	2.48	ND	2.52	2.50	2.50	2.54	2.48	4.91	25		
VOC COMPOUND NAME	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	(ng)	($\mu g/m^3$)	($\mu g/m^3$)
Acetone*	2.28	1.67	---	2.04	4.00	3.60	1.84	2.04	< 3.06	16	30,000	180,000
Benzaldehyde**	**4.15**	**3.75**	---	**3.61**		**2.86**					0.10	----
Benzene			---								0.13	27
Bromodichloromethane			---								70.0	---
Bromoform*			---								0.91	---
Bromomethane			---								5.00	3900
2-Butanone*			---		1.13						5000	13,000
Carbon Disulfide			---	0.55		0.81					700	6200
Carbon Tetrachloride			---								0.17	1,900
Chlorobenzene			---								60	---
Chloroethane			---	1.51							10,000	---
2-Chloroethyl Vinyl Ether**			---								0.10	----
Chloroform	3.84	13.97	---	1.14	0.73	1.01	0.78	8.32	< 1.57		14.7	150
Chloromethane			---	0.51	0.52						90.0	22,000
Dibromochloromethane			---								0.10	---
1,2-Dichlorobenzene (o)			---								200	30,000
1,3-Dichlorobenzene (m)			---								10.0	---
1,4-Dichlorobenzene (p)			---								0.09	---
1,1-Dichloroethane			---								0.63	---
1,2-Dichloroethane			---								0.038	---
1,1-Dichloroethene			---								200.0	---
cis-1,2-Dichloroethene			---								63.0	---
trans-1,2-Dichloroethene			---								63.0	----
1,2-Dichloropropane			---								4.00	----
1,3-Dichloropropene, cis & trans isomers			---								0.25	---
Ethylbenzene			---								1,000	---
2/4-Ethyltoluene (total)			---								0.10	----
Freon 13**			---								5,000	9,000
2-Hexanone*			---								30.0	4000
Methylene Chloride			---		1.99						60.00	14,000
4-Methyl-2-Pentanone*			---								3,000	31,000
Styrene			---								1,000	17,000
1,1,2,2-Tetrachloroethane			---								16.0	---
Tetrachloroethene	**11.58**	**27.65**	---	1.42		0.57	1.21	1.83	**32.86**		4.00	300
Toluene			---								5,000	37,000
1,1,1-Trichloroethane		0.54	---								5,000	9,000
1,1,2-Trichloroethane			---								1.40	---
Trichloroethene			---								0.20	20
Trichlorofluoromethane	1.47	2.49	---	1.41	0.94	0.96	1.25	1.17	< 1.21		5,000	9,000
Vinyl Chloride			---								0.11	180,000
Xylenes (Total)			---								100	22,000
Decane**			---		50.35						700	---

TABLE 4.3
(Concluded)

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SOIL GAS VOST SAMPLE RESULTS
ADDITIONAL TENTATIVELY IDENTIFIED COMPOUNDS
2021 ANNUAL REPORT

SOIL GAS WELL ID	M13	M16	M21	M22	M28	M31	M34	M37	M39	FB2	Current	Current
ADDITIONAL TIC LQL	2.48	2.48		2.52	2.50	2.50	2.54	2.48	4.91	25	AGC	SGC
VOC COMPOUND NAME	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(µg/m^3)	(ng)	(µg/m^3)	(µg/m^3)
Ethane, 1,2-dichloro-1,1			---								17,000	---
Undecane	12.77	19.82	---	49.80							---	---
Dichlorodifluoromethane			---								12,000	---
Cyclotrisiloxane, hexame			---								---	---

Notes:

* An 8 nanogram practical quantitation limit has been assigned to these compounds due to their poor responses during laboratory analysis.

** Targeted Tentatively Identified Compound (TIC). As reported by the laboratory, Targeted TICs have a Lower Quantitation Limit that is five (5) times the targeted compound Lower Quantitation Limit.

- All values are reported in micrograms per standard cubic meter (mg/std-m^3).
- Blank values:

  Targeted Compounds and Targeted TICs- All blank values are below the Lower Quantitation Limit, Practical Quantitation Limit (applies to Acetone, Bromoform, 2-Butanone, 4-Methyl-2-Pentanone and 2-Hexanone), or the Targeted TIC Lower Quantitation Limit (applies to Chloroethyl vinyl ether, Freon 13 and Decane). Benzaldehyde has a LQL 2 times the targeted TIC LQL.

  Additional Tentatively Identified Compounds- All blank values are either below the Targeted TIC Lower Quantitation Limit where fewer than six (6) additional TICs are reported for a particular sample or below the lowest reported additional TIC value, where six (6) or more additional TICs are reported for a particular sample.
- Values in shaded areas are at or exceed the level of the current (last revised February 2021 and still current as of December 2021) and/or previous ambient air Annual Guideline Concentration (AGC) values.
- Less than values (<) are used where the Lower Quantitation Limit, the Target TIC Lower Quantitation Limit, or the Practical Quantitation Limit is averaged with the reported values.
- Freon 13 is listed as Chlorotrifluoromethane in the Analytical Results, Appendix C.
- (µg/std-m^3): micrograms per standard cubic meter
- (ng): nanograms

As shown on Table 4.3, three (3) TCL constituents, benzaldehyde, tetrachloroethene, and trichloroethene, were measured in excess of the level of their respective ambient air AGC values at one or more soil gas well locations. Benzaldehyde was measured in excess of the ambient air AGC value at soil gas Wells F1, M4, M9(10), M9(20), M9(40), M13, M16, M22, and M31. Tetrachloroethene was measured in excess of the ambient air AGC value at soil gas Wells F1, M2, M9(10), M9(20), M9(30), M9(40), M13, M16, and M39. Trichloroethene was measured in excess of the ambient air AGC value at soil gas Well M9(40). No TICs were detected in excess of their respective AGC guideline values, and no compounds (neither TCL, nor TICs) were found in excess of their respective SGC guideline values.

Two blank samples (FB1 and FB2) were taken at soil gas well locations. FB1 was collected at the RAP building and FB2 was collected at soil gas Well M13. FB1 and FB2 were found to contain a small concentration of acetone. As discussed in Section 4.1, RTP deemed it necessary to analyze the trip blanks (TB1 & TB2). Acetone was present in trip blanks 1 and 2, indicating that laboratory contamination may have occurred.

A review of all the data indicated that all three (3) of the field blanks and the trip blanks demonstrated similar concentrations of acetone. Neither FB1 nor FB2 contained compounds in excess of their AGC values. All field, trip, and verification blank concentrations are reported in Attachment C.

Historically, the soil gas sample results for concentrations recorded at cluster Well M9, including Wells M9(10), M9(20), M9(30), and M9(40) have shown an increase in certain constituent concentrations as well depth increases, particularly with tetrachloroethene. During this 2021 annual sampling event, tetrachloroethene was found in increasing concentrations from M9(10) to M9(40). The highest concentration of this compound was found at M9(40), showing a tetrachloroethene concentration of 53.38 μg/std-m^3. RTP will continue to closely monitor concentrations of this compound at M9 and other wells in future sampling events.

In recent quarterly tests, it appeared that tetrachloroethene concentrations had been increasing relative to the values detected since 2006. During the 4th quarter 2015 test, tetrachloroethene was detected in 15 soil gas wells and exceeded the AGC value in eight (8) of them. In the 1st quarter 2016 test, this compound was present in 10 wells and exceeded the AGC value in two (2) of them. In the 2016 annual sampling event, tetrachloroethene concentrations were in line with the 4th quarter 2015 test, with this compound being detected in 14 wells and exceeding the AGC value in six (6) of them. During the 2017 annual sampling event, tetrachloroethene was detected in 15 soil gas wells and exceeded the AGC value in nine (9) of them. In the 2018 annual sampling event, tetrachloroethene was detected in 13 soil gas wells and exceeded the AGC value in six (6) of them. Tetrachloroethene was detected in seven (7) soil gas wells and exceeded the AGC in five (5) of them during the 2019 annual sampling effort. During 2020, Tetrachloroethene was detected in fourteen (14) soil gas wells and exceeded the AGC in eight (8) of them. During this 2021 annual

sampling event, tetrachloroethene was detected in sixteen (16) soil gas wells and exceeded the AGC in nine (9) of them. Six (6) of the previous eight (8) tests have registered tetrachloroethene in at least 13 wells, which suggests that concentrations of this compound remain elevated. Specifically, RTP continues to have concerns about the elevated concentrations of tetrachloroethene in soil gas Wells M13 and M39. These wells exceeded the AGC value for this compound in 2017, 2018, 2020, and 2021. The concentrations were lower in 2019 but have increased during the 2020 annual sampling effort and remain elevated in 2021. The historical increased concentrations at these locations could indicate a potential second plume of this compound in the area. The concentrations of tetrachloroethene in soil gas wells onsite will continue to be closely reviewed in future sampling events.

Some soil gas well sample LQLs exceeded the value of respective AGCs, therefore, in addition to those noted above, other well concentrations may have exceeded the level of the ambient air AGC for compounds with an AGC value lower than the highest LQL (1.035 µg/std-m^3) or PQL (1.656 µg/std-m^3). The collection of a soil gas sample volume significantly greater than 10 liters would be required to reduce the LQL; however, a significantly larger sample volume greater than 10 liters is not recommended due to well volume restrictions for the 30-inch wells.

The number of target compounds in soil gas wells that exceeded the level of their respective ambient air AGCs during the 2021 annual test is similar to results from recent tests, including the 2020 annual test. The noted compounds have been detected over the respective AGCs when looking historically through OBSWDC results for the past several years. In the two (2) tests conducted in 2016, benzaldehyde was recorded in soil gas wells above the AGC. However, benzaldehyde was not present in any of the soil gas wells above the MDL during the 2017-2019 annual tests but was found in excess of the AGC at multiple wells in 2020 and 2021. Benzaldehyde levels are suspect because they are difficult to accurately quantify using the current analytical method. RTP will continue to monitor the soil gas wells for the presence of this compound in future tests and continue to investigate any significant differences in soil gas constituent concentrations from quarter to quarter. Additionally, carbon tetrachloride and 1,1-dichloroethane, which were detected in levels over the AGC values in 2017, were both below the AGC values in 2018-2021.

The variety of TICs identified in the soil gas wells during this 2021 test has exhibited a decrease when compared to the 2020 annual test and recent overall trend. Dichlorodifluoromethane was again detected in slightly fewer soil gas wells compared to 2020, with seven (7) locations in which this compound was present (this compound was found in eight (8) wells in 2020, five (5) wells in 2019, and three (3) in 2018). Similar to the most recent tests, the most abundant TICs in 2021 were dichlorodifluoromethane and 1,2-dichloro-1,1,2,2-tetrafluoroethane. Unlike 2020 in which Wells M5, M13, and M39 all showed a slightly greater concentration of most TICs, the 2021 sampling effort exhibited the greatest variety of TICs in M9(10) – M9(40), which has historically been the case. Additionally, some concentrations of certain TICs

were significantly higher than those seen in other wells. RTP will continue to monitor the results of TIC concentrations of these compounds and any notable patterns in future tests.

When the values shown in Table 4.3 were multiplied by a factor of 4 to allow comparison to the ambient air SGC, no targeted compound concentrations were calculated to be in excess of the respective current ambient air SGC values. It should be noted that such comparisons are extremely conservative since soil gas concentrations are being compared to ambient air guideline values and, as such, no true exceedance of the ambient guidelines were measured. Again, an exceedance of an AGC or SGC in soil gas does not constitute an actual exceedance of a NYSDEC guideline.

5.0 SOIL GAS PRESSURE READINGS

As per the modified Consent Decree requirements, pressure readings were taken at the following three (3) locations around the perimeter of the gas collection system: (1) northwest of the Landfill between LGV16 and LGV17, (2) southeast of the Landfill between LGV-1 and LGV-9, and (3) south of the Landfill on the Nassau County Fire Training Center (NCFTC) at either F-6 or F-9. Figure 2.1 illustrates the locations of the three (3) soil gas pressure Wells PW1, PW2, and PW3.

A 10-inch inclined manometer, manufactured by Dwyer Instruments, Inc., was used to monitor soil gas pressures at each well. The 0 to 1-inch inclined portion is divided into 0.01-inch increments with the remaining portion (1 to 10 inches) marked in 0.1-inch increments. The inclined manometer is zeroed prior to taking measurements at each of the three (3) wells. There are two (2) soil gas pressure probes at different depths (10-foot and 20-foot) at each location.

For this annual 2021 sampling event, duplicate pressure readings were taken from each of the six (6) probes. Table 5.1 provides a summary of the soil gas pressure tests relative to the atmospheric pressure at each respective well. RTP conducted the pressure well tests from 07:40 hours through 08:31 hours on September 15, 2021. Essentially, the recorded pressure readings are the pressure differentials between the well pressure and the atmospheric pressure at each well. Zero values were measured for the 10-foot depths at all wells except for the PW3 measurement of 0.02 in H_2O. Zero values were measured at the 20-foot depth at PW1 and PW2, while measurements of -0.02 in H_2O values were measured at the 20-foot depth at PW3. This is fairly consistent with our findings in the tests since 2016. It is important to note that the differential pressure of these wells is relative to the atmospheric pressure at the time of testing. Additionally, the issues with the blower system and reduced flow documented during the annual 2020 and 2021 vent stack test could have contributed to the zero or positive pressure readings observed at the wells. RTP will continue to monitor these wells and report any abnormal readings.

TABLE 5.1

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF SOIL GAS PRESSURE TESTS

2021 ANNUAL REPORT

SAMPLE ID	DATE (mm/dd/yy)	TIME (EST)	WELL ID	WELL LOCATION	WELL DEPTH (feet)	PRESSURE* (inches water)
P1	9/15/21	8:30 AM	PW1	NW corner of the landfill on Haul Road	10	0.00
P2	9/15/21	8:30 AM	PW1	NW corner of the landfill on Haul Road	20	0.00
P3	9/15/21	8:31 AM	PW1	NW corner of the landfill on Haul Road	10	0.00
P4	9/15/21	8:31 AM	PW1	NW corner of the landfill on Haul Road	20	0.00
P5	9/15/21	7:58 AM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P6	9/15/21	7:58 AM	PW2	SE corner of the landfill NW of Well M2	20	0.00
P7	9/15/21	8:00 AM	PW2	SE corner of the landfill NW of Well M2	10	0.00
P8	9/15/21	8:00 AM	PW2	SE corner of the landfill NW of Well M2	20	0.00
P9	9/15/21	7:40 AM	PW3	Nassau County Fire Service Academy	10	0.02
P10	9/15/21	7:40 AM	PW3	Nassau County Fire Service Academy	20	-0.02
P11	9/15/21	7:42 AM	PW3	Nassau County Fire Service Academy	10	0.02
P12	9/15/21	7:42 AM	PW3	Nassau County Fire Service Academy	20	-0.02

NOTES:

- Measurements taken using a ten inch Dwyer inclined manometer.
- Leak checks were performed on the manometer before testing pressure wells.

* The differential pressure of a well is relative to ambient pressure.

6.0 SUMMARY AND CONCLUSIONS

The 2021 annual ambient air, soil gas, and pressure well monitoring event was performed by RTP on September 14-15, 2021. Ambient air VOC concentrations and meteorology were monitored during the 24-hour sampling period. In accordance with the Consent Decree, ambient air VOC samples will be collected at locations both upwind and downwind of the Landfill. The ambient air quality test results indicate five (5) constituents on the program TCL, but no TICs, exceeded their AGC values. The exceeding compounds included benzaldehyde, benzene, carbon tetrachloride, 1,2-dichloroethane, and 2/4-ethyltoluene (total). The measured compound concentrations in the ambient air were relatively similar in magnitude for samples collected both upwind and downwind of the Landfill. These results are based on 24-hour samples and, therefore, an exceedance of an AGC does not necessarily indicate an exceedance of a respective annual guideline value. No calculated values exceeded their respective SGC values. Collectible quantities of condensate were not present in any of the ambient air sample impingers and, as such, no separate condensate samples were collected or analyzed.

The net landfill impact values (averaged downwind concentrations minus averaged upwind concentrations) for the 2021 annual test have been calculated to approximate the actual impacts associated with landfill and other OBSWDC sources. The results indicate that the Landfill and other OBSWDC sources may have had some impact on the measured constituents. When the upwind average values were deducted from the downwind average values to define the impacts associated with the Landfill, one (1) out of the five (5) compounds exceeding the level of the respective annual guidelines, continued to exceed the level of the guideline based on only landfill related impacts; benzene being the only exceeding compound. In general, VOC concentrations in the ambient air for the annual 2021 test were consistent with a majority of the TCL constituents and TIC concentrations when the results were compared to the 2020 test results. Because of the limited number of air samples collected in 2021, the levels provided can only be a very rough estimate of true annual or short-term maximum or average levels existing in the environment surrounding the OBSWDC.

Onsite meteorological data atop the Landfill were recorded during the 24-hour test period. Data from Republic Airport in Farmingdale, NY was also utilized to corroborate local meteorological conditions during the test. Wind directions forecasted by the National Weather Service included southeasterly to southwesterly winds at mainly light speeds with falling barometric pressure during the testing period. The actual wind conditions recorded onsite during the 24-hour test were similar to those forecasted. Meteorological conditions recorded at the meteorological station positioned atop the Landfill during this annual test compared favorably with station observations recorded at Republic Airport.

Soil gas well concentrations were monitored at specific well locations surrounding the Landfill. All samples

from available soil gas wells were collected and analyzed successfully. Soil gas sample results indicate the presence of a number of target compounds in the soil gas wells surrounding the Landfill. Although no applicable guidelines are currently available for soil gas concentration readings, New York State and EPA have considered introducing vadose zone limits. The number of soil gas well target compound constituents that exceeded the level of respective ambient air AGCs during the annual 2021 test is similar to the annual 2020 results and slightly higher than the 2019 results.

TIC detections in some of the soil gas samples for this annual test have decreased when compared to the annual 2020 data and the variety of TICs typically detected in the soil gas wells is also lower in the 2021 data. No target or TIC concentrations in the soil gas samples exceeded the level of respective ambient air SGC guideline values. However, three (3) target compounds were found at concentrations above the level of the respective AGC. RTP will continue to review concentration results for the wells for any atypical values or notable trends. Comparisons of soil gas concentrations with ambient AGCs and SGCs are provided only as relative indicators since soil gas levels are not considered ambient air. Also, because of the limited number of soil samples collected in 2021, the levels can only be rough estimates of true annual, short-term maximum, or average levels existing in the environment surrounding the OSWDC.

Finally, soil gas pressures were measured at three (3) pressure well locations surrounding the Landfill. RTP conducted the pressure well tests from 07:40 hours through 08:31 hours on September 15, 2021. Zero pressure was recorded at all 10-foot depth pressure wells except for the readings at PW3. A slightly negative pressure was recorded at the 20-foot depth at Pressure Well PW3 while 0.00 in H2O pressure was observed at Pressure Wells PW1 and PW2.

ATTACHMENT A

METEOROLOGICAL MONITORING DATA

Table A-1

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF TOP OF LANDFILL METEOROLOGICAL DATA

2021 ANNUAL REPORT
(September 14-15, 2021)

DST (HH:MM)	MWS (MPH)	MWD (Degrees)	SDWD (Degrees)	TEMP (Deg F)	RH (%)	PRESS (in. Hg)	PRECIP (in.)
10:00	4.77	67.6	16.44	72.4	62.3	29.89	0.00
11:00	3.76	80.6	27.31	74.5	57.4	29.89	0.00
12:00	4.02	130.9	35.03	76.6	54.1	29.88	0.00
13:00	4.93	149.0	29.31	77.1	54.6	29.87	0.00
14:00	5.70	132.8	18.29	76.4	53.7	29.86	0.00
15:00	5.77	137.5	20.83	75.8	53.8	29.85	0.00
16:00	5.89	147.3	16.59	74.5	55.4	29.84	0.00
17:00	4.95	141.6	14.54	72.9	64.6	29.83	0.00
18:00	5.17	130.2	13.30	71.8	71.4	29.83	0.00
19:00	5.72	131.7	12.35	70.6	79.0	29.82	0.00
20:00	5.44	129.7	11.73	69.7	85.0	29.81	0.00
21:00	4.74	124.4	12.29	69.7	87.2	29.82	0.00
22:00	4.62	131.0	11.35	70.1	89.2	29.82	0.00
23:00	5.44	152.0	20.00	71.4	91.0	29.81	0.00
0:00	5.55	170.6	16.35	71.8	92.6	29.81	0.00
1:00	5.28	183.6	15.09	71.7	93.3	29.81	0.00
2:00	3.72	165.7	15.55	70.9	93.6	29.79	0.00
3:00	4.57	187.4	17.12	70.4	93.9	29.78	0.00
4:00	4.80	193.6	12.71	70.6	94.1	29.77	0.00
5:00	6.78	206.6	16.83	71.3	94.0	29.76	0.00
6:00	7.50	210.8	13.12	71.6	93.1	29.77	0.00
7:00	6.93	208.8	14.43	71.7	92.9	29.77	0.00
8:00	6.59	209.8	14.35	72.0	92.5	29.77	0.00
9:00	7.15	213.2	14.64	73.6	88.4	29.77	0.00
10:00	8.41	209.6	15.89	76.0	81.1	29.77	0.00

Notes:

DST: Daylight Savings Time.
EDT: Eastern Daylight Savings Time.
MWS: Mean Wind Speed, miles per hour.
MWD: Mean Wind Direction, corrected for wind direction reference.
- 360 degrees is due North (Grid North).
SDWD: Standard Deviation of Wind Direction.
TEMP: Ambient Temperature, degrees Fahrenheit.
RH: Relative Humidity, percent.
PRESS: Atmospheric Pressure, inches of mercury (Hg).
PRECIP: Precipitation, inches of water column.

Table A-2

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF UPWIND METEOROLOGICAL DATA
From Republic Airport, Farmingdale, NY

2021 ANNUAL REPORT
(September 14-15, 2021)

DST (HH:MM)	MWS (MPH)	MWD (Degrees)	TEMP (Deg F)	RH (%)	PRESS (in. Hg)	PRECIP (in.)
9:53	3.5	90.0	73.9	62.05	30.11	0.00
10:53	5.8	140.0	75.9	58.04	30.10	0.00
11:53	6.9	150.0	77.0	51.72	30.09	0.00
12:53	9.2	160.0	78.1	51.88	30.08	0.00
13:53	9.2	140.0	77.0	51.72	30.07	0.00
14:53	9.2	180.0	75.9	53.64	30.06	0.00
15:53	10.4	170.0	75.9	55.8	30.05	0.00
16:53	10.4	150.0	73.9	64.07	30.04	0.00
17:53	9.2	160.0	73.9	71.21	30.04	0.00
18:53	10.4	150.0	73.0	75.75	30.03	0.00
19:53	8.1	150.0	72.0	81.41	30.03	0.00
20:53	6.9	140.0	72.0	83.99	30.03	0.00
21:53	9.2	150.0	72.0	87.24	30.03	0.00
22:53	9.2	170.0	73.0	90.32	30.03	0.00
23:53	9.2	180.0	73.0	93.77	30.02	0.00
0:53	8.1	190.0	73.0	90.32	30.01	0.00
1:53	6.9	180.0	72.0	90.59	30.00	0.00
2:53	6.9	200.0	73.0	87.59	29.99	0.00
3:53	8.1	200.0	73.0	90.32	29.98	0.00
4:53	9.2	210.0	73.0	90.32	29.98	0.00
5:53	9.2	210.0	73.0	90.32	29.98	0.00
6:53	9.2	210.0	73.0	90.32	29.98	0.00
7:53	10.4	210.0	73.9	87.63	29.98	0.00
8:53	12.7	220.0	75.0	87.68	29.98	0.00
9:53	12.7	220.0	78.1	79.1	29.99	0.00
10:53	12.7	200.0	78.1	79.1	29.99	0.00

Notes:

DST: Daylight Savings Time.
EDT: Eastern Daylight Savings Time.
MWS: Mean Wind Speed, miles per hour.
MWD: Mean Wind Direction.
- 360 degrees is due North (Grid North).
TEMP: Ambient Temperature, degrees Fahrenheit.
RH: Relative Humidity, percent.
PRESS: Atmospheric Pressure, inches of mercury (Hg).
PRECIP: Precipitation, inches of water column.

ATTACHMENT B

CHRONOLOGY

AMBIENT AIR, SOIL GAS, AND WELL PRESSURE SAMPLING EVENTS

CHRONOLOGY FOR AMBIENT AIR, SOIL GAS, AND WELL PRESSURE SAMPLING EVENTS

Ambient Air Monitoring

A total of five (5) ambient air monitoring samplers were used to collect ambient air quality samples of VOCs during the 2021 annual test effort. The following discussion provides a chronology of events during this annual test event.

The deployment of samplers at all locations consisted of positioning the units, starting the pumps, measuring the back pressure drops, resetting the thermometers, and setting the flowrates for each unit. Leak checks were performed prior to sample initiation. The initial setup conditions were noted on field data sheets for each station. The samples for Location U1/2 were collocated near the east fence of the 15th hole fairway of the Bethpage State Park Black Golf Course, approximately 200 feet west of Round Swamp Road. Both units were assembled at the RTP Westbury, New York office, and transported to the monitoring site. Samplers U1 and U2 were each started at 10:12 AM (10:12 hours) and 10:13 AM (10:13 hours), respectively, on September 14, 2021. Sample U1 ran continuously for 1,440 minutes before being turned off on-time at 10:12 on September 15, having operated for 100% of the targeted runtime. Sample U2 ran for a total of 931 minutes (64.7% of the 24-hour sampling period). Significant back pressure developed across the U2 traps as condensation formed inside the sampling cartridge. Six (6) site inspections were performed for Samplers U1 and U2 over the sampling period. Periodic adjustments were necessary on each sampler to maintain the optimum flowrate for the collection of samples. Both U1 and U2 were recovered normally and forwarded to the laboratory for analysis, as per protocol. Samplers U1 and U2 each passed startup and shutdown leak checks. Condensate samples were not present except in trace amounts and, therefore, were recovered on the front trap.

Samplers for Locations D1/2 were collocated approximately 75 feet southwest of the southwest corner of the Groundwater Treatment Building. (Note: Effective October 1, 2016, the DEC took over plant operations from the Town, and the plant continues to collect and treat groundwater from RW-3, RW-4 and RW-5, which contain VOCs from the Claremont Site.) Samples D1 and D2 were assembled and positioned as discussed above, and were started at 10:32 and 10:32, respectively, on September 14, 2021. Sample D1 ran for 1,315 minutes (91.3% of the 24-hour sampling period), and experienced operating issues during the morning hours, 1078 minutes into sampling. Sample D2 operated for 1,406 minutes (approximately 97.6% of the 24-hour sampling period). Eight (8) site inspections were performed for Samplers D1 and D2 over the sampling period. Some minor adjustments were necessary on the samplers to maintain the optimum flowrate. Both samplers passed startup and shutdown leak checks. Samples D1 and D2 were recovered normally and forwarded to the laboratory as per protocol. Condensate samples were not present except in trace amounts and, therefore, were recovered on the front trap.

Sampler D3 was located on the west side of the landfill, 50 feet north of the green waste (plant) processing exit. This sampler was assembled and positioned, as noted above, and started at 10:40 hours on September 14, 2021. The sampler ran continuously for 1,425 minutes (approximately 99.0% of the 24-hour sampling period). Eight (8) site inspections took place for Sampler D3 over the sampling period, and a few adjustments were necessary to maintain the optimum flowrate of the sampler. The sampler passed both startup and shutdown leak checks. The sample was recovered normally and forwarded to the laboratory as per protocol. Condensate samples were not present except in trace amounts and, therefore, were recovered on the front trap.

Field and trip blanks for the program were collected according to protocol. Ambient field blank sample TOBOBL21_Annual:FB3.f&b was collected at the RTP Westbury office during sample train assembly. All other samples were forwarded to the laboratory as per protocol.

Soil Gas Monitoring

Two (2) field soil gas VOST assemblies were deployed for the soil gas monitoring portion of the program. Soil gas samples were collected according to the soil gas sampling protocol. All available samples for the annual 2021 test were collected and forwarded to the laboratory according to the protocol. Soil gas well sampling activities occurred between 10:13 and 15:24 hours on September 14, 2021. The sampling protocol required a 10-liter sample. Soil gas field blank TOBOBL21_Annual: FB1.f&b was collected in the vicinity of the RAP building, and TOBOBL21_Annual: FB2.f&b was collected in the vicinity of soil gas Well M13. All samples were recovered normally and forwarded to the laboratory with two (2) trip blanks, as per protocol.

Soil Gas Pressure Readings

Soil gas pressure readings were taken at the three (3) primary pressure wells surrounding the Landfill. Sampling was performed on September 15, 2021 from 07:40 hours through 08:31 hours. Four (4) readings were taken at PW1, PW2, & PW3 (two per 10-foot depth, and two per 20-foot depth) using a Dwyer 10-inch inclined manometer. The inclined manometer was calibrated at zero and leak-checked prior to collecting samples at each well. Sampling followed the established protocol.

ATTACHMENT C

ANALYTICAL RESULTS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

September 29, 2021

Ken Skipka
RTP Environmental
400 Post Avenue (Ste.405)
Westbury, NY 11590

RE: Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Dear Ken Skipka:

Enclosed are the analytical results for sample(s) received by the laboratory on September 15, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicolette Lovari

Nicolette M. Lovari
nicolette.lovari@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Gary Grunseich, RTP Environmental

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Pace Analytical Services Long Island
575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Method: **EPA 5041/0031**
Description: TIC MSV Air
Client: Town of Oyster Bay
Date: September 29, 2021

General Information:
15 samples were analyzed for EPA 5041/0031 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Method: **EPA 5041/0031**
Description: Air Volatile Organics
Client: Town of Oyster Bay
Date: September 29, 2021

General Information:
32 samples were analyzed for EPA 5041/0031 by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

QC Batch: 227010

IC: The initial calibration for this compound was outside of method control limits. The result is estimated.

- BLANK (Lab ID: 1145105)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:FB1.F+B (Lab ID: 70187837026)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:FB2.F+B (Lab ID: 70187837027)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:FB3.F+B (Lab ID: 70187837028)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:TB1.F+B (Lab ID: 70187837029)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:TB2.F+B (Lab ID: 70187837030)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform

QC Batch: 227024

IC: The initial calibration for this compound was outside of method control limits. The result is estimated.

- BLANK (Lab ID: 1145160)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:D2.B (Lab ID: 70187837006)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:D2.F (Lab ID: 70187837005)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:D3.B (Lab ID: 70187837008)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Method: **EPA 5041/0031**
Description: Air Volatile Organics
Client: Town of Oyster Bay
Date: September 29, 2021

QC Batch: 227024

IC: The initial calibration for this compound was outside of method control limits. The result is estimated.

- TOB-OBL21_ANNUAL:D3.F (Lab ID: 70187837007)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M39.B (Lab ID: 70187837025)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M39.F (Lab ID: 70187837024)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M9(30).B (Lab ID: 70187837017)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M9(30).F (Lab ID: 70187837016)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:U2.B (Lab ID: 70187837003)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:U2.F (Lab ID: 70187837002)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform

QC Batch: 227134

IC: The initial calibration for this compound was outside of method control limits. The result is estimated.

- BLANK (Lab ID: 1145549)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:F1.F+B (Lab ID: 70187837009)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M13.F+B (Lab ID: 70187837019)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M16.F+B (Lab ID: 70187837020)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M2.F+B (Lab ID: 70187837010)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M22.F+B (Lab ID: 70187837021)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M34.F+B (Lab ID: 70187837023)
  - 1,1,2,2-Tetrachloroethane

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Method: **EPA 5041/0031**
Description: Air Volatile Organics
Client: Town of Oyster Bay
Date: September 29, 2021

QC Batch: 227134

IC: The initial calibration for this compound was outside of method control limits. The result is estimated.

- Bromoform
- TOB-OBL21_ANNUAL:M4.F+B (Lab ID: 70187837011)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M5.F+B (Lab ID: 70187837012)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M6.F+B (Lab ID: 70187837013)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M9(10).F+B (Lab ID: 70187837014)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M9(20).F+B (Lab ID: 70187837015)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M9(40).F+B (Lab ID: 70187837018)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform

QC Batch: 227320

IC: The initial calibration for this compound was outside of method control limits. The result is estimated.

- BLANK (Lab ID: 1146402)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- M31F+B (Lab ID: 70187837031)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- M37F+B (Lab ID: 70187837032)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:D1F+B (Lab ID: 70187837004)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:M28.F+B (Lab ID: 70187837022)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform
- TOB-OBL21_ANNUAL:U1F+B (Lab ID: 70187837001)
  - 1,1,2,2-Tetrachloroethane
  - Bromoform

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Method: **EPA 5041/0031**
Description: Air Volatile Organics
Client: Town of Oyster Bay
Date: September 29, 2021

QC Batch: 227024

v3: The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have a low bias.

- BLANK (Lab ID: 1145160)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:D2.B (Lab ID: 70187837006)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:D2.F (Lab ID: 70187837005)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:D3.B (Lab ID: 70187837008)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:D3.F (Lab ID: 70187837007)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:M39.B (Lab ID: 70187837025)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:M39.F (Lab ID: 70187837024)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:M9(30).B (Lab ID: 70187837017)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:M9(30).F (Lab ID: 70187837016)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:U2.B (Lab ID: 70187837003)
  - Benzaldehyde
  - Chlorotrifluoromethane
- TOB-OBL21_ANNUAL:U2.F (Lab ID: 70187837002)
  - Benzaldehyde
  - Benzene

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Method: **EPA 5041/0031**
Description: Air Volatile Organics
Client: Town of Oyster Bay
Date: September 29, 2021

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:U1F+B **Lab ID: 70187837001** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**293**	ng	8.0	1		09/28/21 19:19	67-64-1	
Benzaldehyde	**314**	ng	25.0	1		09/28/21 19:19	100-52-7	
Benzene	**82.0**	ng	5.0	1		09/28/21 19:19	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/28/21 19:19	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/28/21 19:19	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/28/21 19:19	74-83-9	
2-Butanone (MEK)	**130**	ng	8.0	1		09/28/21 19:19	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/28/21 19:19	75-15-0	
Carbon tetrachloride	**91.2**	ng	5.0	1		09/28/21 19:19	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/28/21 19:19	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/28/21 19:19	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/28/21 19:19	110-75-8	
Chloroform	**28.5**	ng	5.0	1		09/28/21 19:19	67-66-3	
Chloromethane	**6.1**	ng	5.0	1		09/28/21 19:19	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/28/21 19:19	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/28/21 19:19	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/28/21 19:19	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 19:19	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 19:19	541-73-1	
1,4-Dichlorobenzene	**5.3**	ng	5.0	1		09/28/21 19:19	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/28/21 19:19	75-34-3	
1,2-Dichloroethane	**8.9**	ng	5.0	1		09/28/21 19:19	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 19:19	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 19:19	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 19:19	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/28/21 19:19	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 19:19	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 19:19	10061-02-6	
Ethylbenzene	**21.1**	ng	5.0	1		09/28/21 19:19	100-41-4	
Ethyltoluene (Total)	**30.6**	ng	5.0	1		09/28/21 19:19		
2-Ethyltoluene	**23.7**	ng	5.0	1		09/28/21 19:19	611-14-3	
4-Ethyltoluene	**6.9**	ng	5.0	1		09/28/21 19:19	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/28/21 19:19	591-78-6	
Methylene Chloride	**44.6**	ng	10.0	1		09/28/21 19:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/28/21 19:19	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/28/21 19:19	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/28/21 19:19	79-34-5	IC
Tetrachloroethene	**31.7**	ng	5.0	1		09/28/21 19:19	127-18-4	
Toluene	**157**	ng	5.0	1		09/28/21 19:19	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 19:19	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 19:19	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/28/21 19:19	79-01-6	
Trichlorofluoromethane	**332**	ng	5.0	1		09/28/21 19:19	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/28/21 19:19	75-01-4	
Xylene (Total)	**83.3**	ng	5.0	1		09/28/21 19:19	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:U1F+B **Lab ID: 70187837001** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	70-190	1		09/28/21 19:19	17060-07-0	
4-Bromofluorobenzene (S)	87	%	69-145	1		09/28/21 19:19	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/28/21 19:19	2037-26-5	
Tentatively Identified Compounds								
Nonanal	**134J**	ng		1		09/28/21 19:19	124-19-6	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:U2.F **Lab ID: 70187837002** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**150**	ng	8.0	1		09/26/21 20:53	67-64-1	
Benzaldehyde	**211**	ng	25.0	1		09/26/21 20:53	100-52-7	v3
Benzene	**53.1**	ng	5.0	1		09/26/21 20:53	71-43-2	v3
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 20:53	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 20:53	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 20:53	74-83-9	
2-Butanone (MEK)	**87.4**	ng	8.0	1		09/26/21 20:53	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 20:53	75-15-0	
Carbon tetrachloride	**51.3**	ng	5.0	1		09/26/21 20:53	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 20:53	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 20:53	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 20:53	110-75-8	
Chloroform	**13.4**	ng	5.0	1		09/26/21 20:53	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/26/21 20:53	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 20:53	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/26/21 20:53	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 20:53	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 20:53	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 20:53	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 20:53	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 20:53	75-34-3	
1,2-Dichloroethane	**5.4**	ng	5.0	1		09/26/21 20:53	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 20:53	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 20:53	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 20:53	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 20:53	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 20:53	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 20:53	10061-02-6	
Ethylbenzene	**16.4**	ng	5.0	1		09/26/21 20:53	100-41-4	
Ethyltoluene (Total)	**24.0**	ng	5.0	1		09/26/21 20:53		
2-Ethyltoluene	**18.6**	ng	5.0	1		09/26/21 20:53	611-14-3	
4-Ethyltoluene	**5.4**	ng	5.0	1		09/26/21 20:53	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 20:53	591-78-6	
Methylene Chloride	**11.1**	ng	10.0	1		09/26/21 20:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/26/21 20:53	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 20:53	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 20:53	79-34-5	IC
Tetrachloroethene	**24.9**	ng	5.0	1		09/26/21 20:53	127-18-4	
Toluene	**122**	ng	5.0	1		09/26/21 20:53	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 20:53	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 20:53	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 20:53	79-01-6	
Trichlorofluoromethane	**33.5**	ng	5.0	1		09/26/21 20:53	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 20:53	75-01-4	
Xylene (Total)	**66.2**	ng	5.0	1		09/26/21 20:53	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:U2.F **Lab ID: 70187837002** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%	70-190	1		09/26/21 20:53	17060-07-0	
4-Bromofluorobenzene (S)	87	%	69-145	1		09/26/21 20:53	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/26/21 20:53	2037-26-5	
Tentatively Identified Compounds								
Hexane	**55.1J**	ng		1		09/26/21 20:53	110-54-3	N
Heptanal	**34.4J**	ng		1		09/26/21 20:53	111-71-7	N
Octanal	**41.3J**	ng		1		09/26/21 20:53	124-13-0	N
Nonanal	**84.8J**	ng		1		09/26/21 20:53	124-19-6	N
Dodecane	**37.6J**	ng		1		09/26/21 20:53	112-40-3	N
Decanal	**31.0J**	ng		1		09/26/21 20:53	112-31-2	N
Unknown Petroleum Alkan	**26.7J**	ng		1		09/26/21 20:53		
Unknown	**58.2J**	ng		1		09/26/21 20:53		
Unknown Petroleum Alkan	**26.7J**	ng		1		09/26/21 20:53		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:U2.B **Lab ID: 70187837003** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/26/21 20:28		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**12.5**	ng	8.0	1		09/26/21 19:20	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/26/21 19:20	100-52-7	v3
Benzene	**<5.0**	ng	5.0	1		09/26/21 19:20	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 19:20	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 19:20	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 19:20	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/26/21 19:20	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 19:20	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/26/21 19:20	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 19:20	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 19:20	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 19:20	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/26/21 19:20	67-66-3	
Chloromethane	**11.4**	ng	5.0	1		09/26/21 19:20	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 19:20	75-72-9	v3
n-Decane	**<25.0**	ng	25.0	1		09/26/21 19:20	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 19:20	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 19:20	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 19:20	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 19:20	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 19:20	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 19:20	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 19:20	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 19:20	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 19:20	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 19:20	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 19:20	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 19:20	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/26/21 19:20	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/26/21 19:20		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 19:20	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 19:20	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 19:20	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/26/21 19:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/26/21 19:20	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 19:20	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 19:20	79-34-5	IC
Tetrachloroethene	**<5.0**	ng	5.0	1		09/26/21 19:20	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/26/21 19:20	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 19:20	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:U2.B **Lab ID: 70187837003** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 19:20	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 19:20	79-01-6	
Trichlorofluoromethane	**<5.0**	ng	5.0	1		09/26/21 19:20	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 19:20	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/26/21 19:20	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%	70-190	1		09/26/21 19:20	17060-07-0	
4-Bromofluorobenzene (S)	79	%	69-145	1		09/26/21 19:20	460-00-4	
Toluene-d8 (S)	101	%	81-125	1		09/26/21 19:20	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D1F+B **Lab ID: 70187837004** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**101**	ng	8.0	1		09/28/21 18:46	67-64-1	
Benzaldehyde	**265**	ng	25.0	1		09/28/21 18:46	100-52-7	
Benzene	**129**	ng	5.0	1		09/28/21 18:46	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/28/21 18:46	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/28/21 18:46	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/28/21 18:46	74-83-9	
2-Butanone (MEK)	**133**	ng	8.0	1		09/28/21 18:46	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/28/21 18:46	75-15-0	
Carbon tetrachloride	**54.2**	ng	5.0	1		09/28/21 18:46	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/28/21 18:46	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/28/21 18:46	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/28/21 18:46	110-75-8	
Chloroform	**12.2**	ng	5.0	1		09/28/21 18:46	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/28/21 18:46	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/28/21 18:46	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/28/21 18:46	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/28/21 18:46	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 18:46	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 18:46	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 18:46	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/28/21 18:46	75-34-3	
1,2-Dichloroethane	**6.2**	ng	5.0	1		09/28/21 18:46	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 18:46	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 18:46	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 18:46	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/28/21 18:46	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 18:46	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 18:46	10061-02-6	
Ethylbenzene	**20.8**	ng	5.0	1		09/28/21 18:46	100-41-4	
Ethyltoluene (Total)	**33.1**	ng	5.0	1		09/28/21 18:46		
2-Ethyltoluene	**25.6**	ng	5.0	1		09/28/21 18:46	611-14-3	
4-Ethyltoluene	**7.5**	ng	5.0	1		09/28/21 18:46	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/28/21 18:46	591-78-6	
Methylene Chloride	**34.7**	ng	10.0	1		09/28/21 18:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/28/21 18:46	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/28/21 18:46	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/28/21 18:46	79-34-5	IC
Tetrachloroethene	**43.5**	ng	5.0	1		09/28/21 18:46	127-18-4	
Toluene	**143**	ng	5.0	1		09/28/21 18:46	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 18:46	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 18:46	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/28/21 18:46	79-01-6	
Trichlorofluoromethane	**162**	ng	5.0	1		09/28/21 18:46	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/28/21 18:46	75-01-4	
Xylene (Total)	**83.2**	ng	5.0	1		09/28/21 18:46	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D1F+B **Lab ID: 70187837004** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	70-190	1		09/28/21 18:46	17060-07-0	
4-Bromofluorobenzene (S)	87	%	69-145	1		09/28/21 18:46	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/28/21 18:46	2037-26-5	
Tentatively Identified Compounds								
Nonanal	**201J**	ng		1		09/28/21 18:46	124-19-6	N
Decanal	**89.5J**	ng		1		09/28/21 18:46	112-31-2	N
Unknown Aromatic Hydroc	**116J**	ng		1		09/28/21 18:46		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D2.F **Lab ID: 70187837005** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**158**	ng	8.0	1		09/26/21 19:50	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/26/21 19:50	100-52-7	v3
Benzene	**186**	ng	5.0	1		09/26/21 19:50	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 19:50	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 19:50	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 19:50	74-83-9	
2-Butanone (MEK)	**229**	ng	8.0	1		09/26/21 19:50	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 19:50	75-15-0	
Carbon tetrachloride	**76.5**	ng	5.0	1		09/26/21 19:50	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 19:50	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 19:50	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 19:50	110-75-8	
Chloroform	**13.8**	ng	5.0	1		09/26/21 19:50	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/26/21 19:50	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 19:50	75-72-9	v3
n-Decane	**43.4**	ng	25.0	1		09/26/21 19:50	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 19:50	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 19:50	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 19:50	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 19:50	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 19:50	75-34-3	
1,2-Dichloroethane	**9.7**	ng	5.0	1		09/26/21 19:50	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 19:50	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 19:50	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 19:50	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 19:50	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 19:50	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 19:50	10061-02-6	
Ethylbenzene	**28.3**	ng	5.0	1		09/26/21 19:50	100-41-4	
Ethyltoluene (Total)	**38.5**	ng	5.0	1		09/26/21 19:50		
2-Ethyltoluene	**29.9**	ng	5.0	1		09/26/21 19:50	611-14-3	
4-Ethyltoluene	**8.6**	ng	5.0	1		09/26/21 19:50	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 19:50	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/26/21 19:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	**385**	ng	8.0	1		09/26/21 19:50	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 19:50	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 19:50	79-34-5	IC
Tetrachloroethene	**63.3**	ng	5.0	1		09/26/21 19:50	127-18-4	
Toluene	**197**	ng	5.0	1		09/26/21 19:50	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 19:50	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 19:50	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 19:50	79-01-6	
Trichlorofluoromethane	**16.1**	ng	5.0	1		09/26/21 19:50	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 19:50	75-01-4	
Xylene (Total)	**110**	ng	5.0	1		09/26/21 19:50	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D2.F **Lab ID: 70187837005** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	70-190	1		09/26/21 19:50	17060-07-0	
4-Bromofluorobenzene (S)	78	%	69-145	1		09/26/21 19:50	460-00-4	
Toluene-d8 (S)	98	%	81-125	1		09/26/21 19:50	2037-26-5	
Tentatively Identified Compounds								
Hexane	**97.8J**	ng		1		09/26/21 19:50	110-54-3	N
Hexanal	**49.1J**	ng		1		09/26/21 19:50	66-25-1	N
.alpha.-Pinene	**88.0J**	ng		1		09/26/21 19:50	80-56-8	N
Unknown Cycloalkane	**74.0J**	ng		1		09/26/21 19:50		
Benzene, 1,2,4-trimethy	**40.0J**	ng		1		09/26/21 19:50	95-63-6	N
Octanal	**50.2J**	ng		1		09/26/21 19:50	124-13-0	N
Undecane	**51.9J**	ng		1		09/26/21 19:50	1120-21-4	N
Unknown	**58.0J**	ng		1		09/26/21 19:50		
Nonanal	**57.8J**	ng		1		09/26/21 19:50	124-19-6	N
Dodecane	**95.3J**	ng		1		09/26/21 19:50	112-40-3	N
Unknown	**49.7J**	ng		1		09/26/21 19:50		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D2.B **Lab ID: 70187837006** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**311**	ng	8.0	1		09/26/21 18:20	67-64-1	
Benzaldehyde	**32.5**	ng	25.0	1		09/26/21 18:20	100-52-7	v3
Benzene	**38.6**	ng	5.0	1		09/26/21 18:20	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 18:20	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 18:20	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 18:20	74-83-9	
2-Butanone (MEK)	**49.1**	ng	8.0	1		09/26/21 18:20	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 18:20	75-15-0	
Carbon tetrachloride	**31.1**	ng	5.0	1		09/26/21 18:20	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 18:20	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 18:20	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 18:20	110-75-8	
Chloroform	**13.9**	ng	5.0	1		09/26/21 18:20	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/26/21 18:20	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 18:20	75-72-9	v3
n-Decane	**<25.0**	ng	25.0	1		09/26/21 18:20	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 18:20	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 18:20	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 18:20	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 18:20	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 18:20	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 18:20	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 18:20	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 18:20	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 18:20	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 18:20	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 18:20	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 18:20	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/26/21 18:20	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/26/21 18:20		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 18:20	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 18:20	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 18:20	591-78-6	
Methylene Chloride	**48.5**	ng	10.0	1		09/26/21 18:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/26/21 18:20	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 18:20	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 18:20	79-34-5	IC
Tetrachloroethene	**<5.0**	ng	5.0	1		09/26/21 18:20	127-18-4	
Toluene	**6.3**	ng	5.0	1		09/26/21 18:20	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 18:20	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 18:20	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 18:20	79-01-6	
Trichlorofluoromethane	**293**	ng	5.0	1		09/26/21 18:20	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 18:20	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/26/21 18:20	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D2.B **Lab ID: 70187837006** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	70-190	1		09/26/21 18:20	17060-07-0	
4-Bromofluorobenzene (S)	83	%	69-145	1		09/26/21 18:20	460-00-4	
Toluene-d8 (S)	98	%	81-125	1		09/26/21 18:20	2037-26-5	
Tentatively Identified Compounds								
Butane, 2-methyl-	**199J**	ng		1		09/26/21 18:20	78-78-4	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D3.F **Lab ID: 70187837007** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**84.4**	ng	8.0	1		09/26/21 20:21	67-64-1	
Benzaldehyde	**329**	ng	25.0	1		09/26/21 20:21	100-52-7	v3
Benzene	**206**	ng	5.0	1		09/26/21 20:21	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 20:21	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 20:21	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 20:21	74-83-9	
2-Butanone (MEK)	**571**	ng	8.0	1		09/26/21 20:21	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 20:21	75-15-0	
Carbon tetrachloride	**58.5**	ng	5.0	1		09/26/21 20:21	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 20:21	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 20:21	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 20:21	110-75-8	
Chloroform	**9.5**	ng	5.0	1		09/26/21 20:21	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/26/21 20:21	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 20:21	75-72-9	v3
n-Decane	**65.2**	ng	25.0	1		09/26/21 20:21	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 20:21	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 20:21	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 20:21	541-73-1	
1,4-Dichlorobenzene	**5.7**	ng	5.0	1		09/26/21 20:21	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 20:21	75-34-3	
1,2-Dichloroethane	**6.7**	ng	5.0	1		09/26/21 20:21	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 20:21	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 20:21	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 20:21	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 20:21	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 20:21	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 20:21	10061-02-6	
Ethylbenzene	**33.5**	ng	5.0	1		09/26/21 20:21	100-41-4	
Ethyltoluene (Total)	**61.8**	ng	5.0	1		09/26/21 20:21		
2-Ethyltoluene	**47.7**	ng	5.0	1		09/26/21 20:21	611-14-3	
4-Ethyltoluene	**14.1**	ng	5.0	1		09/26/21 20:21	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 20:21	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/26/21 20:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/26/21 20:21	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 20:21	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 20:21	79-34-5	IC
Tetrachloroethene	**35.7**	ng	5.0	1		09/26/21 20:21	127-18-4	
Toluene	**200**	ng	5.0	1		09/26/21 20:21	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 20:21	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 20:21	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 20:21	79-01-6	
Trichlorofluoromethane	**9.2**	ng	5.0	1		09/26/21 20:21	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 20:21	75-01-4	
Xylene (Total)	**143**	ng	5.0	1		09/26/21 20:21	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D3.F **Lab ID: 70187837007** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%	70-190	1		09/26/21 20:21	17060-07-0	
4-Bromofluorobenzene (S)	88	%	69-145	1		09/26/21 20:21	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/26/21 20:21	2037-26-5	
Tentatively Identified Compounds								
Hexanal	**57.3J**	ng		1		09/26/21 20:21	66-25-1	N
.alpha.-Pinene	**180J**	ng		1		09/26/21 20:21	80-56-8	N
.beta.-Pinene	**101J**	ng		1		09/26/21 20:21	127-91-3	N
Octanal	**146J**	ng		1		09/26/21 20:21	124-13-0	N
Undecane	**76.0J**	ng		1		09/26/21 20:21	1120-21-4	N
Nonanal	**266J**	ng		1		09/26/21 20:21	124-19-6	N
Dodecane	**111J**	ng		1		09/26/21 20:21	112-40-3	N
Decanal	**128J**	ng		1		09/26/21 20:21	112-31-2	N
Naphthalene	**54.8J**	ng		1		09/26/21 20:21	91-20-3	N
Unknown Petroleum Alkan	**112J**	ng		1		09/26/21 20:21		
Unknown	**164J**	ng		1		09/26/21 20:21		
Unknown Petroleum Alkan	**73.8J**	ng		1		09/26/21 20:21		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D3.B **Lab ID: 70187837008** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**15.4**	ng	8.0	1		09/26/21 18:50	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/26/21 18:50	100-52-7	v3
Benzene	**<5.0**	ng	5.0	1		09/26/21 18:50	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 18:50	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 18:50	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 18:50	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/26/21 18:50	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 18:50	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/26/21 18:50	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 18:50	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 18:50	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 18:50	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/26/21 18:50	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/26/21 18:50	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 18:50	75-72-9	v3
n-Decane	**<25.0**	ng	25.0	1		09/26/21 18:50	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 18:50	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 18:50	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 18:50	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 18:50	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 18:50	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 18:50	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 18:50	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 18:50	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 18:50	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 18:50	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 18:50	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 18:50	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/26/21 18:50	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/26/21 18:50		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 18:50	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 18:50	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 18:50	591-78-6	
Methylene Chloride	**99.0**	ng	10.0	1		09/26/21 18:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/26/21 18:50	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 18:50	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 18:50	79-34-5	IC
Tetrachloroethene	**<5.0**	ng	5.0	1		09/26/21 18:50	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/26/21 18:50	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 18:50	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 18:50	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 18:50	79-01-6	
Trichlorofluoromethane	**117**	ng	5.0	1		09/26/21 18:50	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 18:50	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/26/21 18:50	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:D3.B **Lab ID: 70187837008** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%	70-190	1		09/26/21 18:50	17060-07-0	
4-Bromofluorobenzene (S)	84	%	69-145	1		09/26/21 18:50	460-00-4	
Toluene-d8 (S)	98	%	81-125	1		09/26/21 18:50	2037-26-5	
Tentatively Identified Compounds								
Isobutane	**154J**	ng		1		09/26/21 18:50	75-28-5	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:F1.F+B **Lab ID: 70187837009** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/28/21 15:08		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**18.5**	ng	8.0	1		09/27/21 16:34	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/27/21 16:34	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 16:34	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 16:34	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 16:34	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 16:34	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 16:34	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 16:34	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 16:34	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 16:34	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 16:34	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 16:34	110-75-8	
Chloroform	**29.1**	ng	5.0	1		09/27/21 16:34	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 16:34	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 16:34	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 16:34	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 16:34	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 16:34	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 16:34	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 16:34	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 16:34	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 16:34	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 16:34	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 16:34	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 16:34	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 16:34	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 16:34	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 16:34	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 16:34	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 16:34		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 16:34	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 16:34	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 16:34	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 16:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 16:34	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 16:34	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 16:34	79-34-5	IC
Tetrachloroethene	**94.1**	ng	5.0	1		09/27/21 16:34	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 16:34	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 16:34	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:F1.F+B **Lab ID: 70187837009** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 16:34	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 16:34	79-01-6	
Trichlorofluoromethane	**27.9**	ng	5.0	1		09/27/21 16:34	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 16:34	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 16:34	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	70-190	1		09/27/21 16:34	17060-07-0	
4-Bromofluorobenzene (S)	85	%	69-145	1		09/27/21 16:34	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/27/21 16:34	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M2.F+B **Lab ID: 70187837010** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/28/21 15:08		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**20.4**	ng	8.0	1		09/27/21 17:03	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/27/21 17:03	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 17:03	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 17:03	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 17:03	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 17:03	74-83-9	
2-Butanone (MEK)	**28.1**	ng	8.0	1		09/27/21 17:03	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 17:03	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 17:03	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:03	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 17:03	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 17:03	110-75-8	
Chloroform	**57.2**	ng	5.0	1		09/27/21 17:03	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 17:03	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 17:03	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 17:03	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 17:03	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:03	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:03	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:03	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:03	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:03	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:03	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:03	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:03	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 17:03	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 17:03	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 17:03	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 17:03	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 17:03		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 17:03	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 17:03	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 17:03	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 17:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 17:03	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 17:03	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 17:03	79-34-5	IC
Tetrachloroethene	**40.2**	ng	5.0	1		09/27/21 17:03	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 17:03	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:03	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M2.F+B **Lab ID: 70187837010** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:03	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:03	79-01-6	
Trichlorofluoromethane	**9.0**	ng	5.0	1		09/27/21 17:03	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 17:03	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 17:03	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	70-190	1		09/27/21 17:03	17060-07-0	
4-Bromofluorobenzene (S)	86	%	69-145	1		09/27/21 17:03	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/27/21 17:03	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M4.F+B **Lab ID: 70187837011** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/28/21 15:09		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**27.2**	ng	8.0	1		09/27/21 17:31	67-64-1	
Benzaldehyde	**54.4**	ng	25.0	1		09/27/21 17:31	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 17:31	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 17:31	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 17:31	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 17:31	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 17:31	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 17:31	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 17:31	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:31	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 17:31	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 17:31	110-75-8	
Chloroform	**5.4**	ng	5.0	1		09/27/21 17:31	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 17:31	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 17:31	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 17:31	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 17:31	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:31	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:31	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:31	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:31	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:31	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:31	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:31	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:31	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 17:31	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 17:31	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 17:31	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 17:31	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 17:31		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 17:31	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 17:31	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 17:31	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 17:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 17:31	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 17:31	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 17:31	79-34-5	IC
Tetrachloroethene	**5.3**	ng	5.0	1		09/27/21 17:31	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 17:31	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:31	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M4.F+B **Lab ID: 70187837011** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:31	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:31	79-01-6	
Trichlorofluoromethane	**7.7**	ng	5.0	1		09/27/21 17:31	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 17:31	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 17:31	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%	70-190	1		09/27/21 17:31	17060-07-0	
4-Bromofluorobenzene (S)	86	%	69-145	1		09/27/21 17:31	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/27/21 17:31	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M5.F+B **Lab ID: 70187837012** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**24.5**	ng	8.0	1		09/27/21 17:57	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/27/21 17:57	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 17:57	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 17:57	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 17:57	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 17:57	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 17:57	78-93-3	
Carbon disulfide	**5.0**	ng	5.0	1		09/27/21 17:57	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 17:57	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:57	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 17:57	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 17:57	110-75-8	
Chloroform	**17.7**	ng	5.0	1		09/27/21 17:57	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 17:57	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 17:57	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 17:57	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 17:57	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:57	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:57	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 17:57	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:57	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:57	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:57	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:57	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:57	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 17:57	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 17:57	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 17:57	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 17:57	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 17:57		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 17:57	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 17:57	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 17:57	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 17:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 17:57	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 17:57	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 17:57	79-34-5	IC
Tetrachloroethene	**37.0**	ng	5.0	1		09/27/21 17:57	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 17:57	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:57	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 17:57	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 17:57	79-01-6	
Trichlorofluoromethane	**11.9**	ng	5.0	1		09/27/21 17:57	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 17:57	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 17:57	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M5.F+B **Lab ID: 70187837012** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	70-190	1		09/27/21 17:57	17060-07-0	
4-Bromofluorobenzene (S)	85	%	69-145	1		09/27/21 17:57	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/27/21 17:57	2037-26-5	
Tentatively Identified Compounds								
Ethane, 1,2-dichloro-1,1	**206J**	ng		1		09/27/21 17:57	76-14-2	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M6.F+B **Lab ID: 70187837013** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/28/21 15:11		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**29.4**	ng	8.0	1		09/27/21 18:22	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/27/21 18:22	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 18:22	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 18:22	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 18:22	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 18:22	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 18:22	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 18:22	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 18:22	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 18:22	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 18:22	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 18:22	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/27/21 18:22	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 18:22	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 18:22	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 18:22	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 18:22	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 18:22	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 18:22	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 18:22	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 18:22	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 18:22	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 18:22	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 18:22	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 18:22	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 18:22	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 18:22	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 18:22	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 18:22	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 18:22		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 18:22	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 18:22	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 18:22	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 18:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 18:22	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 18:22	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 18:22	79-34-5	IC
Tetrachloroethene	**9.5**	ng	5.0	1		09/27/21 18:22	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 18:22	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 18:22	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M6.F+B **Lab ID: 70187837013** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 18:22	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 18:22	79-01-6	
Trichlorofluoromethane	**9.2**	ng	5.0	1		09/27/21 18:22	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 18:22	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 18:22	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	104	%	70-190	1		09/27/21 18:22	17060-07-0	
4-Bromofluorobenzene (S)	86	%	69-145	1		09/27/21 18:22	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/27/21 18:22	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(10).F+B **Lab ID: 70187837014** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**26.8**	ng	8.0	1		09/27/21 18:48	67-64-1	
Benzaldehyde	**54.5**	ng	25.0	1		09/27/21 18:48	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 18:48	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 18:48	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 18:48	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 18:48	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 18:48	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 18:48	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 18:48	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 18:48	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 18:48	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 18:48	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/27/21 18:48	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 18:48	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 18:48	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 18:48	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 18:48	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 18:48	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 18:48	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 18:48	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 18:48	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 18:48	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 18:48	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 18:48	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 18:48	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 18:48	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 18:48	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 18:48	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 18:48	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 18:48		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 18:48	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 18:48	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 18:48	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 18:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 18:48	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 18:48	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 18:48	79-34-5	IC
Tetrachloroethene	**203**	ng	5.0	1		09/27/21 18:48	127-18-4	
Toluene	**7.3**	ng	5.0	1		09/27/21 18:48	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 18:48	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 18:48	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 18:48	79-01-6	
Trichlorofluoromethane	**39.0**	ng	5.0	1		09/27/21 18:48	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 18:48	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(10).F+B **Lab ID: 70187837014** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 18:48	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%	70-190	1		09/27/21 18:48	17060-07-0	
4-Bromofluorobenzene (S)	87	%	69-145	1		09/27/21 18:48	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/27/21 18:48	2037-26-5	
Tentatively Identified Compounds								
Dichlorodifluoromethane	**265J**	ng		1		09/27/21 18:48	75-71-8	N
Ethane, 1,2-dichloro-1,1	**393J**	ng		1		09/27/21 18:48	76-14-2	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(20).F+B **Lab ID: 70187837015** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**38.2**	ng	8.0	1		09/27/21 19:16	67-64-1	
Benzaldehyde	**53.3**	ng	25.0	1		09/27/21 19:16	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 19:16	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 19:16	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 19:16	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 19:16	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 19:16	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 19:16	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 19:16	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 19:16	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 19:16	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 19:16	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/27/21 19:16	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 19:16	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 19:16	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 19:16	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 19:16	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 19:16	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 19:16	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 19:16	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 19:16	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 19:16	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 19:16	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 19:16	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 19:16	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 19:16	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 19:16	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 19:16	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 19:16	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 19:16		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 19:16	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 19:16	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 19:16	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 19:16	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 19:16	79-34-5	IC
Tetrachloroethene	**213**	ng	5.0	1		09/27/21 19:16	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 19:16	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 19:16	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 19:16	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 19:16	79-01-6	
Trichlorofluoromethane	**30.3**	ng	5.0	1		09/27/21 19:16	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 19:16	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(20).F+B **Lab ID: 70187837015** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 19:16	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	134	%	70-190	1		09/27/21 19:16	17060-07-0	
4-Bromofluorobenzene (S)	87	%	69-145	1		09/27/21 19:16	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/27/21 19:16	2037-26-5	
Tentatively Identified Compounds								
Dichlorodifluoromethane	**560J**	ng		1		09/27/21 19:16	75-71-8	N
Ethane, 1,2-dichloro-1,1	**1090J**	ng		1		09/27/21 19:16	76-14-2	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(30).F **Lab ID: 70187837016** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**14.9**	ng	8.0	1		09/26/21 17:24	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/26/21 17:24	100-52-7	v3
Benzene	**<5.0**	ng	5.0	1		09/26/21 17:24	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 17:24	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 17:24	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 17:24	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/26/21 17:24	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 17:24	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/26/21 17:24	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 17:24	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 17:24	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 17:24	110-75-8	
Chloroform	**5.1**	ng	5.0	1		09/26/21 17:24	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/26/21 17:24	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 17:24	75-72-9	v3
n-Decane	**<25.0**	ng	25.0	1		09/26/21 17:24	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 17:24	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 17:24	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 17:24	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 17:24	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 17:24	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 17:24	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 17:24	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 17:24	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 17:24	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 17:24	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 17:24	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 17:24	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/26/21 17:24	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/26/21 17:24		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 17:24	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 17:24	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 17:24	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/26/21 17:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/26/21 17:24	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 17:24	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 17:24	79-34-5	IC
Tetrachloroethene	**452**	ng	5.0	1		09/26/21 17:24	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/26/21 17:24	108-88-3	
1,1,1-Trichloroethane	**5.4**	ng	5.0	1		09/26/21 17:24	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 17:24	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 17:24	79-01-6	
Trichlorofluoromethane	**24.6**	ng	5.0	1		09/26/21 17:24	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 17:24	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/26/21 17:24	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(30).F **Lab ID: 70187837016** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	70-190	1		09/26/21 17:24	17060-07-0	
4-Bromofluorobenzene (S)	79	%	69-145	1		09/26/21 17:24	460-00-4	
Toluene-d8 (S)	97	%	81-125	1		09/26/21 17:24	2037-26-5	
Tentatively Identified Compounds								
Dichlorodifluoromethane	**54.3J**	ng		1		09/26/21 17:24	75-71-8	N
Ethane, 1,2-dichloro-1,1	**83.0J**	ng		1		09/26/21 17:24	76-14-2	N
Cyclotrisiloxane, hexame	**27.5J**	ng		1		09/26/21 17:24	541-05-9	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(30).B **Lab ID: 70187837017** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**8.7**	ng	8.0	1		09/26/21 17:51	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/26/21 17:51	100-52-7	v3
Benzene	**<5.0**	ng	5.0	1		09/26/21 17:51	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 17:51	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 17:51	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 17:51	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/26/21 17:51	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 17:51	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/26/21 17:51	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 17:51	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 17:51	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 17:51	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/26/21 17:51	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/26/21 17:51	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 17:51	75-72-9	v3
n-Decane	**<25.0**	ng	25.0	1		09/26/21 17:51	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 17:51	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 17:51	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 17:51	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 17:51	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 17:51	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 17:51	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 17:51	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 17:51	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 17:51	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 17:51	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 17:51	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 17:51	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/26/21 17:51	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/26/21 17:51		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 17:51	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 17:51	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 17:51	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/26/21 17:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/26/21 17:51	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 17:51	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 17:51	79-34-5	IC
Tetrachloroethene	**11.9**	ng	5.0	1		09/26/21 17:51	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/26/21 17:51	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 17:51	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 17:51	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 17:51	79-01-6	
Trichlorofluoromethane	**8.9**	ng	5.0	1		09/26/21 17:51	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 17:51	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/26/21 17:51	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(30).B **Lab ID: 70187837017** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	99	%	70-190	1		09/26/21 17:51	17060-07-0	
4-Bromofluorobenzene (S)	81	%	69-145	1		09/26/21 17:51	460-00-4	
Toluene-d8 (S)	98	%	81-125	1		09/26/21 17:51	2037-26-5	
Tentatively Identified Compounds								
Dichlorodifluoromethane	**618J**	ng		1		09/26/21 17:51	75-71-8	N
Ethane, 1,2-dichloro-1,1	**1130J**	ng		1		09/26/21 17:51	76-14-2	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(40).F+B **Lab ID: 70187837018** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**21.2**	ng	8.0	1		09/27/21 19:42	67-64-1	
Benzaldehyde	**26.4**	ng	25.0	1		09/27/21 19:42	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 19:42	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 19:42	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 19:42	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 19:42	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 19:42	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 19:42	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 19:42	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 19:42	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 19:42	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 19:42	110-75-8	
Chloroform	**5.6**	ng	5.0	1		09/27/21 19:42	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 19:42	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 19:42	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 19:42	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 19:42	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 19:42	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 19:42	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 19:42	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 19:42	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 19:42	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 19:42	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 19:42	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 19:42	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 19:42	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 19:42	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 19:42	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 19:42	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 19:42		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 19:42	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 19:42	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 19:42	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 19:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 19:42	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 19:42	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 19:42	79-34-5	IC
Tetrachloroethene	**521**	ng	5.0	1		09/27/21 19:42	127-18-4	
Toluene	**8.5**	ng	5.0	1		09/27/21 19:42	108-88-3	
1,1,1-Trichloroethane	**7.5**	ng	5.0	1		09/27/21 19:42	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 19:42	79-00-5	
Trichloroethene	**8.3**	ng	5.0	1		09/27/21 19:42	79-01-6	
Trichlorofluoromethane	**32.3**	ng	5.0	1		09/27/21 19:42	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 19:42	75-01-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M9(40).F+B **Lab ID: 70187837018** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 19:42	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	70-190	1		09/27/21 19:42	17060-07-0	
4-Bromofluorobenzene (S)	85	%	69-145	1		09/27/21 19:42	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/27/21 19:42	2037-26-5	
Tentatively Identified Compounds								
Dichlorodifluoromethane	**751J**	ng		1		09/27/21 19:42	75-71-8	N
Ethane, 1,2-dichloro-1,1	**1360J**	ng		1		09/27/21 19:42	76-14-2	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M13.F+B **Lab ID: 70187837019** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**23.0**	ng	8.0	1		09/27/21 20:08	67-64-1	
Benzaldehyde	**41.9**	ng	25.0	1		09/27/21 20:08	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 20:08	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 20:08	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 20:08	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 20:08	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 20:08	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 20:08	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 20:08	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 20:08	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 20:08	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 20:08	110-75-8	
Chloroform	**38.8**	ng	5.0	1		09/27/21 20:08	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 20:08	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 20:08	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 20:08	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 20:08	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 20:08	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 20:08	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 20:08	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 20:08	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 20:08	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 20:08	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 20:08	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 20:08	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 20:08	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 20:08	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 20:08	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 20:08	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 20:08		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 20:08	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 20:08	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 20:08	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 20:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 20:08	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 20:08	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 20:08	79-34-5	IC
Tetrachloroethene	**117**	ng	5.0	1		09/27/21 20:08	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 20:08	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 20:08	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 20:08	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 20:08	79-01-6	
Trichlorofluoromethane	**14.8**	ng	5.0	1		09/27/21 20:08	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 20:08	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 20:08	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M13.F+B **Lab ID: 70187837019** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%	70-190	1		09/27/21 20:08	17060-07-0	
4-Bromofluorobenzene (S)	86	%	69-145	1		09/27/21 20:08	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/27/21 20:08	2037-26-5	
Tentatively Identified Compounds								
Undecane	**129J**	ng		1		09/27/21 20:08	1120-21-4	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M16.F+B **Lab ID: 70187837020** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**16.9**	ng	8.0	1		09/27/21 20:35	67-64-1	
Benzaldehyde	**37.8**	ng	25.0	1		09/27/21 20:35	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 20:35	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 20:35	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 20:35	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 20:35	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 20:35	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 20:35	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 20:35	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 20:35	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 20:35	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 20:35	110-75-8	
Chloroform	**141**	ng	5.0	1		09/27/21 20:35	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 20:35	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 20:35	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 20:35	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 20:35	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 20:35	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 20:35	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 20:35	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 20:35	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 20:35	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 20:35	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 20:35	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 20:35	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 20:35	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 20:35	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 20:35	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 20:35	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 20:35		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 20:35	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 20:35	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 20:35	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 20:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 20:35	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 20:35	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 20:35	79-34-5	IC
Tetrachloroethene	**279**	ng	5.0	1		09/27/21 20:35	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 20:35	108-88-3	
1,1,1-Trichloroethane	**5.4**	ng	5.0	1		09/27/21 20:35	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 20:35	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 20:35	79-01-6	
Trichlorofluoromethane	**25.1**	ng	5.0	1		09/27/21 20:35	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 20:35	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 20:35	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M16.F+B **Lab ID: 70187837020** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	70-190	1		09/27/21 20:35	17060-07-0	
4-Bromofluorobenzene (S)	84	%	69-145	1		09/27/21 20:35	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/27/21 20:35	2037-26-5	
Tentatively Identified Compounds								
Undecane	**200J**	ng		1		09/27/21 20:35	1120-21-4	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M22.F+B **Lab ID: 70187837021** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**20.3**	ng	8.0	1		09/27/21 21:02	67-64-1	
Benzaldehyde	**35.9**	ng	25.0	1		09/27/21 21:02	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 21:02	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 21:02	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 21:02	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 21:02	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 21:02	78-93-3	
Carbon disulfide	**5.5**	ng	5.0	1		09/27/21 21:02	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 21:02	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 21:02	108-90-7	
Chloroethane	**15.0**	ng	5.0	1		09/27/21 21:02	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 21:02	110-75-8	
Chloroform	**11.3**	ng	5.0	1		09/27/21 21:02	67-66-3	
Chloromethane	**5.1**	ng	5.0	1		09/27/21 21:02	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 21:02	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 21:02	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 21:02	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 21:02	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 21:02	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 21:02	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 21:02	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 21:02	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 21:02	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 21:02	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 21:02	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 21:02	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 21:02	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 21:02	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 21:02	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 21:02		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 21:02	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 21:02	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 21:02	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 21:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 21:02	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 21:02	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 21:02	79-34-5	IC
Tetrachloroethene	**14.1**	ng	5.0	1		09/27/21 21:02	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 21:02	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 21:02	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 21:02	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 21:02	79-01-6	
Trichlorofluoromethane	**14.0**	ng	5.0	1		09/27/21 21:02	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 21:02	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 21:02	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M22.F+B **Lab ID: 70187837021** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%	70-190	1		09/27/21 21:02	17060-07-0	
4-Bromofluorobenzene (S)	86	%	69-145	1		09/27/21 21:02	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/27/21 21:02	2037-26-5	
Tentatively Identified Compounds								
Undecane	**495J**	ng		1		09/27/21 21:02	1120-21-4	N

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M28.F+B **Lab ID: 70187837022** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**40.0**	ng	8.0	1		09/28/21 17:23	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/28/21 17:23	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/28/21 17:23	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/28/21 17:23	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/28/21 17:23	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/28/21 17:23	74-83-9	
2-Butanone (MEK)	**11.3**	ng	8.0	1		09/28/21 17:23	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/28/21 17:23	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/28/21 17:23	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/28/21 17:23	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/28/21 17:23	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/28/21 17:23	110-75-8	
Chloroform	**7.3**	ng	5.0	1		09/28/21 17:23	67-66-3	
Chloromethane	**5.2**	ng	5.0	1		09/28/21 17:23	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/28/21 17:23	75-72-9	
n-Decane	**504**	ng	25.0	1		09/28/21 17:23	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/28/21 17:23	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 17:23	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 17:23	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 17:23	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/28/21 17:23	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/28/21 17:23	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 17:23	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 17:23	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 17:23	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/28/21 17:23	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 17:23	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 17:23	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/28/21 17:23	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/28/21 17:23		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/28/21 17:23	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/28/21 17:23	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/28/21 17:23	591-78-6	
Methylene Chloride	**19.9**	ng	10.0	1		09/28/21 17:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/28/21 17:23	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/28/21 17:23	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/28/21 17:23	79-34-5	IC
Tetrachloroethene	**<5.0**	ng	5.0	1		09/28/21 17:23	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/28/21 17:23	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 17:23	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 17:23	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/28/21 17:23	79-01-6	
Trichlorofluoromethane	**9.4**	ng	5.0	1		09/28/21 17:23	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/28/21 17:23	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/28/21 17:23	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M28.F+B **Lab ID: 70187837022** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Surrogates								
1,2-Dichloroethane-d4 (S)	134	%	70-190	1		09/28/21 17:23	17060-07-0	
4-Bromofluorobenzene (S)	86	%	69-145	1		09/28/21 17:23	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/28/21 17:23	2037-26-5	
Tentatively Identified Compounds								
Benzeneacetonitrile, .a	**0.0J**	ng		1		09/28/21 17:23	532-28-5	N
Undecane	**0.0J**	ng		1		09/28/21 17:23		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M34.F+B **Lab ID: 70187837023** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/28/21 15:14		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**18.1**	ng	8.0	1		09/27/21 21:28	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/27/21 21:28	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/27/21 21:28	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/27/21 21:28	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/27/21 21:28	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/27/21 21:28	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/27/21 21:28	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/27/21 21:28	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/27/21 21:28	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/27/21 21:28	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/27/21 21:28	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/27/21 21:28	110-75-8	
Chloroform	**7.7**	ng	5.0	1		09/27/21 21:28	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/27/21 21:28	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/27/21 21:28	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/27/21 21:28	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/27/21 21:28	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 21:28	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 21:28	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/27/21 21:28	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 21:28	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/27/21 21:28	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 21:28	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 21:28	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/27/21 21:28	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/27/21 21:28	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 21:28	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/27/21 21:28	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/27/21 21:28	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/27/21 21:28		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 21:28	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/27/21 21:28	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/27/21 21:28	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/27/21 21:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/27/21 21:28	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/27/21 21:28	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/27/21 21:28	79-34-5	IC
Tetrachloroethene	**11.9**	ng	5.0	1		09/27/21 21:28	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/27/21 21:28	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 21:28	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M34.F+B **Lab ID: 70187837023** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/27/21 21:28	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/27/21 21:28	79-01-6	
Trichlorofluoromethane	**12.3**	ng	5.0	1		09/27/21 21:28	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/27/21 21:28	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/27/21 21:28	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%	70-190	1		09/27/21 21:28	17060-07-0	
4-Bromofluorobenzene (S)	85	%	69-145	1		09/27/21 21:28	460-00-4	
Toluene-d8 (S)	101	%	81-125	1		09/27/21 21:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M39.F **Lab ID: 70187837024** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/26/21 20:31		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**23.2**	ng	8.0	1		09/26/21 16:28	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/26/21 16:28	100-52-7	v3
Benzene	**<5.0**	ng	5.0	1		09/26/21 16:28	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 16:28	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 16:28	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 16:28	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/26/21 16:28	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 16:28	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/26/21 16:28	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 16:28	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 16:28	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 16:28	110-75-8	
Chloroform	**11.0**	ng	5.0	1		09/26/21 16:28	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/26/21 16:28	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 16:28	75-72-9	v3
n-Decane	**<25.0**	ng	25.0	1		09/26/21 16:28	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 16:28	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 16:28	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 16:28	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 16:28	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 16:28	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 16:28	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 16:28	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 16:28	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 16:28	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 16:28	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 16:28	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 16:28	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/26/21 16:28	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/26/21 16:28		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 16:28	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 16:28	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 16:28	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/26/21 16:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/26/21 16:28	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 16:28	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 16:28	79-34-5	IC
Tetrachloroethene	**321**	ng	5.0	1		09/26/21 16:28	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/26/21 16:28	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 16:28	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M39.F **Lab ID: 70187837024** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 16:28	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 16:28	79-01-6	
Trichlorofluoromethane	**7.3**	ng	5.0	1		09/26/21 16:28	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 16:28	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/26/21 16:28	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	115	%	70-190	1		09/26/21 16:28	17060-07-0	
4-Bromofluorobenzene (S)	83	%	69-145	1		09/26/21 16:28	460-00-4	
Toluene-d8 (S)	98	%	81-125	1		09/26/21 16:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M39.B **Lab ID: 70187837025** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/26/21 20:43		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**<8.0**	ng	8.0	1		09/26/21 16:57	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/26/21 16:57	100-52-7	v3
Benzene	**<5.0**	ng	5.0	1		09/26/21 16:57	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/26/21 16:57	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/26/21 16:57	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/26/21 16:57	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/26/21 16:57	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/26/21 16:57	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/26/21 16:57	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/26/21 16:57	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/26/21 16:57	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/26/21 16:57	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/26/21 16:57	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/26/21 16:57	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/26/21 16:57	75-72-9	v3
n-Decane	**<25.0**	ng	25.0	1		09/26/21 16:57	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/26/21 16:57	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 16:57	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 16:57	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/26/21 16:57	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 16:57	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/26/21 16:57	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 16:57	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 16:57	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/26/21 16:57	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/26/21 16:57	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 16:57	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/26/21 16:57	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/26/21 16:57	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/26/21 16:57		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 16:57	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/26/21 16:57	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/26/21 16:57	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/26/21 16:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/26/21 16:57	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/26/21 16:57	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/26/21 16:57	79-34-5	IC
Tetrachloroethene	**13.5**	ng	5.0	1		09/26/21 16:57	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/26/21 16:57	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 16:57	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:M39.B **Lab ID: 70187837025** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/26/21 16:57	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/26/21 16:57	79-01-6	
Trichlorofluoromethane	**<5.0**	ng	5.0	1		09/26/21 16:57	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/26/21 16:57	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/26/21 16:57	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	98	%	70-190	1		09/26/21 16:57	17060-07-0	
4-Bromofluorobenzene (S)	83	%	69-145	1		09/26/21 16:57	460-00-4	
Toluene-d8 (S)	98	%	81-125	1		09/26/21 16:57	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:FB1.F+B **Lab ID: 70187837026** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/26/21 14:59		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**16.2**	ng	8.0	1		09/25/21 19:36	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/25/21 19:36	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/25/21 19:36	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/25/21 19:36	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/25/21 19:36	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/25/21 19:36	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/25/21 19:36	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/25/21 19:36	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/25/21 19:36	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/25/21 19:36	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/25/21 19:36	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/25/21 19:36	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/25/21 19:36	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/25/21 19:36	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/25/21 19:36	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/25/21 19:36	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/25/21 19:36	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 19:36	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 19:36	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 19:36	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 19:36	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 19:36	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 19:36	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 19:36	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 19:36	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/25/21 19:36	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 19:36	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 19:36	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/25/21 19:36	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/25/21 19:36		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 19:36	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 19:36	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/25/21 19:36	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/25/21 19:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/25/21 19:36	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/25/21 19:36	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/25/21 19:36	79-34-5	IC
Tetrachloroethene	**<5.0**	ng	5.0	1		09/25/21 19:36	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/25/21 19:36	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 19:36	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:FB1.F+B **Lab ID: 70187837026** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 19:36	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/25/21 19:36	79-01-6	
Trichlorofluoromethane	**<5.0**	ng	5.0	1		09/25/21 19:36	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/25/21 19:36	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/25/21 19:36	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%	70-190	1		09/25/21 19:36	17060-07-0	
4-Bromofluorobenzene (S)	85	%	69-145	1		09/25/21 19:36	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/25/21 19:36	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:FB2.F+B **Lab ID: 70187837027** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/26/21 15:00		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**16.2**	ng	8.0	1		09/25/21 20:03	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/25/21 20:03	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/25/21 20:03	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/25/21 20:03	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/25/21 20:03	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/25/21 20:03	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/25/21 20:03	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/25/21 20:03	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/25/21 20:03	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/25/21 20:03	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/25/21 20:03	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/25/21 20:03	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/25/21 20:03	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/25/21 20:03	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/25/21 20:03	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/25/21 20:03	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/25/21 20:03	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 20:03	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 20:03	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 20:03	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 20:03	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 20:03	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 20:03	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 20:03	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 20:03	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/25/21 20:03	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 20:03	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 20:03	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/25/21 20:03	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/25/21 20:03		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 20:03	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 20:03	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/25/21 20:03	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/25/21 20:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/25/21 20:03	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/25/21 20:03	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/25/21 20:03	79-34-5	IC
Tetrachloroethene	**<5.0**	ng	5.0	1		09/25/21 20:03	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/25/21 20:03	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 20:03	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:FB2.F+B **Lab ID: 70187837027** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 20:03	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/25/21 20:03	79-01-6	
Trichlorofluoromethane	**<5.0**	ng	5.0	1		09/25/21 20:03	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/25/21 20:03	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/25/21 20:03	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%	70-190	1		09/25/21 20:03	17060-07-0	
4-Bromofluorobenzene (S)	85	%	69-145	1		09/25/21 20:03	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/25/21 20:03	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:FB3.F+B **Lab ID: 70187837028** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/26/21 15:00		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**39.1**	ng	8.0	1		09/25/21 20:31	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/25/21 20:31	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/25/21 20:31	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/25/21 20:31	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/25/21 20:31	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/25/21 20:31	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/25/21 20:31	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/25/21 20:31	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/25/21 20:31	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/25/21 20:31	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/25/21 20:31	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/25/21 20:31	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/25/21 20:31	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/25/21 20:31	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/25/21 20:31	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/25/21 20:31	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/25/21 20:31	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 20:31	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 20:31	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 20:31	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 20:31	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 20:31	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 20:31	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 20:31	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 20:31	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/25/21 20:31	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 20:31	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 20:31	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/25/21 20:31	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/25/21 20:31		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 20:31	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 20:31	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/25/21 20:31	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/25/21 20:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/25/21 20:31	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/25/21 20:31	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/25/21 20:31	79-34-5	IC
Tetrachloroethene	**<5.0**	ng	5.0	1		09/25/21 20:31	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/25/21 20:31	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 20:31	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:FB3.F+B **Lab ID: 70187837028** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 20:31	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/25/21 20:31	79-01-6	
Trichlorofluoromethane	**<5.0**	ng	5.0	1		09/25/21 20:31	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/25/21 20:31	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/25/21 20:31	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	109	%	70-190	1		09/25/21 20:31	17060-07-0	
4-Bromofluorobenzene (S)	87	%	69-145	1		09/25/21 20:31	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/25/21 20:31	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:TB1.F+B **Lab ID: 70187837029** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/26/21 15:00		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**9.5**	ng	8.0	1		09/25/21 21:00	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/25/21 21:00	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/25/21 21:00	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/25/21 21:00	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/25/21 21:00	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/25/21 21:00	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/25/21 21:00	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/25/21 21:00	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/25/21 21:00	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/25/21 21:00	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/25/21 21:00	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/25/21 21:00	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/25/21 21:00	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/25/21 21:00	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/25/21 21:00	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/25/21 21:00	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/25/21 21:00	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 21:00	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 21:00	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 21:00	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 21:00	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 21:00	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 21:00	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 21:00	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 21:00	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/25/21 21:00	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 21:00	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 21:00	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/25/21 21:00	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/25/21 21:00		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 21:00	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 21:00	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/25/21 21:00	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/25/21 21:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/25/21 21:00	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/25/21 21:00	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/25/21 21:00	79-34-5	IC
Tetrachloroethene	**<5.0**	ng	5.0	1		09/25/21 21:00	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/25/21 21:00	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 21:00	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:TB1.F+B **Lab ID: 70187837029** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 21:00	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/25/21 21:00	79-01-6	
Trichlorofluoromethane	**<5.0**	ng	5.0	1		09/25/21 21:00	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/25/21 21:00	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/25/21 21:00	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%	70-190	1		09/25/21 21:00	17060-07-0	
4-Bromofluorobenzene (S)	86	%	69-145	1		09/25/21 21:00	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/25/21 21:00	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:TB2.F+B **Lab ID: 70187837030** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/26/21 15:00		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**33.4**	ng	8.0	1		09/25/21 21:28	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/25/21 21:28	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/25/21 21:28	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/25/21 21:28	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/25/21 21:28	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/25/21 21:28	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/25/21 21:28	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/25/21 21:28	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/25/21 21:28	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/25/21 21:28	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/25/21 21:28	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/25/21 21:28	110-75-8	
Chloroform	**<5.0**	ng	5.0	1		09/25/21 21:28	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/25/21 21:28	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/25/21 21:28	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/25/21 21:28	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/25/21 21:28	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 21:28	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 21:28	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/25/21 21:28	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 21:28	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/25/21 21:28	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 21:28	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 21:28	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/25/21 21:28	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/25/21 21:28	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 21:28	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/25/21 21:28	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/25/21 21:28	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/25/21 21:28		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 21:28	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/25/21 21:28	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/25/21 21:28	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/25/21 21:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/25/21 21:28	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/25/21 21:28	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/25/21 21:28	79-34-5	IC
Tetrachloroethene	**<5.0**	ng	5.0	1		09/25/21 21:28	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/25/21 21:28	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 21:28	71-55-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: TOB-OBL21_ANNUAL:TB2.F+B **Lab ID: 70187837030** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/25/21 21:28	79-00-5	
Trichloroethene	**<5.0**	ng	5.0	1		09/25/21 21:28	79-01-6	
Trichlorofluoromethane	**<5.0**	ng	5.0	1		09/25/21 21:28	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/25/21 21:28	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/25/21 21:28	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%	70-190	1		09/25/21 21:28	17060-07-0	
4-Bromofluorobenzene (S)	84	%	69-145	1		09/25/21 21:28	460-00-4	
Toluene-d8 (S)	103	%	81-125	1		09/25/21 21:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: M31F+B **Lab ID: 70187837031** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/28/21 20:18		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**36.1**	ng	8.0	1		09/28/21 17:50	67-64-1	
Benzaldehyde	**28.7**	ng	25.0	1		09/28/21 17:50	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/28/21 17:50	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/28/21 17:50	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/28/21 17:50	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/28/21 17:50	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/28/21 17:50	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/28/21 17:50	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/28/21 17:50	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/28/21 17:50	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/28/21 17:50	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/28/21 17:50	110-75-8	
Chloroform	**10.1**	ng	5.0	1		09/28/21 17:50	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/28/21 17:50	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/28/21 17:50	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/28/21 17:50	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/28/21 17:50	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 17:50	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 17:50	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 17:50	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/28/21 17:50	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/28/21 17:50	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 17:50	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 17:50	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 17:50	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/28/21 17:50	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 17:50	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 17:50	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/28/21 17:50	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/28/21 17:50		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/28/21 17:50	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/28/21 17:50	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/28/21 17:50	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/28/21 17:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/28/21 17:50	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/28/21 17:50	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/28/21 17:50	79-34-5	IC
Tetrachloroethene	**5.7**	ng	5.0	1		09/28/21 17:50	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/28/21 17:50	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 17:50	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 17:50	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: M31F+B **Lab ID: 70187837031** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Trichloroethene	**<5.0**	ng	5.0	1		09/28/21 17:50	79-01-6	
Trichlorofluoromethane	**9.6**	ng	5.0	1		09/28/21 17:50	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/28/21 17:50	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/28/21 17:50	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	104	%	70-190	1		09/28/21 17:50	17060-07-0	
4-Bromofluorobenzene (S)	85	%	69-145	1		09/28/21 17:50	460-00-4	
Toluene-d8 (S)	99	%	81-125	1		09/28/21 17:50	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: M37F+B **Lab ID: 70187837032** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TIC MSV Air	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
TIC Search	**No TIC's Found**			1		09/28/21 20:18		
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Acetone	**20.6**	ng	8.0	1		09/28/21 18:17	67-64-1	
Benzaldehyde	**<25.0**	ng	25.0	1		09/28/21 18:17	100-52-7	
Benzene	**<5.0**	ng	5.0	1		09/28/21 18:17	71-43-2	
Bromodichloromethane	**<5.0**	ng	5.0	1		09/28/21 18:17	75-27-4	
Bromoform	**<8.0**	ng	8.0	1		09/28/21 18:17	75-25-2	IC
Bromomethane	**<5.0**	ng	5.0	1		09/28/21 18:17	74-83-9	
2-Butanone (MEK)	**<8.0**	ng	8.0	1		09/28/21 18:17	78-93-3	
Carbon disulfide	**<5.0**	ng	5.0	1		09/28/21 18:17	75-15-0	
Carbon tetrachloride	**<5.0**	ng	5.0	1		09/28/21 18:17	56-23-5	
Chlorobenzene	**<5.0**	ng	5.0	1		09/28/21 18:17	108-90-7	
Chloroethane	**<5.0**	ng	5.0	1		09/28/21 18:17	75-00-3	
2-Chloroethylvinyl ether	**<25.0**	ng	25.0	1		09/28/21 18:17	110-75-8	
Chloroform	**83.9**	ng	5.0	1		09/28/21 18:17	67-66-3	
Chloromethane	**<5.0**	ng	5.0	1		09/28/21 18:17	74-87-3	
Chlorotrifluoromethane	**<25.0**	ng	25.0	1		09/28/21 18:17	75-72-9	
n-Decane	**<25.0**	ng	25.0	1		09/28/21 18:17	124-18-5	
Dibromochloromethane	**<5.0**	ng	5.0	1		09/28/21 18:17	124-48-1	
1,2-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 18:17	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 18:17	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ng	5.0	1		09/28/21 18:17	106-46-7	
1,1-Dichloroethane	**<5.0**	ng	5.0	1		09/28/21 18:17	75-34-3	
1,2-Dichloroethane	**<5.0**	ng	5.0	1		09/28/21 18:17	107-06-2	
1,1-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 18:17	75-35-4	
cis-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 18:17	156-59-2	
trans-1,2-Dichloroethene	**<5.0**	ng	5.0	1		09/28/21 18:17	156-60-5	
1,2-Dichloropropane	**<5.0**	ng	5.0	1		09/28/21 18:17	78-87-5	
cis-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 18:17	10061-01-5	
trans-1,3-Dichloropropene	**<5.0**	ng	5.0	1		09/28/21 18:17	10061-02-6	
Ethylbenzene	**<5.0**	ng	5.0	1		09/28/21 18:17	100-41-4	
Ethyltoluene (Total)	**<5.0**	ng	5.0	1		09/28/21 18:17		
2-Ethyltoluene	**<5.0**	ng	5.0	1		09/28/21 18:17	611-14-3	
4-Ethyltoluene	**<5.0**	ng	5.0	1		09/28/21 18:17	622-96-8	
2-Hexanone	**<8.0**	ng	8.0	1		09/28/21 18:17	591-78-6	
Methylene Chloride	**<10.0**	ng	10.0	1		09/28/21 18:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.0**	ng	8.0	1		09/28/21 18:17	108-10-1	
Styrene	**<5.0**	ng	5.0	1		09/28/21 18:17	100-42-5	
1,1,2,2-Tetrachloroethane	**<5.0**	ng	5.0	1		09/28/21 18:17	79-34-5	IC
Tetrachloroethene	**18.4**	ng	5.0	1		09/28/21 18:17	127-18-4	
Toluene	**<5.0**	ng	5.0	1		09/28/21 18:17	108-88-3	
1,1,1-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 18:17	71-55-6	
1,1,2-Trichloroethane	**<5.0**	ng	5.0	1		09/28/21 18:17	79-00-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Sample: M37F+B **Lab ID: 70187837032** Collected: 09/14/21 10:00 Received: 09/15/21 12:08 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Air Volatile Organics	Analytical Method: EPA 5041/0031 Pace Analytical Services - Melville							
Trichloroethene	**<5.0**	ng	5.0	1		09/28/21 18:17	79-01-6	
Trichlorofluoromethane	**11.8**	ng	5.0	1		09/28/21 18:17	75-69-4	
Vinyl chloride	**<5.0**	ng	5.0	1		09/28/21 18:17	75-01-4	
Xylene (Total)	**<5.0**	ng	5.0	1		09/28/21 18:17	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	106	%	70-190	1		09/28/21 18:17	17060-07-0	
4-Bromofluorobenzene (S)	85	%	69-145	1		09/28/21 18:17	460-00-4	
Toluene-d8 (S)	100	%	81-125	1		09/28/21 18:17	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

QC Batch: 227010
QC Batch Method: EPA 5041/0031
Analysis Method: EPA 5041/0031
Analysis Description: 5041 MSV
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70187837026, 70187837027, 70187837028, 70187837029, 70187837030

METHOD BLANK: 1145105 Matrix: Water
Associated Lab Samples: 70187837026, 70187837027, 70187837028, 70187837029, 70187837030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ng	<5.0	5.0	09/25/21 19:05	
1,1,2,2-Tetrachloroethane	ng	<5.0	5.0	09/25/21 19:05	IC
1,1,2-Trichloroethane	ng	<5.0	5.0	09/25/21 19:05	
1,1-Dichloroethane	ng	<5.0	5.0	09/25/21 19:05	
1,1-Dichloroethene	ng	<5.0	5.0	09/25/21 19:05	
1,2-Dichlorobenzene	ng	<5.0	5.0	09/25/21 19:05	
1,2-Dichloroethane	ng	<5.0	5.0	09/25/21 19:05	
1,2-Dichloropropane	ng	<5.0	5.0	09/25/21 19:05	
1,3-Dichlorobenzene	ng	<5.0	5.0	09/25/21 19:05	
1,4-Dichlorobenzene	ng	<5.0	5.0	09/25/21 19:05	
2-Butanone (MEK)	ng	<8.0	8.0	09/25/21 19:05	
2-Chloroethylvinyl ether	ng	<25.0	25.0	09/25/21 19:05	
2-Ethyltoluene	ng	<5.0	5.0	09/25/21 19:05	
2-Hexanone	ng	<8.0	8.0	09/25/21 19:05	
4-Ethyltoluene	ng	<5.0	5.0	09/25/21 19:05	
4-Methyl-2-pentanone (MIBK)	ng	<8.0	8.0	09/25/21 19:05	
Acetone	ng	<8.0	8.0	09/25/21 19:05	
Benzaldehyde	ng	<25.0	25.0	09/25/21 19:05	
Benzene	ng	<5.0	5.0	09/25/21 19:05	
Bromodichloromethane	ng	<5.0	5.0	09/25/21 19:05	
Bromoform	ng	<8.0	8.0	09/25/21 19:05	IC
Bromomethane	ng	<5.0	5.0	09/25/21 19:05	
Carbon disulfide	ng	<5.0	5.0	09/25/21 19:05	
Carbon tetrachloride	ng	<5.0	5.0	09/25/21 19:05	
Chlorobenzene	ng	<5.0	5.0	09/25/21 19:05	
Chloroethane	ng	<5.0	5.0	09/25/21 19:05	
Chloroform	ng	<5.0	5.0	09/25/21 19:05	
Chloromethane	ng	<5.0	5.0	09/25/21 19:05	
Chlorotrifluoromethane	ng	<25.0	25.0	09/25/21 19:05	
cis-1,2-Dichloroethene	ng	<5.0	5.0	09/25/21 19:05	
cis-1,3-Dichloropropene	ng	<5.0	5.0	09/25/21 19:05	
Dibromochloromethane	ng	<5.0	5.0	09/25/21 19:05	
Ethylbenzene	ng	<5.0	5.0	09/25/21 19:05	
Ethyltoluene (Total)	ng	<5.0	5.0	09/25/21 19:05	
Methylene Chloride	ng	<10.0	10.0	09/25/21 19:05	
n-Decane	ng	<25.0	25.0	09/25/21 19:05	
Styrene	ng	<5.0	5.0	09/25/21 19:05	
Tetrachloroethene	ng	<5.0	5.0	09/25/21 19:05	
Toluene	ng	<5.0	5.0	09/25/21 19:05	
trans-1,2-Dichloroethene	ng	<5.0	5.0	09/25/21 19:05	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

METHOD BLANK: 1145105 Matrix: Water
Associated Lab Samples: 70187837026, 70187837027, 70187837028, 70187837029, 70187837030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ng	<5.0	5.0	09/25/21 19:05	
Trichloroethene	ng	<5.0	5.0	09/25/21 19:05	
Trichlorofluoromethane	ng	<5.0	5.0	09/25/21 19:05	
Vinyl chloride	ng	<5.0	5.0	09/25/21 19:05	
Xylene (Total)	ng	<5.0	5.0	09/25/21 19:05	
1,2-Dichloroethane-d4 (S)	%	100	70-190	09/25/21 19:05	
4-Bromofluorobenzene (S)	%	86	69-145	09/25/21 19:05	
Toluene-d8 (S)	%	99	81-125	09/25/21 19:05	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

QC Batch: 227024
QC Batch Method: EPA 5041/0031
Analysis Method: EPA 5041/0031
Analysis Description: 5041 MSV
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70187837002, 70187837003, 70187837005, 70187837006, 70187837007, 70187837008, 70187837016, 70187837017, 70187837024, 70187837025

METHOD BLANK: 1145160
Matrix: Water
Associated Lab Samples: 70187837002, 70187837003, 70187837005, 70187837006, 70187837007, 70187837008, 70187837016, 70187837017, 70187837024, 70187837025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ng	<5.0	5.0	09/26/21 15:59	
1,1,2,2-Tetrachloroethane	ng	<5.0	5.0	09/26/21 15:59	IC
1,1,2-Trichloroethane	ng	<5.0	5.0	09/26/21 15:59	
1,1-Dichloroethane	ng	<5.0	5.0	09/26/21 15:59	
1,1-Dichloroethene	ng	<5.0	5.0	09/26/21 15:59	
1,2-Dichlorobenzene	ng	<5.0	5.0	09/26/21 15:59	
1,2-Dichloroethane	ng	<5.0	5.0	09/26/21 15:59	
1,2-Dichloropropane	ng	<5.0	5.0	09/26/21 15:59	
1,3-Dichlorobenzene	ng	<5.0	5.0	09/26/21 15:59	
1,4-Dichlorobenzene	ng	<5.0	5.0	09/26/21 15:59	
2-Butanone (MEK)	ng	<8.0	8.0	09/26/21 15:59	
2-Chloroethylvinyl ether	ng	<25.0	25.0	09/26/21 15:59	
2-Ethyltoluene	ng	<5.0	5.0	09/26/21 15:59	
2-Hexanone	ng	<8.0	8.0	09/26/21 15:59	
4-Ethyltoluene	ng	<5.0	5.0	09/26/21 15:59	
4-Methyl-2-pentanone (MIBK)	ng	<8.0	8.0	09/26/21 15:59	
Acetone	ng	<8.0	8.0	09/26/21 15:59	
Benzaldehyde	ng	<25.0	25.0	09/26/21 15:59	v3
Benzene	ng	<5.0	5.0	09/26/21 15:59	
Bromodichloromethane	ng	<5.0	5.0	09/26/21 15:59	
Bromoform	ng	<8.0	8.0	09/26/21 15:59	IC
Bromomethane	ng	<5.0	5.0	09/26/21 15:59	
Carbon disulfide	ng	<5.0	5.0	09/26/21 15:59	
Carbon tetrachloride	ng	<5.0	5.0	09/26/21 15:59	
Chlorobenzene	ng	<5.0	5.0	09/26/21 15:59	
Chloroethane	ng	<5.0	5.0	09/26/21 15:59	
Chloroform	ng	<5.0	5.0	09/26/21 15:59	
Chloromethane	ng	<5.0	5.0	09/26/21 15:59	
Chlorotrifluoromethane	ng	<25.0	25.0	09/26/21 15:59	v3
cis-1,2-Dichloroethene	ng	<5.0	5.0	09/26/21 15:59	
cis-1,3-Dichloropropene	ng	<5.0	5.0	09/26/21 15:59	
Dibromochloromethane	ng	<5.0	5.0	09/26/21 15:59	
Ethylbenzene	ng	<5.0	5.0	09/26/21 15:59	
Ethyltoluene (Total)	ng	<5.0	5.0	09/26/21 15:59	
Methylene Chloride	ng	<10.0	10.0	09/26/21 15:59	
n-Decane	ng	<25.0	25.0	09/26/21 15:59	
Styrene	ng	<5.0	5.0	09/26/21 15:59	
Tetrachloroethene	ng	<5.0	5.0	09/26/21 15:59	
Toluene	ng	<5.0	5.0	09/26/21 15:59	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

METHOD BLANK: 1145160 Matrix: Water

Associated Lab Samples: 70187837002, 70187837003, 70187837005, 70187837006, 70187837007, 70187837008, 70187837016, 70187837017, 70187837024, 70187837025

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ng	<5.0	5.0	09/26/21 15:59	
trans-1,3-Dichloropropene	ng	<5.0	5.0	09/26/21 15:59	
Trichloroethene	ng	<5.0	5.0	09/26/21 15:59	
Trichlorofluoromethane	ng	<5.0	5.0	09/26/21 15:59	
Vinyl chloride	ng	<5.0	5.0	09/26/21 15:59	
Xylene (Total)	ng	<5.0	5.0	09/26/21 15:59	
1,2-Dichloroethane-d4 (S)	%	101	70-190	09/26/21 15:59	
4-Bromofluorobenzene (S)	%	85	69-145	09/26/21 15:59	
Toluene-d8 (S)	%	98	81-125	09/26/21 15:59	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

QC Batch: 227134
QC Batch Method: EPA 5041/0031
Analysis Method: EPA 5041/0031
Analysis Description: 5041 MSV
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70187837009, 70187837010, 70187837011, 70187837012, 70187837013, 70187837014, 70187837015, 70187837018, 70187837019, 70187837020, 70187837021, 70187837023

METHOD BLANK: 1145549
Matrix: Water
Associated Lab Samples: 70187837009, 70187837010, 70187837011, 70187837012, 70187837013, 70187837014, 70187837015, 70187837018, 70187837019, 70187837020, 70187837021, 70187837023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ng	<5.0	5.0	09/27/21 15:57	
1,1,2,2-Tetrachloroethane	ng	<5.0	5.0	09/27/21 15:57	IC
1,1,2-Trichloroethane	ng	<5.0	5.0	09/27/21 15:57	
1,1-Dichloroethane	ng	<5.0	5.0	09/27/21 15:57	
1,1-Dichloroethene	ng	<5.0	5.0	09/27/21 15:57	
1,2-Dichlorobenzene	ng	<5.0	5.0	09/27/21 15:57	
1,2-Dichloroethane	ng	<5.0	5.0	09/27/21 15:57	
1,2-Dichloropropane	ng	<5.0	5.0	09/27/21 15:57	
1,3-Dichlorobenzene	ng	<5.0	5.0	09/27/21 15:57	
1,4-Dichlorobenzene	ng	<5.0	5.0	09/27/21 15:57	
2-Butanone (MEK)	ng	<8.0	8.0	09/27/21 15:57	
2-Chloroethylvinyl ether	ng	<25.0	25.0	09/27/21 15:57	
2-Ethyltoluene	ng	<5.0	5.0	09/27/21 15:57	
2-Hexanone	ng	<8.0	8.0	09/27/21 15:57	
4-Ethyltoluene	ng	<5.0	5.0	09/27/21 15:57	
4-Methyl-2-pentanone (MIBK)	ng	<8.0	8.0	09/27/21 15:57	
Acetone	ng	<8.0	8.0	09/27/21 15:57	
Benzaldehyde	ng	<25.0	25.0	09/27/21 15:57	
Benzene	ng	<5.0	5.0	09/27/21 15:57	
Bromodichloromethane	ng	<5.0	5.0	09/27/21 15:57	
Bromoform	ng	<8.0	8.0	09/27/21 15:57	IC
Bromomethane	ng	<5.0	5.0	09/27/21 15:57	
Carbon disulfide	ng	<5.0	5.0	09/27/21 15:57	
Carbon tetrachloride	ng	<5.0	5.0	09/27/21 15:57	
Chlorobenzene	ng	<5.0	5.0	09/27/21 15:57	
Chloroethane	ng	<5.0	5.0	09/27/21 15:57	
Chloroform	ng	<5.0	5.0	09/27/21 15:57	
Chloromethane	ng	<5.0	5.0	09/27/21 15:57	
Chlorotrifluoromethane	ng	<25.0	25.0	09/27/21 15:57	
cis-1,2-Dichloroethene	ng	<5.0	5.0	09/27/21 15:57	
cis-1,3-Dichloropropene	ng	<5.0	5.0	09/27/21 15:57	
Dibromochloromethane	ng	<5.0	5.0	09/27/21 15:57	
Ethylbenzene	ng	<5.0	5.0	09/27/21 15:57	
Ethyltoluene (Total)	ng	<5.0	5.0	09/27/21 15:57	
Methylene Chloride	ng	<10.0	10.0	09/27/21 15:57	
n-Decane	ng	<25.0	25.0	09/27/21 15:57	
Styrene	ng	<5.0	5.0	09/27/21 15:57	
Tetrachloroethene	ng	<5.0	5.0	09/27/21 15:57	
Toluene	ng	<5.0	5.0	09/27/21 15:57	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

METHOD BLANK: 1145549 Matrix: Water

Associated Lab Samples: 70187837009, 70187837010, 70187837011, 70187837012, 70187837013, 70187837014, 70187837015, 70187837018, 70187837019, 70187837020, 70187837021, 70187837023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,2-Dichloroethene	ng	<5.0	5.0	09/27/21 15:57	
trans-1,3-Dichloropropene	ng	<5.0	5.0	09/27/21 15:57	
Trichloroethene	ng	<5.0	5.0	09/27/21 15:57	
Trichlorofluoromethane	ng	<5.0	5.0	09/27/21 15:57	
Vinyl chloride	ng	<5.0	5.0	09/27/21 15:57	
Xylene (Total)	ng	<5.0	5.0	09/27/21 15:57	
1,2-Dichloroethane-d4 (S)	%	103	70-190	09/27/21 15:57	
4-Bromofluorobenzene (S)	%	86	69-145	09/27/21 15:57	
Toluene-d8 (S)	%	94	81-125	09/27/21 15:57	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

QC Batch: 227320 | Analysis Method: EPA 5041/0031
QC Batch Method: EPA 5041/0031 | Analysis Description: 5041 MSV
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70187837001, 70187837004, 70187837022, 70187837031, 70187837032

METHOD BLANK: 1146402 Matrix: Water
Associated Lab Samples: 70187837001, 70187837004, 70187837022, 70187837031, 70187837032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ng	<5.0	5.0	09/28/21 16:50	
1,1,2,2-Tetrachloroethane	ng	<5.0	5.0	09/28/21 16:50	IC
1,1,2-Trichloroethane	ng	<5.0	5.0	09/28/21 16:50	
1,1-Dichloroethane	ng	<5.0	5.0	09/28/21 16:50	
1,1-Dichloroethene	ng	<5.0	5.0	09/28/21 16:50	
1,2-Dichlorobenzene	ng	<5.0	5.0	09/28/21 16:50	
1,2-Dichloroethane	ng	<5.0	5.0	09/28/21 16:50	
1,2-Dichloropropane	ng	<5.0	5.0	09/28/21 16:50	
1,3-Dichlorobenzene	ng	<5.0	5.0	09/28/21 16:50	
1,4-Dichlorobenzene	ng	<5.0	5.0	09/28/21 16:50	
2-Butanone (MEK)	ng	<8.0	8.0	09/28/21 16:50	
2-Chloroethylvinyl ether	ng	<25.0	25.0	09/28/21 16:50	
2-Ethyltoluene	ng	<5.0	5.0	09/28/21 16:50	
2-Hexanone	ng	<8.0	8.0	09/28/21 16:50	
4-Ethyltoluene	ng	<5.0	5.0	09/28/21 16:50	
4-Methyl-2-pentanone (MIBK)	ng	<8.0	8.0	09/28/21 16:50	
Acetone	ng	<8.0	8.0	09/28/21 16:50	
Benzaldehyde	ng	<25.0	25.0	09/28/21 16:50	
Benzene	ng	<5.0	5.0	09/28/21 16:50	
Bromodichloromethane	ng	<5.0	5.0	09/28/21 16:50	
Bromoform	ng	<8.0	8.0	09/28/21 16:50	IC
Bromomethane	ng	<5.0	5.0	09/28/21 16:50	
Carbon disulfide	ng	<5.0	5.0	09/28/21 16:50	
Carbon tetrachloride	ng	<5.0	5.0	09/28/21 16:50	
Chlorobenzene	ng	<5.0	5.0	09/28/21 16:50	
Chloroethane	ng	<5.0	5.0	09/28/21 16:50	
Chloroform	ng	<5.0	5.0	09/28/21 16:50	
Chloromethane	ng	<5.0	5.0	09/28/21 16:50	
Chlorotrifluoromethane	ng	<25.0	25.0	09/28/21 16:50	
cis-1,2-Dichloroethene	ng	<5.0	5.0	09/28/21 16:50	
cis-1,3-Dichloropropene	ng	<5.0	5.0	09/28/21 16:50	
Dibromochloromethane	ng	<5.0	5.0	09/28/21 16:50	
Ethylbenzene	ng	<5.0	5.0	09/28/21 16:50	
Ethyltoluene (Total)	ng	<5.0	5.0	09/28/21 16:50	
Methylene Chloride	ng	<10.0	10.0	09/28/21 16:50	
n-Decane	ng	<25.0	25.0	09/28/21 16:50	
Styrene	ng	<5.0	5.0	09/28/21 16:50	
Tetrachloroethene	ng	<5.0	5.0	09/28/21 16:50	
Toluene	ng	<5.0	5.0	09/28/21 16:50	
trans-1,2-Dichloroethene	ng	<5.0	5.0	09/28/21 16:50	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

METHOD BLANK: 1146402 Matrix: Water
Associated Lab Samples: 70187837001, 70187837004, 70187837022, 70187837031, 70187837032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ng	<5.0	5.0	09/28/21 16:50	
Trichloroethene	ng	<5.0	5.0	09/28/21 16:50	
Trichlorofluoromethane	ng	<5.0	5.0	09/28/21 16:50	
Vinyl chloride	ng	<5.0	5.0	09/28/21 16:50	
Xylene (Total)	ng	<5.0	5.0	09/28/21 16:50	
1,2-Dichloroethane-d4 (S)	%	103	70-190	09/28/21 16:50	
4-Bromofluorobenzene (S)	%	84	69-145	09/28/21 16:50	
Toluene-d8 (S)	%	100	81-125	09/28/21 16:50	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

IC	The initial calibration for this compound was outside of method control limits. The result is estimated.
N	The reported TIC has an 85% or higher match on a mass spectral library search.
v3	The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have a low bias.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70187837003	TOB-OBL21_ANNUAL:U2.B	EPA 5041/0031			
70187837009	TOB-OBL21_ANNUAL:F1.F+B	EPA 5041/0031			
70187837010	TOB-OBL21_ANNUAL:M2.F+B	EPA 5041/0031			
70187837011	TOB-OBL21_ANNUAL:M4.F+B	EPA 5041/0031			
70187837013	TOB-OBL21_ANNUAL:M6.F+B	EPA 5041/0031			
70187837023	TOB-OBL21_ANNUAL:M34.F+B	EPA 5041/0031			
70187837024	TOB-OBL21_ANNUAL:M39.F	EPA 5041/0031			
70187837025	TOB-OBL21_ANNUAL:M39.B	EPA 5041/0031			
70187837026	TOB-OBL21_ANNUAL:FB1.F+B	EPA 5041/0031			
70187837027	TOB-OBL21_ANNUAL:FB2.F+B	EPA 5041/0031			
70187837028	TOB-OBL21_ANNUAL:FB3.F+B	EPA 5041/0031			
70187837029	TOB-OBL21_ANNUAL:TB1.F+B	EPA 5041/0031			
70187837030	TOB-OBL21_ANNUAL:TB2.F+B	EPA 5041/0031			
70187837031	M31F+B	EPA 5041/0031			
70187837032	M37F+B	EPA 5041/0031			
70187837001	TOB-OBL21_ANNUAL:U1F+B	EPA 5041/0031	227320		
70187837002	TOB-OBL21_ANNUAL:U2.F	EPA 5041/0031	227024		
70187837003	TOB-OBL21_ANNUAL:U2.B	EPA 5041/0031	227024		
70187837004	TOB-OBL21_ANNUAL:D1F+B	EPA 5041/0031	227320		
70187837005	TOB-OBL21_ANNUAL:D2.F	EPA 5041/0031	227024		
70187837006	TOB-OBL21_ANNUAL:D2.B	EPA 5041/0031	227024		
70187837007	TOB-OBL21_ANNUAL:D3.F	EPA 5041/0031	227024		
70187837008	TOB-OBL21_ANNUAL:D3.B	EPA 5041/0031	227024		
70187837009	TOB-OBL21_ANNUAL:F1.F+B	EPA 5041/0031	227134		
70187837010	TOB-OBL21_ANNUAL:M2.F+B	EPA 5041/0031	227134		
70187837011	TOB-OBL21_ANNUAL:M4.F+B	EPA 5041/0031	227134		
70187837012	TOB-OBL21_ANNUAL:M5.F+B	EPA 5041/0031	227134		
70187837013	TOB-OBL21_ANNUAL:M6.F+B	EPA 5041/0031	227134		
70187837014	TOB-OBL21_ANNUAL:M9(10).F+B	EPA 5041/0031	227134		
70187837015	TOB-OBL21_ANNUAL:M9(20).F+B	EPA 5041/0031	227134		
70187837016	TOB-OBL21_ANNUAL:M9(30).F	EPA 5041/0031	227024		
70187837017	TOB-OBL21_ANNUAL:M9(30).B	EPA 5041/0031	227024		
70187837018	TOB-OBL21_ANNUAL:M9(40).F+B	EPA 5041/0031	227134		
70187837019	TOB-OBL21_ANNUAL:M13.F+B	EPA 5041/0031	227134		
70187837020	TOB-OBL21_ANNUAL:M16.F+B	EPA 5041/0031	227134		
70187837021	TOB-OBL21_ANNUAL:M22.F+B	EPA 5041/0031	227134		
70187837022	TOB-OBL21_ANNUAL:M28.F+B	EPA 5041/0031	227320		
70187837023	TOB-OBL21_ANNUAL:M34.F+B	EPA 5041/0031	227134		
70187837024	TOB-OBL21_ANNUAL:M39.F	EPA 5041/0031	227024		
70187837025	TOB-OBL21_ANNUAL:M39.B	EPA 5041/0031	227024		
70187837026	TOB-OBL21_ANNUAL:FB1.F+B	EPA 5041/0031	227010		

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: VOST SPETEMBER 2021
Pace Project No.: 70187837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70187837027	**TOB-OBL21_ANNUAL:FB2.F+B**	EPA 5041/0031	227010		
70187837028	**TOB-OBL21_ANNUAL:FB3.F+B**	EPA 5041/0031	227010		
70187837029	**TOB-OBL21_ANNUAL:TB1.F+B**	EPA 5041/0031	227010		
70187837030	**TOB-OBL21_ANNUAL:TB2.F+B**	EPA 5041/0031	227010		
70187837031	**M31F+B**	EPA 5041/0031	227320		
70187837032	**M37F+B**	EPA 5041/0031	227320		

CHAIN OF CUS

WO# : 70187837

70187837

RTP ENVIRONMENTAL ASSOCIATES, INC.®
AIR • WATER • SOLID WASTE CONSULTANTS
400 Post Avenue
Westbury, New York 11590
(www.rtpenv.com)
(516) 333-4526
fax (516) 333-4571

Project Name:	TOBOBL21_Annual
Project ID:	TOBOBL21_Annual
Project Location:	TOB Landfill
Laboratory:	Pace Analytical
Samplers: (Signature)	Gary Brunsich

Test ID	Sample ID	Matrix (A, L, S)	Date	Time	Sample Method	Sample Duration	Number of Containers	Analysis Requested			
TOBOBL21_Annual	TOB-OBL21_Annual: U1.f	A	9/14/21	10:00	VOST	24 hours	1	See	Letter		
	U1.b						1				
	U2.f						1				
	U2.b						1				
	D1.f						1				
	D1.b						1				
	D2.f						1				
	D2.b						1				
	D3.f						1				
	D3.b						1				
	F1.f					10 mins	1				
	F1.b						1				
	M2.f						1				
	M2.b						1				
	M4.f						1				
	M4.b						1				

Relinquished by: (Signature) Gary Brunsich	Date/Time: 9/15/21 12:03	Received By: (Signature)	Date/Time: 9/15/21 12:03
Relinquished by: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:

Remarks:

Delivery Method: Drop-off

Custody Seals Intact: Yes No

P:\Projects\Town of Oyster Bay\OBL Monitoring\2021\FDS and supplies\COC.xls

CHAIN OF CUSTODY RECORD

RTP ENVIRONMENTAL ASSOCIATES, INC.®
AIR • WATER • SOLID WASTE CONSULTANTS
400 Post Avenue
Westbury, New York 11590
(www.rtpenv.com)
(516) 333-4526
fax (516) 333-4571

Project Name:	TOBOBL21_Annual
Project ID:	TOBOBL21_Annual
Project Location:	TOB Landfill
Laboratory:	Pace Analytical
Samplers: (Signature)	Gary Gunserich

Test ID	Sample ID	Matrix (A, L, S)	Date	Time	Sample Method	Sample Duration	Number of Containers	Analysis Requested			
TOBOBL21_Annual	TOB-OBL21_Annual: MS.f	A	9/14/21	10:30	VOST	10 mins	1	See	Letter		
	MS.b						1				
	M6.f						1				
	M6.b						1				
	M9(10).f						1				
	M9(10).b						1				
	M9(20).f						1				
	M9(20).b						1				
	M9(30).f						1				
	M9(30).b						1				
	M9(40).f						1				
	M9(40).b						1				
	M13.f						1				
	M13.b						1				
	M16.f						1				
	M16.b						1				

Relinquished by: (Signature) Gary Gunserich	Date/Time: 9/15/21 12:03	Received By: (Signature)	Date/Time: 9/16/21 12:08
Relinquished by: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:

Remarks:

Delivery Method: Drop-off

Custody Seals Intact: Yes No

CHAIN OF CUSTODY RECORD

RTP ENVIRONMENTAL ASSOCIATES, INC.®
AIR • WATER • SOLID WASTE CONSULTANTS
400 Post Avenue
Westbury, New York 11590
(www.rtpenv.com)
(516) 333-4526
fax (516) 333 4571

Project Name: TOBOBL21_Annual
Project ID: TOBOBL21_Annual
Project Location: TOB Landfill
Laboratory: Pace Analytical
Samplers: (Signature)

Test ID	Sample ID	Matrix (A, L, S)	Date	Time	Sample Method	Sample Duration	Number of Containers	Analysis Requested			
TOBOBL21_Annual	TOB-OBL21_Annual: M22.f	A	9/14/21	10:00	VOST	10 mins	1	See	Letter		
	M22.b						1				
	M28.f						1				
	M28.b						1				
	M31.f						1				
	M31.b						1				
	M34.f						1				
	M34.b						1				
	M37.f						1				
	M37.b						1				
	M39.f						1				
	M39.b						1				
	FB1.f					1 min	1				
	FB1.b						1				
	FB2.f						1				
	FB2.b						1				

Relinquished by: (Signature) Gary Brunsell	Date/Time: 9/15/21 12:03	Received By: (Signature)	Date/Time: 9/15/21 12:03
Relinquished by: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:

Remarks:

Delivery Method: Drop-off

Custody Seals Intact: Yes No

CHAIN OF CUSTODY RECORD

RTP ENVIRONMENTAL ASSOCIATES, INC.®
AIR • WATER • SOLID WASTE CONSULTANTS
400 Post Avenue
Westbury, New York 11590
(www.rtpenv.com)
(516) 333-4526
Fax (516) 333 4571

Project Name:	TOBOBL21_Annual
Project ID:	TOBOBL21_Annual
Project Location:	TOB Landfill
Laboratory:	Pace Analytical
Samplers: (Signature)	Barry Brunswick

Test ID	Sample ID	Matrix (A, L, S)	Date	Time	Sample Method	Sample Duration	Number of Containers	Analysis Requested
TOBOBL21_Annual	TOB-OBL21_Annual:FB3.f	A	9/14/21	10:00	VOST	1 min	1	See letter
	FB3.b						1	
	TB1.f						1	
	TB1.b						1	
	TB2.f						1	
	TB2.b						1	
							1	
							1	
							1	
							1	
							1	
							1	
							1	
							1	
							1	
							1	
							1	

Relinquished by: (Signature) Barry Brunswick	Date/Time: 9/15/2021 12:03	Received By: (Signature)	Date/Time: 9/15/21 12:08
Relinquished by: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:

Remarks:

Delivery Method: Drop-off

Custody Seals Intact: Yes No

Sample Condition Upon Rec

Pace Analytical®

WO#: 70187837

PM: NML Due Date: 09/29/21

CLIENT: TOY

Client Name: TOY Proje

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Thermometer Used: TH091 Correction Factor: +0.0

Cooler Temperature(°C): — Cooler Temperature Corrected(°C): —

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Temperature Blank Present: ☐ Yes ☐ No

Type of Ice: Wet Blue (None)

☐ Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer

Date and Initials of person examining contents: KW 9/16/21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑ Yes	☐ No		1.
Chain of Custody Filled Out:	☑ Yes	☐ No		2.
Chain of Custody Relinquished:	☑ Yes	☐ No		3.
Sampler Name & Signature on COC:	☐ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☐ Yes	☑ No		6.
Rush Turn Around Time Requested:	☐ Yes	☑ No		7.
Sufficient Volume: (Triple volume provided for	☑ Yes	☐ No		8.
Correct Containers Used:	☑ Yes	☐ No		9.
-Pace Containers Used:	☑ Yes	☐ No		
Containers Intact:	☑ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☑ Yes	☐ No		12.
-Includes date/time/ID, Matrix: SL WT OL (AR)				
All containers needing preservation have been checked?	☐ Yes	☐ No	☐ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	☐ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☐ Yes	☐ No	☐ N/A	14.
KI starch test strips Lot #				Positive for Res. Chlorine? Y N
Residual chlorine strips Lot #				
SM 4500 CN samples checked for sulfide?	☐ Yes	☐ No	☐ N/A	15.
Lead Acetate Strips Lot #				
Headspace in VOA Vials (>6mm):	☐ Yes	☐ No	☐ N/A	16.
Trip Blank Present:	☐ Yes	☐ No	☐ N/A	17.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS

ATTACHMENT D

FIELD DATA FORMS

Front Trap ID A067155
Back Trap ID A065884

AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL21_Annual **Date:** 9/14/2021
Project Site: TOBOBSWDC **Operators:** KJS, JKB, JLB, GG
General Weather Conditions:

Sample ID: TOBOBL21_Annual **Sample Location:** U1
Pump ID: R8 **Nominal Flow Rate:** 0.25 LPM
Sampler ID: {R-8 } **Nominal Sample Volume** 360 liters

Initial Ambient VOC Conc. (ppm): 0.0
Leak Check: AOK
Sampling Start Time: 10:12
Initial Rotameter Reading (Bottom of the S.S. Ball): 58
Initial Pressure Drop Across Traps: 6
Initial Max/Min Temperature Inside Cooler: 64/60

Rotameter Reading	Total Elapse Time	Local Time
58	101	1653
54	257	1429
60	258	1430
59	344	1556
62	345	1557
58	666	2118
25	889	0101

Rotameter Reading	Total Elapse Time	Local Time
~~59~~	~~1~~	~~1~~
60	890	0102
58	1217	0630

Final Leak Check: OK
Sample Stop Time: 10:12
Final Rotameter Reading: 63
Total Elapse Time: 1440
Final Ambient VOC Conc. (ppm): 0.0
Final Pressure Drop Across Traps: 22
Final Max/Min Temperature Inside Cooler: 72°F / 43°F

Comments:

Front Trap ID A067396
Back Trap ID A062414

AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL21_Annual
Date: 9/14/2021
Project Site: TOBOBSWDC
Operators: KJS, JKB, JLB, GG
General Weather Conditions:

Sample ID: TOBOBL21_Annual
Sample Location: U2
Pump ID: R9
Nominal Flow Rate: 0.25 LPM
Sampler ID: {R-9 }
Nominal Sample Volume 360 liters

Initial Ambient VOC Conc. (ppm): ~~0.5~~ 0.0
Leak Check: AOK
Sampling Start Time: 10:13
Initial Rotameter Reading (Bottom of the S.S. Ball): 58
Initial Pressure Drop Across Traps: 10
Initial Max/Min Temperature Inside Cooler: 52/68

Rotameter Reading	Total Elapse Time	Local Time
57	100	1153
52	258	1930
60	259	1431
60	344	1557
62	345	1558
58	666	2114
45	889	0101

Rotameter Reading	Total Elapse Time	Local Time
60	840	0102
40	895	0620
58	0	0635
0	36	10:13

895
36
931

Final Leak Check: OK
Sample Stop Time: 10:13
Final Rotameter Reading: 0
Total Elapse Time: 931
Final Ambient VOC Conc. (ppm): 0.0
Final Pressure Drop Across Traps: 24
Final Max/Min Temperature Inside Cooler: 68°F / 32°F

Comments:

Front Trap ID A067845
Back Trap ID A062521

AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL21_Annual
Date: 9/14/2021
Project Site: TOBOBSWDC
Operators: KJS, JKB, JLB, GG
General Weather Conditions: Sunny

Sample ID: TOBOBL21_Annual
Sample Location: D1
Pump ID: R1
Nominal Flow Rate: 0.25 LPM
Sampler ID: {R- 1 }
Nominal Sample Volume: 360 liters

Initial Ambient VOC Conc. (ppm): 0.0ppm
Leak Check: OK
Sampling Start Time: 10:32
Initial Rotameter Reading (Bottom of the S.S. Ball): 58
Initial Pressure Drop Across Traps: 7.0 in H_2O
Initial Max/Min Temperature Inside Cooler: 62°F/60°F

Rotameter Reading	Total Elapse Time	Local Time
58 ~~63~~	00:03	10:35
58	86	11:59
55	250	14:43
60	251	14:44
59	319	15:51
65	320	15:52
61	636	21:09

Rotameter Reading	Total Elapse Time	Local Time
45	879	01 11
58	880	01 12
0	1108	609
~~58~~	1111	616
55	1204	823
0	1205	824
61	01	825

Final Leak Check: OK
Sample Stop Time: 10:15
Final Rotameter Reading: 62
Total Elapse Time: 110 + 1205 (1315)
Final Ambient VOC Conc. (ppm): 0.0ppm
Final Pressure Drop Across Traps: 26 in H_2O
Final Max/Min Temperature Inside Cooler: 80°F/58°F

Comments:
Switched out R1 w/ R6 at 824 due to pressure issues

Front Trap ID A067164
Back Trap ID A055847

AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL21_Annual
Date: 9/14/2021
Project Site: TOBOBSWDC
Operators: KJS, JKB, JLB, GG
General Weather Conditions: Sunny

Sample ID: TOBOBL21_Annual
Sample Location: D2
Pump ID: R2
Nominal Flow Rate: 0.25 LPM
Sampler ID: {R- 2 }
Nominal Sample Volume: 360 liters

Initial Ambient VOC Conc. (ppm): 0.0ppm
Leak Check: OK
Sampling Start Time: 10:32
Initial Rotameter Reading (Bottom of the S.S. Ball): 58
Initial Pressure Drop Across Traps: 6.0 in H_2O
Initial Max/Min Temperature Inside Cooler: 62°F / 62°F

Rotameter Reading	Total Elapse Time	Local Time
58	00:04	10:36
56	87	11:54
56	252	14:45
60	253	14:46
60	320	15:52
62	321	15:53
58	636	21:09

Rotameter Reading	Total Elapse Time	Local Time
57	874	0111
44	1178	610
58	1179	611
55	1300	823
0	1303	8:26
63	00:01	8:32

Final Leak Check: OK
Sample Stop Time: 10:15
Final Rotameter Reading: 60
Total Elapse Time: 1303 + 103 (1406)
Final Ambient VOC Conc. (ppm): 0.0ppm
Final Pressure Drop Across Traps: 18 in H_2O
Final Max/Min Temperature Inside Cooler: 82°F / 60°F

Comments:
Switched out R2 w/ R7 at 8:31 due to pressure issues

Front Trap ID A061970
Back Trap ID A067151

AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL21_Annual
Date: 9/14/2021
Project Site: TOBOBSWDC
Operators: KJS, JKB, JLB, GG
General Weather Conditions:

Sample ID: TOBOBL21_Annual
Sample Location: D_3
Pump ID: RS
Nominal Flow Rate: 0.25 LPM
Sampler ID: {R-5}
Nominal Sample Volume: 360 liters

Initial Ambient VOC Conc. (ppm): 0.0 ppm
Leak Check: OK
Sampling Start Time: 10:40
Initial Rotameter Reading (Bottom of the S.S. Ball): 58
Initial Pressure Drop Across Traps: 6.5 in H_2O
Initial Max/Min Temperature Inside Cooler: 60°F / no Max

Rotameter Reading	Total Elapse Time	Local Time
58	00:02	10:42
58	90	12:09
57	238	14:37
60	239	14:38
59	307	15:47
62	308	15:48
58	632	21:12

Rotameter Reading	Total Elapse Time	Local Time
56	876	0115
60	877	0116
103	1179	620
59	1318	8:37
62	1319	8:38

Final Leak Check: OK
Sample Stop Time: 10:25
Final Rotameter Reading: 60
Total Elapse Time: 1425
Final Ambient VOC Conc. (ppm): 0.0 ppm
Final Pressure Drop Across Traps: 10 in H_2O
Final Max/Min Temperature Inside Cooler: 58°F / no Max

Comments:
12:09- Payloader loading trucks

Front Trap ID: A062684
Back Trap ID: A061786

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/21
Invesitgators: KJS, JKB, JLB, GG
General Weather Conditions: Wind: E/2 Sky Condition: clear Temperature: 80

Sample ID: TOBOBL21_Annual **Sampler ID:** (R - 4)
Pump ID: R4 **Sample Location:** F1
Well ID: F1 **Well Depth:** 30" or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: AOK **PID ID:** RTP1

Initial Ambient VOC Reading: 0.0 **Initial Well VOC Reading:** 0.0

Sample Start Time: 10:44

Initial Rotameter Reading: 120
5-Minute Rotameter Reading: 122
Final Rotameter Reading: 122

Final Ambient VOC Reading: 0.0 **Final Well VOC Reading:** 0.0

Sample Stop Time: 1054 **Duration:** 10 minutes

Final Leak Check: OK.

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A06749
Back Trap ID: A062141

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/21

Invesitgators: KJS, JKB, JLB, GG

General Weather Conditions: Wind: SE/2 Sky Condition: CLR Temperature: 82

Sample ID: TOBOBL21_Annual
Pump ID: A4
Well ID: M2
Nominal Flow Rate: 1 LPM
Initial Leak Check: AOK

Sampler ID: (R - 4)
Sample Location: M2
Well Depth: 30" or 10', 20', 30', or 40'
Nominal Sample Volume: 10 Liters
PID ID: RTP 1

Initial Ambient VOC Reading: 0.0

Initial Well VOC Reading: 0.0

Sample Start Time: 1110

Initial Rotameter Reading: 118
5-Minute Rotameter Reading: 118
Final Rotameter Reading: 120

Final Ambient VOC Reading: 0.0

Final Well VOC Reading: 0.0

Sample Stop Time: 1120

Duration: 10 minutes

Final Leak Check: AOK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: AC03035
Back Trap ID: 4055313

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/21
Invesitgators: KJS, JKB, JLB, GG
General Weather Conditions: Wind: SE 3 Sky Condition: CLR Temperature: 84

Sample ID: TOBOBL21_Annual
Pump ID: R4
Well ID: M4
Nominal Flow Rate: 1 LPM
Initial Leak Check: AOK

Sampler ID: (R - 4)
Sample Location: M4
Well Depth: 30" or 10', 20', 30', or 40'
Nominal Sample Volume: 10 Liters
PID ID: RAE1

Initial Ambient VOC Reading: 0.0
Initial Well VOC Reading: 0.0

Sample Start Time: 1131

Initial Rotameter Reading: 119
5-Minute Rotameter Reading: 119
Final Rotameter Reading: 119

Final Ambient VOC Reading: 0.0
Final Well VOC Reading: 0.0

Sample Stop Time: 1141
Duration: 10 minutes

Final Leak Check: AOK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: AD 47363
Back Trap ID: AD 67858

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/21
Invesitgators: ~~KJS~~, JKB, JLB, GG
General Weather Conditions: Wind: S 4 Sky Condition: Clr Temperature: 84

Sample ID: TOBOBL21_Annual
Pump ID: R4
Well ID: MS
Nominal Flow Rate: 1 LPM
Initial Leak Check:

Sampler ID: (R - 4)
Sample Location: MS
Well Depth: ~~30~~" or 10', 20', 30', or 40'
Nominal Sample Volume: 10 Liters
PID ID: RTP 16.1

Initial Ambient VOC Reading: 0.0

Initial Well VOC Reading: 0.0

Sample Start Time: 1237

Initial Rotameter Reading: 120
5-Minute Rotameter Reading: 123
Final Rotameter Reading: 126

Final Ambient VOC Reading: 0.0

Final Well VOC Reading: 0.0

Sample Stop Time: 1247

Duration: 10 minutes

Final Leak Check: OK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: AO 64596
Back Trap ID: AO 61667

RTP Environmental Associates, Inc.

Page _____ of _____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/21
Invesitgators: KJS, JKB, JLB, GG
General Weather Conditions: Wind: SW 5 G 14 Sky Condition: CLR Temperature: 84

Sample ID: TOBOBL21_Annual **Sampler ID:** (R-4)
Pump ID: R4 **Sample Location:** M6
Well ID: M6 **Well Depth:** (30") or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: AOK **PID ID:** RAE1

Initial Ambient VOC Reading: 0.0 **Initial Well VOC Reading:** 0.0

Sample Start Time: 1220

Initial Rotameter Reading: 120
5-Minute Rotameter Reading: 121
Final Rotameter Reading: 121

Final Ambient VOC Reading: 0.0 **Final Well VOC Reading:** 0.0

Sample Stop Time: 1230 **Duration:** 10 minutes

Final Leak Check: AOK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: AO 71776
Back Trap ID: AO 65847

RTP Environmental Associates, Inc.

Page _____ of _____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/21
Invesitgators: KJS, JKB, JLB, GG
General Weather Conditions: Wind: S 7 Sky Condition: ~~SUNNY~~ CLR Temperature: 80°F

Sample ID: TOBOBL21_Annual **Sampler ID:** (R-4)
Pump ID: R4 **Sample Location:** MW 10
Well ID: _____ **Well Depth:** 30" or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: AOK **PID ID:** RAE 1

Initial Ambient VOC Reading: 0.0 **Initial Well VOC Reading:** 0.0

Sample Start Time: 1417

Initial Rotameter Reading: 120
5-Minute Rotameter Reading: 120
Final Rotameter Reading: 120

Final Ambient VOC Reading: 0.0 **Final Well VOC Reading:** 0.0

Sample Stop Time: 1427 **Duration:** 10 minutes

Final Leak Check: AOK

Comments: _____

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: AO 66934
Back Trap ID: AO 55515

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/21
Invesitgators: KJS, JKB, JLB, GG AS
General Weather Conditions: Wind: S 4 Sky Condition: CLR Temperature: 80

Sample ID: TOBOBL21_Annual
Pump ID: R4
Well ID: MW20
Nominal Flow Rate: 1 LPM
Initial Leak Check: AOK

Sampler ID: (R-4)
Sample Location: MW 20
Well Depth: 30" or 10', 20', 30', or 40'
Nominal Sample Volume: 10 Liters
PID ID: RTP-1

Initial Ambient VOC Reading: 0.0

Initial Well VOC Reading: 0.0

Sample Start Time: 14:36

Initial Rotameter Reading: 120
5-Minute Rotameter Reading: 120
Final Rotameter Reading: 120

Final Ambient VOC Reading: 0.0

Final Well VOC Reading: 0.0

Sample Stop Time: 14:46

Duration: 10 minutes

Final Leak Check: AOK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: AO 56221
Back Trap ID: AO 67606

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/21
Invesitgators: (KJS), JKB, JLB, (GG) AK
General Weather Conditions: Wind: S/4 Sky Condition: P. Cldy Temperature: 80

Sample ID: TOBOBL21_Annual
Pump ID: R-4
Well ID: MW 30
Nominal Flow Rate: 1 LPM
Initial Leak Check: AOK

Sampler ID: (R-4)
Sample Location: MW30
Well Depth: 30" or 10', 20', (30'), or 40'
Nominal Sample Volume: 10 Liters
PID ID: RTP 1

Initial Ambient VOC Reading: 0.0

Initial Well VOC Reading: 0.0

Sample Start Time: 1456

Initial Rotameter Reading: 118
5-Minute Rotameter Reading: 119
Final Rotameter Reading: 119

Final Ambient VOC Reading: 0.0

Final Well VOC Reading: 0.8

Sample Stop Time: 1506

Duration: 10 minutes

Final Leak Check: AOK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: AOT1738
Back Trap ID: AO61979

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/12/21
Invesitgators: KJS, JKB, JLB, GG AS
General Weather Conditions: Wind: S4 Sky Condition: P Cldy Temperature: 80

Sample ID: TOBOBL21_Annual **Sampler ID:** (R-4)
Pump ID: R4 **Sample Location:** M9-40
Well ID: M9-40 **Well Depth:** 30" or 10', 20', 30', or (40')
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: ____ **PID ID:** RTP#1

Initial Ambient VOC Reading: 0.0 **Initial Well VOC Reading:** 0.0

Sample Start Time: 1514

Initial Rotameter Reading: 120
5-Minute Rotameter Reading: 120
Final Rotameter Reading: 120

Final Ambient VOC Reading: 0.0 **Final Well VOC Reading:** 0.0

Sample Stop Time: 1524 **Duration:** 10 minutes

Final Leak Check: ADK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A067848
Back Trap ID: A055757

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/2021

Invesitgators: KJS, JKB, JLB, (GG)

General Weather Conditions: Wind: SE 5mph Sky Condition: Sunny Temperature: 78°F

Sample ID: TOBOBL21_Annual
Pump ID: R3
Well ID: M13
Nominal Flow Rate: 1 LPM
Initial Leak Check: OK

Sampler ID: (R - 3)
Sample Location: M13
Well Depth: (30') or 10', 20', 30', or 40'
Nominal Sample Volume: 10 Liters
PID ID: RTP2

Initial Ambient VOC Reading: 0.0 ppm

Initial Well VOC Reading: 9.3 ppm

Sample Start Time: 14:06

Initial Rotameter Reading: 130
5-Minute Rotameter Reading: 131
Final Rotameter Reading: 133

Final Ambient VOC Reading: 0.0 ppm

Final Well VOC Reading: 5.8 ppm

Sample Stop Time: 14:16

Duration: 10 minutes

Final Leak Check: OK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A071909
Back Trap ID: A062568

RTP Environmental Associates, Inc.

Page _____ of _____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/2021
Invesitgators: KJS, JKB, JLB, (GG)
General Weather Conditions: Wind: SE 1-2mph Sky Condition: Sunny Temperature: 79°F

Sample ID: TOBOBL21_Annual **Sampler ID:** (R - 3)
Pump ID: R3 **Sample Location:** M16
Well ID: M16 **Well Depth:** (30") or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: OK **PID ID:** RTP2

Initial Ambient VOC Reading: 0.0ppm
Initial Well VOC Reading: 0.0ppm

Sample Start Time: 13:44

Initial Rotameter Reading: 130
5-Minute Rotameter Reading: 132
Final Rotameter Reading: 132

Final Ambient VOC Reading: 0.0ppm
Final Well VOC Reading: 0.0ppm

Sample Stop Time: 13:54 **Duration:** 10 minutes

Final Leak Check: OK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A067316
Back Trap ID: A062429

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/2021

Invesitgators: KJS, JKB, JLB, (GG)

General Weather Conditions: Wind: ESE 5mph Sky Condition: Sunny Temperature: 78°F

Sample ID: TOBOBL21_Annual **Sampler ID:** (R - 3)

Pump ID: R3 **Sample Location:** M22

Well ID: M22 **Well Depth:** (30') or 10', 20', 30', or 40'

Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters

Initial Leak Check: OK **PID ID:** RTP2

Initial Ambient VOC Reading: 0.0ppm **Initial Well VOC Reading:** 1.3 ppm

Sample Start Time: 12:43

Initial Rotameter Reading: 129

5-Minute Rotameter Reading: 130

Final Rotameter Reading: 131

Final Ambient VOC Reading: 0.0ppm **Final Well VOC Reading:** 0.7ppm

Sample Stop Time: 12:53 **Duration:** 10 minutes

Final Leak Check: OK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A067287
Back Trap ID: A055529

RTP Environmental Associates, Inc.

Page _____ of _____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/2021
Invesitgators: KJS, JKB, JLB, (GG)
General Weather Conditions: Wind: Calm Sky Condition: Sunny Temperature: 77°F

Sample ID: TOBOBL21_Annual **Sampler ID:** (R - 3)
Pump ID: R3 **Sample Location:** M28
Well ID: M28 **Well Depth:** (30') or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: OK **PID ID:** RTP 2

Initial Ambient VOC Reading: 0.0 ppm
Initial Well VOC Reading: 0.0ppm

Sample Start Time: 12:11

Initial Rotameter Reading: 129
5-Minute Rotameter Reading: 130
Final Rotameter Reading: 132

Final Ambient VOC Reading: ~~1277~~ 0.0ppm
Final Well VOC Reading: 0.0ppm

Sample Stop Time: 12:21 **Duration:** 10 minutes

Final Leak Check: OK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A067841
Back Trap ID: A062486

RTP Environmental Associates, Inc.

Page _____ of _____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/2021
Invesitgators: KJS, JKB, JLB, (GG)
General Weather Conditions: Wind: E 1-2mph Sky Condition: Sunny Temperature: 76°F

Sample ID: TOBOBL21_Annual **Sampler ID:** (R - 3)
Pump ID: R3 **Sample Location:** M31
Well ID: M31 **Well Depth:** (30') or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: OK **PID ID:** RTP2

Initial Ambient VOC Reading: 0.0 ppm
Initial Well VOC Reading: 0.0 ppm

Sample Start Time: 11:42

Initial Rotameter Reading: 129
5-Minute Rotameter Reading: 130
Final Rotameter Reading: 132

Final Ambient VOC Reading: 0.0 ppm
Final Well VOC Reading: 0.0ppm

Sample Stop Time: 11:52 **Duration:** 10 minutes

Final Leak Check: OK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A071926
Back Trap ID: A055571

RTP Environmental Associates, Inc.

Page _____ of _____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/2021
Invesitgators: KJS, JKB, JLB, (GG)
General Weather Conditions: Wind: E 1-2mph Sky Condition: Sunny Temperature: 76°F

Sample ID: TOBOBL21_Annual **Sampler ID:** (R - 3)
Pump ID: R3 **Sample Location:** M34
Well ID: M34 **Well Depth:** (30') or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: OK **PID ID:** RTP2

Initial Ambient VOC Reading: 0.0 ppm
Initial Well VOC Reading: 0.0 ppm

Sample Start Time: 11:15

Initial Rotameter Reading: 129
5-Minute Rotameter Reading: 129
Final Rotameter Reading: 129

Final Ambient VOC Reading: 0.0 ppm
Final Well VOC Reading: 0.0 ppm

Sample Stop Time: 11:25 **Duration:** 10 minutes

Final Leak Check: OK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A067049
Back Trap ID: A062403

RTP Environmental Associates, Inc.

Page _____ of _____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 4/14/2021
Invesitgators: KJS, JKB, JLB, (GG)
General Weather Conditions: Wind: E 1-2mph Sky Condition: Sunny Temperature: 76°F

Sample ID: TOBOBL21_Annual
Pump ID: R3
Well ID: M37
Nominal Flow Rate: 1 LPM
Initial Leak Check: OK

Sampler ID: (R - 3)
Sample Location: M37
Well Depth: (30') or 10', 20', 30', or 40'
Nominal Sample Volume: 10 Liters
PID ID: RTP2

Initial Ambient VOC Reading: 0.0 ppm

Initial Well VOC Reading: 0.0 ppm

Sample Start Time: 10:52

Initial Rotameter Reading: 129
5-Minute Rotameter Reading: 130
Final Rotameter Reading: 133

Final Ambient VOC Reading: 0.0 ppm

Final Well VOC Reading: 0.0 ppm

Sample Stop Time: 11:02

Duration: 10 minutes

Final Leak Check: OK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A066948
Back Trap ID: A064597

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/2021
Invesitgators: KJS, JKB, JLB, (GG)
General Weather Conditions: Wind: E 1-2mph Sky Condition: Sunny Temperature: 75°F

Sample ID: TOBOBL21_Annual **Sampler ID:** (R - 3)
Pump ID: R3 **Sample Location:** M39
Well ID: M39 **Well Depth:** (30") or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: OK **PID ID:** RTP2

Initial Ambient VOC Reading: 0.0 ppm
Initial Well VOC Reading: 2.2 ppm

Sample Start Time: 10:13

Initial Rotameter Reading: 129
5-Minute Rotameter Reading: 133
Final Rotameter Reading: 132

Final Ambient VOC Reading: 0.0 ppm
Final Well VOC Reading: 0.2 ppm

Sample Stop Time: 10:23
Duration: 10 minutes

Final Leak Check: OK

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID A071913
Back Trap ID A055219

AMBIENT AIR SAMPLING DATA SHEET

FB1
Taken during cleanup

Project: TOBOBL21_Annual	**Date:**
Project Site: TOBOBSWDC	**Operators:** KJS, JKB, JLB, GG
General Weather Conditions:	

Sample ID: TOBOBL21_Annual	**Sample Location:**
Pump ID:	**Nominal Flow Rate:** 0.25 LPM
Sampler ID: {R- }	**Nominal Sample Volume** 360 liters

Initial Ambient VOC Conc. (ppm):
Leak Check:
Sampling Start Time:
Initial Rotameter Reading (Bottom of the S.S. Ball):
Initial Pressure Drop Across Traps:
Initial Max/Min Temperature Inside Cooler:

Rotameter Reading	Total Elapse Time	Local Time

Rotameter Reading	Total Elapse Time	Local Time

Final Leak Check:
Sample Stop Time:
Final Rotameter Reading:
Total Elapse Time:
Final Ambient VOC Conc. (ppm):
Final Pressure Drop Across Traps:
Final Max/Min Temperature Inside Cooler:

Comments:

Front Trap ID: A066987
Back Trap ID: A062694

RTP Environmental Associates, Inc.

FB2: @ M13 after soil gas testing

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** 9/14/2021

Invesitgators: KJS, JKB, JLB, GG

General Weather Conditions: Wind: Sky Condition: Temperature:

Sample ID: TOBOBL21_Annual **Sampler ID:** (R -)

Pump ID: **Sample Location:**

Well ID: **Well Depth:** 30" or 10', 20', 30', or 40'

Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters

Initial Leak Check: **PID ID:**

Initial Ambient VOC Reading: **Initial Well VOC Reading:**

Sample Start Time:

Initial Rotameter Reading:

5-Minute Rotameter Reading:

Final Rotameter Reading:

Final Ambient VOC Reading: **Final Well VOC Reading:**

Sample Stop Time: **Duration:** minutes

Final Leak Check:

Comments:

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID A066834
Back Trap ID A055618

AMBIENT AIR SAMPLING DATA SHEET

Project: TOBOBL21_Annual **Date:** 9/14/2021
Project Site: TOBOBSWDC **Operators:** KJS, JKB, JLB, GG
General Weather Conditions:

Sample ID: TOBOBL21_Annual **Sample Location:** FB3
Pump ID: **Nominal Flow Rate:** 0.25 LPM
Sampler ID: {R- } **Nominal Sample Volume** 360 liters

Initial Ambient VOC Conc. (ppm):
Leak Check:
Sampling Start Time:
Initial Rotameter Reading (Bottom of the S.S. Ball):
Initial Pressure Drop Across Traps:
Initial Max/Min Temperature Inside Cooler:

Rotameter Reading	Total Elapse Time	Local Time

Rotameter Reading	Total Elapse Time	Local Time

Final Leak Check:
Sample Stop Time:
Final Rotameter Reading:
Total Elapse Time:
Final Ambient VOC Conc. (ppm):
Final Pressure Drop Across Traps:
Final Max/Min Temperature Inside Cooler:

Comments:

Front Trap ID: A067615
Back Trap ID: A066893

TB 1

RTP Environmental Associates, Inc.

Page _____ of _____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** _____
Invesitgators: KJS, JKB, JLB, (GG)
General Weather Conditions: Wind: Sky Condition: Temperature:

Sample ID: TOBOBL21_Annual **Sampler ID:** (R -)
Pump ID: _____ **Sample Location:** _____
Well ID: _____ **Well Depth:** 30" or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: _____ **PID ID:** _____

Initial Ambient VOC Reading: _____ **Initial Well VOC Reading:** _____

Sample Start Time: _____

Initial Rotameter Reading: _____
5-Minute Rotameter Reading: _____
Final Rotameter Reading: _____

Final Ambient VOC Reading: _____ **Final Well VOC Reading:** _____

Sample Stop Time: _____ **Duration:** _____ minutes

Final Leak Check: _____

Comments: _____

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

Front Trap ID: A055513
Back Trap ID: A055243

TB2

RTP Environmental Associates, Inc.

Page ____ of ____

SOIL GAS WELL SAMPLING DATA SHEET

Project ID: TOBOBL21_Annual **Location:** TOBOBSWDC **Date:** _____
Invesitgators: KJS, JKB, JLB, GG
General Weather Conditions: Wind: Sky Condition: Temperature:

Sample ID: TOBOBL21_Annual **Sampler ID:** (R -)
Pump ID: _____ **Sample Location:** _____
Well ID: _____ **Well Depth:** 30" or 10', 20', 30', or 40'
Nominal Flow Rate: 1 LPM **Nominal Sample Volume:** 10 Liters
Initial Leak Check: _____ **PID ID:** _____

Initial Ambient VOC Reading: _____ **Initial Well VOC Reading:** _____

Sample Start Time: _____

Initial Rotameter Reading: _____
5-Minute Rotameter Reading: _____
Final Rotameter Reading: _____

Final Ambient VOC Reading: _____ **Final Well VOC Reading:** _____

Sample Stop Time: _____ **Duration:** _____ minutes

Final Leak Check: _____

Comments: _____

M-9 = BLUE = 10' GREEN = 20' RED = 30' YELLOW 40'

PRESSURE WELL READING DATA SHEET

Project ID: TOBOBL21_Annual

Project Site: TOBOBSWDC

Date: 9/15/21

General Weather Conditions: Cldy SW@4.

Equipment ID: Dwyer 10" inclined manometer

Operators: KJS, JKB, JLB, GG

Well ID	Pressure Well Location	Color Code	Time	Reading
PW1		blue	8:30	0.00
	NW corner of landfill	green	8:30	0.00
		blue	8:31	0.00
		green	8:31	0.00
Well ID	**Pressure Well Location**	**Color Code**	**Time**	**Reading**
PW2		blue	758	0.0
	SE corner of landfill	green	758	0.0
		blue	800	0.0
		green	800	0.0
Well ID	**Pressure Well Location**	**Color Code**	**Time**	**Reading**
PW3		blue	740	+0.02
	FTC	green	740	-0.02
		blue	742	+0.02
		green	742	-0.02
Well ID	**Pressure Well Location**	**Color Code**	**Time**	**Reading**

Comments: 1 Blower operating

BLUE (Short) = 10' GREEN (Long) = 20'

ATTACHMENT E

EQUIPMENT CALIBRATIONS

MesaLabs

NVLAP®
NVLAP Lab Code 200661-0
Calibration

Calibration Certificate

CertificateNo.	438621	**Sold To:**	RTP Environmental Associates
Product	DCL-MH DryCal DC-Lite Medium High		400 Post Ave, Suite 405
Serial No.	101996		Westbury, NY 11590
Cal. Date	16-Mar-2021		US

All calibrations are performed at Mesa Laboratories, Inc., 10 Park Place, Butler, NJ, 07405, an ISO 17025:2005 accredited laboratory through NVLAP of NIST. This report shall not be reproduced except in full without the written approval of the laboratory. Results only relate to the items calibrated. This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

As Received Calibration Data

Technician	Lilianna Malinowska	**Lab. Pressure**	757 mmHg
		Lab. Temperature	22.4 °C

Instrument Reading	Lab Standard Reading	Deviation	Allowable Deviation	As Received
201.3 ccm	200.2 ccm	0.55%	1.00%	In Tolerance
5014 ccm	5000.5 ccm	0.27%	1.00%	In Tolerance
17040 ccm	17014.5 ccm	0.15%	1.00%	In Tolerance

Mesa Laboratories Standards Used

Description	Standard Serial Number	Calibration Date	Calibration Due Date
ML_500_10	113784	15-Nov-2019	14-Nov-2020
ML_500_44	113762	20-May-2020	20-May-2021

MesaLabs

NVLAP®
NVLAP Lab Code 200661-0
Calibration

As Shipped Calibration Data

Certificate No	438621	**Lab. Pressure**	757 mmHg
Technician	Lilianna Malinowska	**Lab. Temperature**	22.4 °C

Instrument Reading	Lab Standard Reading	Deviation	Allowable Deviation	As Shipped
200.8 ccm	200.15 ccm	0.32%	1.00%	In Tolerance
5012 ccm	5000.5 ccm	0.23%	1.00%	In Tolerance
17091 ccm	17095.5 ccm	-0.03%	1.00%	In Tolerance

Mesa Laboratories Standards Used

Description	Standard Serial Number	Calibration Date	Calibration Due Date
ML_500_10	113784	03-Dec-2020	03-Dec-2021
ML_500_44	113762	20-May-2020	20-May-2021

Calibration Notes

All units are flow tested in accordance with our Procedure PR05-02 or PR01-10 with an expanded uncertainty of 0.27% using high-purity nitrogen or filtered laboratory air.

The expanded uncertainty of flow has a coverage factor of k = 2 for a confidence interval of approximately 95%.

Traceability to the International System of Units (SI) is verified by accreditation to ISO/IEC 17025 by NVLAP under NVLAP Code 200661-0.

Technician Notes:

Mohammed Aziz
Director of Engineering
Mesa Laboratories, Inc., Butler, NJ

INNOCAL®
INNOVATIVE CALIBRATION SOLUTIONS
625 East Bunker Court
Vernon Hills, Illinois 60061
PH: 866-466-6225
Fax: 847-327-2993
www.innocalsolutions.com

NIST Traceable
Calibration Report

REPORT NUMBER
1646841

Reference Number: **1401713**
PO Number: **GGRUNSEICH031621**

RTP Envriomental Associates
400 Post Ave
Suite 405
Westbury NY 11590

Manufacturer: Ashcroft
Model Number: 25-1490-A-02L-100IWV-TU
Description: Pressure, Gauge, -100 to -10
Asset Number: CP290601
Serial Number: CP290601
Procedure: DS Universal Pressure Gauge-5

Calibration Date: 04/05/2021
Calibration Due Date: 04/05/2022
Condition As Found: In Tolerance
Condition As Left: In Tolerance, No adjustment

Remarks:
NIST-traceable calibration performed on the unit referenced above in accordance with customer requirements, published specifications and the lab's standard operating procedures. No adjustments were made to the unit.

Standards Utilized

Asset No.	Manufacturer	Model No.	Description	Cal. Date	Due Date
CP144959	Fluke Corporation	PM600-A700K	Pressure, Measurement Mod -12.1 -100PSI	06/03/2020	06/30/2021

Calibration Data

FUNCTION TESTED	Nominal Value	As Found	Out of Tol	As Left	Out of Tol	CALIBRATION TOLERANCE
Increasing	0.00 inH2O	0.00		Same		-2.00 to 2.00 inH2O [EMU 0.097 inH2O][TUR 21:1]
|	-20.00 inH2O	-19.00		Same		-22.00 to -18.00 inH2O [EMU 0.0095 inH2O][TUR 211:1]
|	-40.00 inH2O	-39.10		Same		-41.00 to -39.00 inH2O [EMU 0.098 inH2O][TUR 10:1]
|	-60.00 inH2O	-59.10		Same		-61.00 to -59.00 inH2O [EMU 0.098 inH2O][TUR 10:1]
|	-80.00 inH2O	-79.30		Same		-82.00 to -78.00 inH2O [EMU 0.098 inH2O][TUR 20:1]
|	-100.00 inH2O	-100.50		Same		-102.00 to -98.00 inH2O [EMU 0.099 inH2O][TUR 20:1]
Decreasing	-80.00 inH2O	-79.30		Same		-82.00 to -78.00 inH2O [EMU 0.098 inH2O][TUR 20:1]
|	-60.00 inH2O	-59.10		Same		-61.00 to -59.00 inH2O [EMU 0.098 inH2O][TUR 10:1]
|	-40.00 inH2O	-39.50		Same		-41.00 to -39.00 inH2O [EMU 0.098 inH2O][TUR 10:1]
|	-20.00 inH2O	-19.80		Same		-22.00 to -18.00 inH2O [EMU 0.097 inH2O][TUR 21:1]
|	0.00 inH2O	0.00		Same		-2.00 to 2.00 inH2O [EMU 0.097 inH2O][TUR 21:1]

Temperature: 22° C
Humidity: 51% RH
Rpt. No.: 1646841

Calibration Performed By:			Quality Reviewer:	
Fitzsimons, Sean	Metrologist	847-327-5320	Szplit, Tony	04/05/2021
Name	Title	Phone	Name	Date

INNOCAL®
INNOVATIVE CALIBRATION SOLUTIONS
625 East Bunker Court
Vernon Hills, Illinois 60061
PH: 866-466-6225
Fax: 847-327-2993
www.innocalsolutions.com

NIST Traceable
Calibration Report

REPORT NUMBER
1648188

Reference Number: **1401713**
PO Number: **GGRUNSEICH031621**

RTP Envriomental Associates
400 Post Ave
Suite 405
Westbury NY 11590

Manufacturer: Ashcroft
Model Number: 25-1490-A-02L-100IWV-TU
Description: Pressure, Gauge, -100 to -10
Asset Number: CP43333
Serial Number: CP43333
Procedure: DS Universal Pressure Gauge-5

Calibration Date: 04/05/2021
Calibration Due Date: 04/05/2022
Condition As Found: In Tolerance
Condition As Left: In Tolerance, No adjustment

Remarks:
NIST-traceable calibration performed on the unit referenced above in accordance with customer requirements, published specifications and the lab's standard operating procedures. No adjustments were made to the unit.

Standards Utilized

Asset No.	Manufacturer	Model No.	Description	Cal. Date	Due Date
CP144959	Fluke Corporation	PM600-A700K	Pressure, Measurement Mod -12.1 -100PSI	06/03/2020	06/30/2021

Calibration Data

FUNCTION TESTED	Nominal Value	As Found	Out of Tol	As Left	Out of Tol	CALIBRATION TOLERANCE
Increasing	0.00 inH2O	0.00		Same		-2.00 to 2.00 inH2O [EMU 0.097 inH2O][TUR 21:1]
|	20.00 inH2O	20.00		Same		18.00 to 22.00 inH2O [EMU 0.097 inH2O][TUR 21:1]
|	40.00 inH2O	39.50		Same		39.00 to 41.00 inH2O [EMU 0.098 inH2O][TUR 10:1]
|	60.00 inH2O	59.00		Same		59.00 to 61.00 inH2O [EMU 0.098 inH2O][TUR 10:1]
|	80.00 inH2O	78.50		Same		78.00 to 82.00 inH2O [EMU 0.098 inH2O][TUR 20:1]
|	100.00 inH2O	98.80		Same		98.00 to 102.00 inH2O [EMU 0.099 inH2O][TUR 20:1]
Decreasing	80.00 inH2O	78.40		Same		78.00 to 82.00 inH2O [EMU 0.098 inH2O][TUR 20:1]
|	60.00 inH2O	59.90		Same		59.00 to 61.00 inH2O [EMU 0.098 inH2O][TUR 10:1]
|	40.00 inH2O	39.50		Same		39.00 to 41.00 inH2O [EMU 0.098 inH2O][TUR 10:1]
|	20.00 inH2O	19.10		Same		18.00 to 22.00 inH2O [EMU 0.097 inH2O][TUR 21:1]
|	0.00 inH2O	0.00		Same		-2.00 to 2.00 inH2O [EMU 0.097 inH2O][TUR 21:1]

Temperature: 21° C
Humidity: 54% RH
Rpt. No.: 1648188

Calibration Performed By:			Quality Reviewer:	
Fitzsimons, Sean	Metrologist	847-327-5320	Szplit, Tony	04/05/2021
Name	Title	Phone	Name	Date

APPENDIX B

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF LANDFILL GAS MONITORING PROGRAMS FOR 2021

APPENDIX B

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF LANDFILL GAS MONITORING PROGRAMS FOR 2021

Prepared for:

Town of Oyster Bay
Department of Public Works
Syosset, New York

Prepared by:

RTP Environmental Associates, Inc.
400 Post Avenue
Westbury, New York

December 2021

APPENDIX B

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF LANDFILL GAS MONITORING PROGRAMS FOR 2021

TABLE OF CONTENTS

APPENDIX B

TABLE OF CONTENTS (continued)

TABLES AND FIGURES

ATTACHMENTS

APPENDIX B

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

SUMMARY OF LANDFILL GAS MONITORING PROGRAMS FOR 2021

1.0 BACKGROUND

The Town of Oyster Bay (Town) initiated several landfill gas (LFG) detection and control programs to monitor and prevent offsite migration of LFG in the vicinity of the Oyster Bay Solid Waste Disposal Complex (OBSWDC) in the late 1970s. Figure 1.1 provides a location and description of the various facilities on the OBSWDC and adjoining properties. Initially, the Town installed permanent sampling probes around the perimeter of the OBSWDC to detect potential offsite LFG migration. Based on the LKB Engineering Report dated June 1980 (LKB, 1980), actions were immediately undertaken by the Town to alleviate offsite LFG migration onto the Nassau County Firemen's Training Center (NCFTC).

In response to reports of offsite LFG migration onto the NCFTC, the original LFG collection system (Phase 1) was installed in 1981, including eight (8) wells generally located along the property line shared with the NCFTC. These wells were connected to a blower station and vented to the atmosphere. In 1983, with further reports of migrating gas crossing Winding Road, the original collection system was expanded along Winding Road (Phase 2) with another six (6) wells. In 1985, the collection system was further expanded around the northern slope onto the western side of the Landfill (Phase 3) with an additional eight (8) wells to protect properties located on Claremont Road. A Thermal Oxidizer (TO), to control the collected LFG, was installed and began operation in late 1985.

In 1988, the Town and the New York State Department of Law (NYSDOL) entered into a Final Consent Decree for the remediation of the Old Bethpage Landfill (83 *CV.* 5357). A Remedial Action Plan (RAP), incorporated into the Consent Decree, detailed the actions to be taken by the Town in compliance with the Final Consent Decree. Appendix A, Section I. (H) of the RAP requires the Town to continue to operate and maintain the existing gas control systems in compliance with the requirements of 6 NYCRR Part 360. In order to demonstrate compliance with 6 NYCRR Part 360 and maintain a zero percent methane gas migration limitation at the landfill boundary, the Town was required to conduct a gas monitoring program, as described in the LKB Report (LKB, 1987). 6 NYCRR Part 360.4(i) states that "*any order prior to the effective date of this regulation is continued until the order expires.*" Although the Landfill must comply with the limits set in the Consent Decree, compliance with the new 6 NYCRR Part 363 was reviewed in which "*a landfill must limit methane concentrations below 25% lower explosive limit (LEL)*

Prepared by:
RTP Environmental Associates, Inc.
Westbury, New York

N

0 250 500 750 1,000 2,000 Feet

FIGURE 1.1

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX
AND SURROUNDING AREA MAP

OLD BETHPAGE, NEW YORK

at or beyond the property boundary, and within onsite structures." As such, monitoring programs in accordance with Consent Decree requirements were initiated. A history of these monitoring activities is discussed in previous reports.

In 1991, in order to better control gas around the Briden property located at the southern end of Claremont Road, additional wells were placed along that property boundary. During that work, additional gas wells to augment the methane gas quality at the blower station were installed along the bench above the Phase 2 Pit area. These wells were connected to additional collection pipes to complete the loop around the Landfill, thereby allowing the blower station to pull gas from both ends of the collection system. This final installation was identified as the Phase 4 system. In 1992, the Town entered into a betterment agreement with Nassau County to improve control of offsite migration onto the NCFTC. That agreement resulted in the installation of three (3) additional wells along the shared NCFTC/OBSWDC property line and another blower skid. The overall intent of the system was to surround the Landfill with a negative pressure zone in the landfill perimeter soils; the negative pressure was supplied by the landfill blower station.

Diminishing levels of methane, attributed to the aging of the Landfill, impacted the operation of the perimeter gas control system TO. Eventually, the TO became inoperable in May 2008, and was decommissioned as part of an agreement with New York State Department of Environmental Conservation (NYSDEC) (NYSDEC, 2012). In October 2010, the NYSDEC requested that the Town take supplemental quarterly samples of LFG from the perimeter collection system vent for VOC speciation of LFG collected while the TO was out of service. This task was discontinued, as per an agreement with the Town and NYSDEC, when the TO was formally decommissioned in 2012 (NYSDEC, 2012). As part of this agreement, the program was modified to include weekly methane testing of the LFG perimeter system; this monitoring began in late 2012.

Finally, in early 2015, the Town petitioned DEC to modify the Consent Decree by reducing the sampling frequency requirements from quarterly to annually; the approval for this request was granted on March 24, 2016. The following report summarizes LFG monitoring programs conducted in accordance with the Modified Consent Decree. (NYSDEC, 2016)

2.0 CURRENT SAMPLING PROGRAMS

The Town of Oyster Bay, to demonstrate conformance with the Final Consent Decree for the remediation of the OBSWDC (83 *CV.* 5357) and the modifications that have been made since 1988, has performed several surveys associated with LFG in 2021. The following surveys were conducted:

Survey No. 1. OBSWDC Perimeter Gas Well Monitoring Survey
Survey No. 2. Building/Structure Gas Survey
Survey No. 3. Supplemental Gas Monitoring Program
Survey No. 5. Zero Gas Migration Limitation Survey
Survey No. 6. Weekly Perimeter Gas Collection System Vent Monitoring

Each of these surveys was conducted in the 3rd quarter of 2021 except for Survey No. 6, which is performed weekly by Town personnel and covers the period from the beginning of the 3rd quarter of 2020 though the end of the 3rd quarter of 2021. Also, Survey No. 3 was not performed in 2021 as there were no unusual events or readings that would have required a supplemental survey.

RTP began performing Survey Nos. 1, 2, and 5 in 2008. The Town staff performs weekly testing of methane at the perimeter vent stack identified as Survey No. 6 and, if necessary, Survey No. 3. Detailed descriptions of the monitoring efforts and the equipment used are provided in the 2021 Annual Report. For additional information, each historical survey report can be obtained from the Town.

The monitoring at the OBSWDC of combustible gas at perimeter wells (Survey No. 1), within structures (Survey No. 2), and zero gas migration (Survey No. 5) was performed by RTP staff utilizing a GEM 2000 Monitor. A stainless-steel probe was attached to the monitor as used in the Zero Gas Migration Survey, and the probe was inserted into the respective wells for a period of 15 seconds or greater to determine the gas concentration. For the structures, several readings of 15 seconds or more were typically taken at various locations within the interior. The specifications for the GEM 2000 and associated calibrations are provided in Attachment A. Factory calibrations of the unit are performed annually. The GEM 2000 unit was rented and calibrated by Pine prior to testing.

In addition, the Zero Gas Migration Limitation Survey (Survey No. 5) requires the documentation of the location of the sampling points at the landfill boundary, Nassau County Campground, Senior Citizens Housing Complex, and other areas potentially impacted by subsurface LFG migration. Based on the lack of in-field reference points, it was determined that the best way of locating sampling points, relative to the above referenced features, would be to use a Trimble® T41/5™ Global Positioning System (GPS) unit. The T41/5 system accuracy is estimated to be approximately within 2-4 meters of the actual position. The Trimble GPS can store sampling point coordinates and the percentage of combustible gas readings. The GPS approach provides a reasonably accurate estimate of the location of sampling points and potential gas problem areas, if present.

Survey No. 5 involves taking subsurface combustible gas readings for defining the zero gas migration limit including monitoring the subsurface combustible gas conditions at the Nassau County Campground. RTP reviewed the previous sampling procedures, as described in the Hazen and Sawyer 2007 Annual Report, which involved using a slam bar to punch 12-inch deep holes into the ground every 50 feet along the perimeter of the landfill boundary and the common boundary between the OBSWDC and the Nassau County Campground (H&S, 2007). To expedite sampling and improve ground penetration, RTP modified the sampling procedure by substituting a ¾-inch diameter, 18-inch long concrete auger bit (powered by a handheld drill for the slam bar) to construct the necessary unsupported subsurface sampling points. A ¼-inch diameter stainless steel tube was then used, along with a rubber stopper, to seal the nominal 18-inch deep sampling point.

The rationale for extending the soil gas sampling point to an 18-inch depth is to ensure the point would likely penetrate an impervious surface, if present. Occasionally, the drilling could not reach a full 18" depth because of rocks or other obstacles. In such cases, additional attempts to establish a point are made with the minimal depth of any soil gas sample point being at least 12 inches. A Tygon sampling line and filter are attached to the ¼-inch stainless steel probe with a rubber stopper that is used to seal the "well". The filter is used to prevent dust and debris from entering the monitor. This assembly is then attached to a multi-gas monitor to determine percentage levels of combustible gas in each soil gas sample point.

A LandTEC GEM 2000 Multi-Gas Monitor was used for all 2021 methane monitoring tests. Span gas is applied to check accuracy prior to each field use. The unit's minimum detection limit (MDL) is 0.1 percent of combustible gas. It takes approximately eight (8) seconds for the soil gas in a well to make its way to the sensor. The sensor typically reaches a stable reading within 15 seconds of when the probe was inserted into the well and the peak value of the combustible gas percentage is recorded.

Survey No. 6 involves the weekly collection of LFG methane readings from the header to the exhaust vent stack that is part of the perimeter gas collection system. The vent stack is located just southeast of the GCCS blower station. The combustible gas data was collected by Town staff using a Multi-Rae Lite Wireless Portable Multi-Gas monitor to check for methane (CH_4). The data are collected weekly and the results are provided in this report along with a discussion of sampling activities and other issues.

3.0 DISCUSSION OF RESULTS

3.1 General

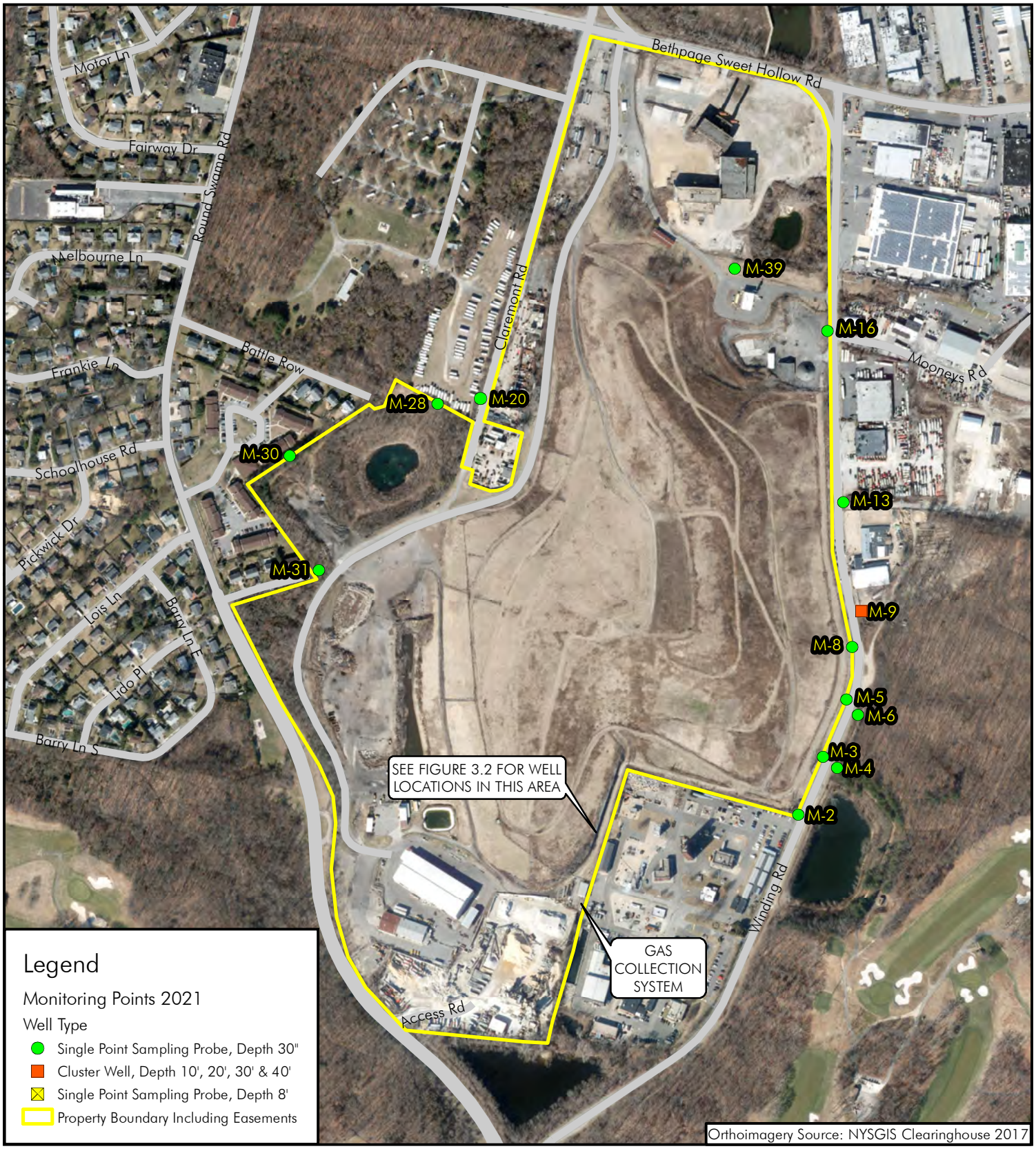
Sampling data generated from Survey Nos. 1, 2, 3, and 5, identified in Section 2.0, are normally used to determine methane levels at various locations and to verify the perimeter collection system is preventing offsite migration of subsurface gas. The LFG perimeter control system (including Phases 1, 2, 3, and 4 of the perimeter collection system) completely encircles the Landfill, extending along the northern and western sides of the NCFTC along Winding Road, and along the northwestern portion of the OBSWDC adjacent to Claremont Road. This Section also provides a discussion of the Zero Gas Migration Limitation Survey followed by the weekly perimeter vent monitoring efforts conducted in 2021.

3.2 2021 Landfill Gas Surveys

3.2.1 Perimeter Gas Well Monitoring Survey (Survey No. 1)

In past years, to confirm the gas conditions in the perimeter gas monitoring wells and make recommendations for future monitoring programs, RTP would usually perform four (4) perimeter gas well monitoring events per calendar year following previously established monitoring survey protocols; however, since the modification to the post-closure monitoring requirements, the schedule for these monitoring events has been revised to annual. As such, one (1) event was conducted in 2021; the perimeter wells along the OBSWDC property boundary and NCFTC wells were monitored for the presence of combustible gas. The locations of these wells are identified on Figures 3.1 and 3.2. The survey took place September 21-22, 2021. The combustible gas data for this monitoring event at these locations is presented on Table 3.1. The combustible gas measurements show that zero (0) wells had detectable combustible gas levels. These findings are in general agreement with the 2020 Zero Gas Migration Limitation Survey.

The perimeter wells are a combination of individual well points and cluster well points containing two (2) to four (4) individual wells. It is worth noting that several wells were removed from the list in the current and previous years based on discussions with LKB (LKB, 2020).



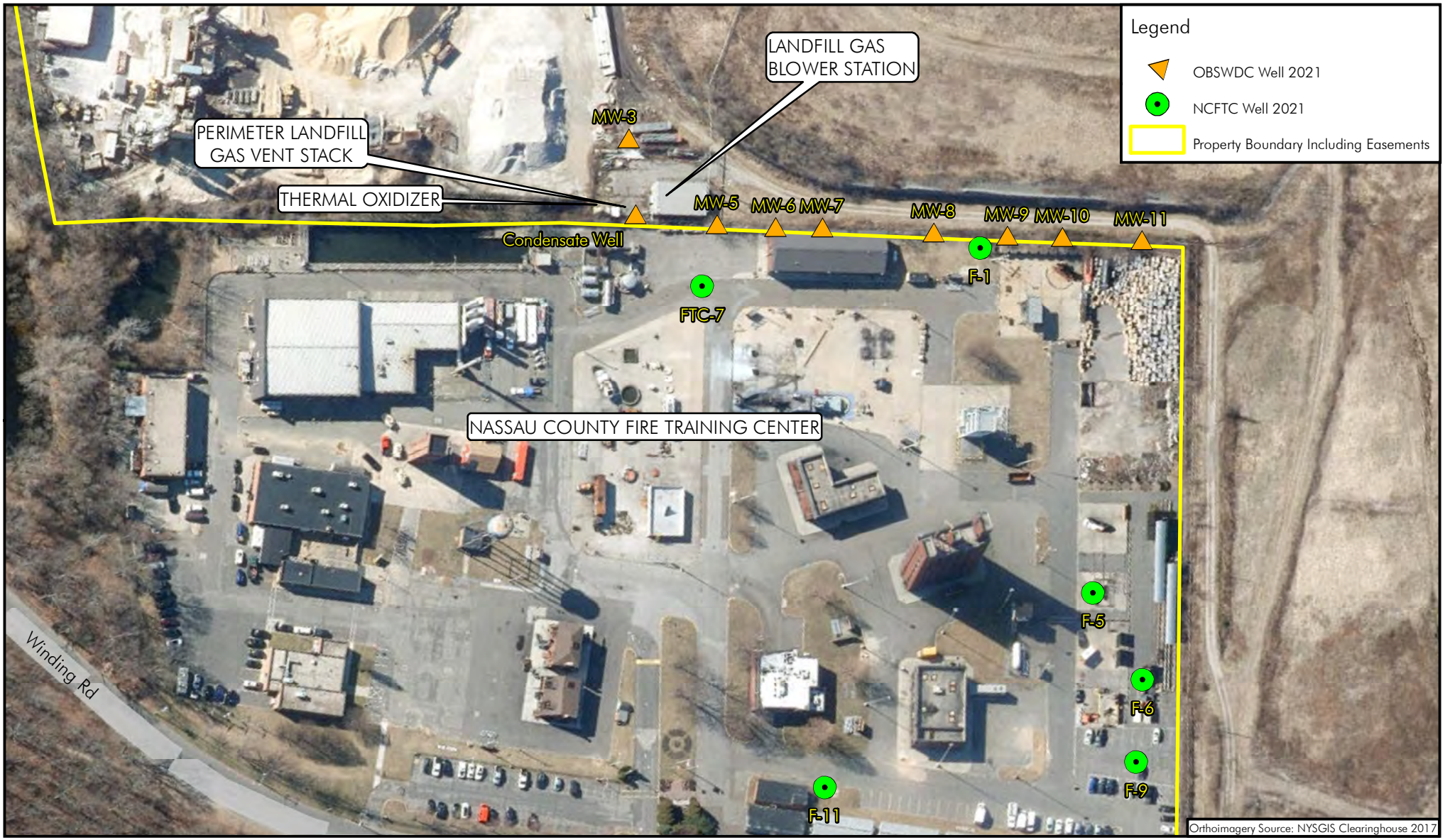
N

0 500 1,000 2,000 Feet

FIGURE 3.1
LANDFILL GAS COLLECTION HEADER AND PERIMETER GAS WELL MONITORING POINTS

TOWN OF OYSTER BAY
SOLID WASTE DISPOSAL COMPLEX
OLD BETHPAGE, NEW YORK

Prepared by:
RTP Environmental Associates, Inc.
Westbury, New York



Prepared by:
RTP Environmental Associates, Inc.
Westbury, New York

N

0 125 250 500 Feet

FIGURE 3.2
LANDFILL GAS HEADER AND WELLS ADJOINING NASSAU COUNTY FIRE TRAINING CENTER

TOWN OF OYSTER BAY
SOLID WASTE DISPOSAL COMPLEX
OLD BETHPAGE, NEW YORK

TABLE 3.1

TOWN OF OYSTER BAY, NY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

2021 GAS WELL SURVEY DATA

Sample ID	Well Depth	X	Y	% LEL
Condensate Well	Feet	1136960	213973	0
F-1	30"	1137085	214308	0
F-5 (10')	10'	1137458	214328	0
F-5 (20')	20'	1137458	214328	0
F-5(30')	30'	1137458	214328	0
F-5 (40')	40'	1137458	214328	0
F-6 (10')	10'	1137557	214354	0
F-6 (20')	20'	1137557	214354	0
F-9 (10')	10'	1137637	214326	0
F-9 (20')	20'	1137637	214326	0
F-11	UNKNOWN	1137580	214009	0
FTC-7	UNKNOWN	1137049	214021	0
M-2	30"	1137835	214327	0
M-3	30"	1137935	214562	0
M-4	30"	1137993	214518	0
M-5	30"	1138031	214796	0
M-6	30"	1138078	214733	0
M-8	30"	1138055	215011	0
M-9 (10')	10'	1138092	215156	0
M-9 (20')	20'	1138092	215156	0
M-9 (30')	30'	1138092	215156	0
M-9 (40')	40'	1138092	215156	0
M-13	30"	1138017	215599	0
M-16	30"	1137954	216297	0
M-20	30"	1136540	216023	0
M-28	30"	1136366	216001	0
M-30	30"	1135762	215789	0
M-31	30"	1135881	215322	0
M-39	30"	1137576	216552	0
MW-5 Upper	10'	1136991	214052	0
MW-5 Lower	20'	1136991	214052	0
MW-6 Upper	10'	1137009	214109	0
MW-6 Lower	20'	1137009	214109	0
MW-7 Upper	10'	1137024	214163	0
MW-7 Lower	20'	1137024	214163	0
MW-8 Upper	10'	1137057	214265	0
MW-8 Lower	20'	1137057	214265	0
MW-9 Upper	10'	1137080	214337	0
MW-9 Lower	20'	1137080	214337	0
MW-10 Upper	10'	1137104	214414	0
MW-10 Lower	20'	1137104	214414	0
MW-11 Upper	10'	1137120	214470	0
MW-11 Lower	20'	1137120	214470	0

Notes:

UNKNOWN - Well depth not documented.

XY Coordinates in NY State Plane

3.2.2 Building/Structure Gas Survey (Survey No. 2)

RTP performed gas monitoring at several of the onsite facility locations that are still in existence and accessible on September 21-22, 2021. The available combustible gas data for buildings/structures are presented in Table 3.2. All readings were non-detectable (i.e., less than 1% of the LEL).

3.2.3 Supplemental Gas Monitoring Survey (Survey No. 3)

Supplemental gas monitoring surveys are performed when special onsite conditions dictate additional monitoring is necessary beyond the testing normally done to comply with the modified Consent Order. No supplemental gas monitoring surveys were conducted in 2021.

3.2.4 Zero Gas Migration Limitation Survey (Survey No. 5)

The Zero Gas Migration Limitation Survey, designed to monitor the lateral migration of LFG around the outer boundary of the Landfill, was conducted by RTP personnel on September 21 & 22, 2021. The survey includes the drilling of three (3) quarter inch (¾") bore holes to a depth of 12 to 18 inches, spaced 50 feet apart along the outer boundary of the Landfill and other areas around the Landfill, to serve as temporary soil gas wells; samples were collected at each well point. If a positive combustible gas reading (measured as percent of the LEL) is obtained at a sampling point, additional sampling points are installed radially outward from the landfill until a combustible gas reading of zero is obtained. This series of points would then provide the boundary of the zero gas migration limit, as required by the Consent Decree. The collected data was then used to identify the extent of combustible gas migration readings (line of zero percent combustible gas) in and around the OBSWDC. Sample points at the toe of the Landfill are not installed radially inward toward the Landfill to avoid damage to the landfill cap.

The 2021 survey results are presented graphically in Figure 3.3. The specific findings of the 2021 annual survey are as follows:

- The 2021 survey results demonstrate that LFG migration has been contained within the landfill perimeter and/or the OBSWDC boundary. The combustible gas concentrations for the line of well points were all zero or non-detect, except for four (4) points where minor concentrations of 4%-18% of LEL,

TABLE 3.2

TOWN OF OYSTER BAY, NY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

2021 FACILITY COMBUSTIBLE GAS SURVEY WITHIN STRUCTURES

	Annual Test
Sample ID	**% LEL**
TO Blower Station Drain 1	0
TO Blower Station Drain 2	0
RAP Building N	0
RAP Building NW	0
RAP Building S	0
RAP Building LAB	0
RAP Building Acid Tank	0
RAP Building Acid Tank	0
RAP Building Mezz	0
Guardhouse	0
Town Offices	0
Leachate Treatment Building	0
Transfer Station	0
Maintenance Garage	0
Recycling Building Area	0
Scalehouse	0

NOTE:

Combustible gas readings were taken at various locations throughout each structure.

The maximum observed value is listed.

The MDL for the LandTec GEM 2000 Plus Multi-Gas Monitor is 0.1% of combustible gas.

Prepared By:
RTP Environmental Associates, Inc.
Westbury, New York

N

0 250 500 750 1,000 Feet

FIGURE 3.3

2021 ANNUAL ZERO GAS MIGRATION LIMITATION SURVEY
September 21 & 22, 2021

TOWN OF OYSTER BAY
SOLID WASTE DISPOSAL COMPLEX
OLD BETHPAGE, NEW YORK

reportable amount of combustible gas was detected. The protocol specifies that when a detectable concentration is identified, additional readings are to be taken further away from the landfill boundary until a reading of less than 1% LEL is observed. All well point locations are identified by *NY State Plane* coordinates, and are provided in Attachment B along with the observed concentrations. Hourly meteorological data measured at Republic Airport, Farmingdale, NY during the survey dates are also provided in Attachment B to this report.

- The one (1) combustible gas reading along Winding Road was taken outside of the Complex's fence line along Winding Road, away from the landfill boundary. Inside the fence line and along the northeast margin of the landfill cap, there was no combustible gas detected at the nearby sample locations. An additional sampling point to the immediately to the east also found non-detectable levels of methane.
- Three (3) combustible gas readings of 4%-18% LEL were recorded along the western edge of the retention pond along the foot of the landfill. During testing, a large pile of dirt and compost material extended the length of this series of sampling points. The September 22, 2021 samples were taken as close as feasibly possible to the original designated points but along the base of this pile. Based on the material present in the pile, and the additional sampling points indicating an absence of combustible gas radially outward from the sampling points, it is likely that the combustible gas is the result of decay in the temporary compost pile and not a release from the base of the landfill.
- RTP will re-monitor this point during the next annual test, scheduled for the 4th quarter of 2022, to assure the zero methane boundary remains onsite.

The 2021 survey data was compared to the combustible gas migration data contour compiled for 2020, as provided on Figure 3.3. As seen on the graphic plot of the 2021 and 2020 zero combustible gas contour lines at the toe of the Landfill, no significant deviations away from the toe were observed, and the 2021 Survey indicated all readings at the toe of the Landfill were non-detectable (i.e., less than 1% of the LEL). As shown in Figure 3.3, the majority of the zero combustible gas migration data for 2021 confirms combustible gas associated with the Landfill is within the OBSWDC boundary.

3.2.5 Weekly Perimeter Gas Collection System Vent Monitoring (Survey No. 6)

Survey No. 6 was initiated as a result of the agreement between the NYSDEC and the Town (NYSDEC, 2012). During 2020-2021, Town personnel conducted the survey on a weekly basis. As discussed in previous sections, the Town was required by the NYSDEC to collect weekly methane readings from the vent of the perimeter collection system in lieu of conducting quarterly gas monitoring at the bypass vent and annual stack testing of the decommissioned TO. The data was collected by the Town using a Multi-

Rae Lite Wireless Portable Multi-Gas monitor to check for methane. The Town operated the blowers on one day every week to take the weekly methane reading.

The Town first began collecting methane readings in September 2012 from the vent for the perimeter collection system at the blower station. This report includes data from the start of the 3rd quarter of 2020 through the end of the 3rd quarter of 2021, as presented in Table 3.3. In all, 66 weekly readings were scheduled.

The 43 observed concentrations indicate methane by volume in the collected gas ranged from a minimum of 0.1% methane to a high of 1.8% methane, with the average methane concentration recorded over the reporting period of 0.54% methane. Based on previous year's observations, levels tended to be higher in October-November 2020 before falling and leveling off around 0.4% methane in March 2021. In general, methane concentrations are lower than the averages reported in the 2018, 2019, and 2020 annual reports of 1.61%, 1.64%, and 0.93% respectively. Starting the week of June 10, 2020 through October 14, 2020, the readings were not taken due to a leak at Well #5. Additionally, a power failure occurred in the beginning of 2021 at the blower station and could not be repaired until the March 1, 2021. No readings were taken during the January 6, 2021 – February 24, 2021 period. All of the concentrations of methane noted are below 5%, which is the LEL for methane. The Town will continue to conduct these weekly tests into 2022, in accordance with the NYSDEC request, until instructed otherwise.

TABLE 3.3

TOWN OF OYSTER BAY, NY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

WEEKLY METHANE MONITORING RESULTS
AT THE PERIMETER COLLECTION SYSTEM VENT
3rd QUARTER 2020 - 3rd QUARTER 2021

Week	Date of Sample	Methane Concentration (%CH_4)
1	7/1/2020	N/A
2	7/8/2020	N/A
3	7/15/2020	N/A
4	7/22/2020	N/A
5	7/29/2020	N/A
6	8/5/2020	N/A
7	8/12/2020	N/A
8	8/19/2020	N/A
9	8/26/2020	N/A
10	9/2/2020	N/A
11	9/9/2020	N/A
12	9/16/2020	N/A
13	9/23/2020	N/A
14	9/30/2020	N/A
15	10/7/2020	N/A
16	10/14/2020	1.5%
17	10/21/2020	1.4%
18	10/28/2020	1.4%
19	11/6/2020	1.6%
20	11/11/2020	1.4%
21	11/18/2020	1.8%
22	11/25/2020	0.9%
23	12/2/2020	0.6%
24	12/9/2020	0.3%
25	12/16/2020	0.5%
26	12/23/2020	0.8%
27	12/30/2020	0.3%
28	1/6/2021	PF
29	1/13/2021	PF
30	1/20/2021	PF
31	1/27/2021	PF
32	2/3/2021	PF
33	2/10/2021	PF
34	2/17/2021	PF
35	2/24/2021	PF
36	3/3/2021	0.4%
37	3/10/2021	0.3%

TABLE 3.3
(continued)
TOWN OF OYSTER BAY, NY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

WEEKLY METHANE MONITORING RESULTS
AT THE PERIMETER COLLECTION SYSTEM VENT
3rd QUARTER 2020 - 3rd QUARTER 2021

Week	Date of Sample	Methane Concentration (%CH_4)
38	3/17/2021	0.6%
39	3/24/2021	0.4%
40	3/31/2021	0.3%
41	4/7/2021	0.5%
42	4/14/2021	0.2%
43	4/21/2021	0.5%
44	4/28/2021	0.4%
45	5/5/2021	0.4%
46	5/12/2021	0.3%
47	5/19/2021	0.5%
48	5/26/2021	0.4%
49	6/2/2021	0.2%
50	6/9/2021	0.4%
51	6/16/2021	0.7%
52	6/23/2021	0.2%
53	6/30/2021	0.3%
54	7/7/2021	0.2%
55	7/14/2021	0.4%
56	7/21/2021	0.1%
57	7/28/2021	0.3%
58	8/4/2021	0.2%
59	8/11/2021	0.4%
60	8/18/2021	0.4%
61	8/28/2021	0.3%
62	9/1/2021	0.4%
63	9/8/2021	0.4%
64	9/15/2021	0.2%
65	9/22/2021	0.3%
66	9/29/2021	0.2%

Five Quarter (66 week) Average:	**0.54%**

NOTE:
- Weeks notated with an asterisk (*) were missing the reading and a substitute value, as marked in italics, was provided in accordance with missing data procedures of 40 CFR 98.345(a) of the GHG Reporting Rule.

** Indicates values are above the combustible gas level.

N/A: Well #5 Leak. No Reading Taken.

PF: Power Failure at Blower Station. No Reading Taken.

4.0 SUMMARY AND CONCLUSIONS

4.1 2021 Landfill Gas Surveys

4.1.1 Perimeter Gas Well Monitoring Survey (Survey No. 1)

Combustible gas concentration data was collected from the perimeter gas wells during one (1) individual monitoring event on September 21 & 22, 2021. The observed data indicates that zero (0) of the perimeter gas wells contained detectable levels of combustible gas during the sampling event noted within this report. The Consent Order stipulates that methane concentrations must be limited to 0% LEL specifically at the landfill boundary; even if the new 6 NYCRR Part 363 is applied, all wells fall below the 25% limit for landfill property boundaries. Therefore, the perimeter gas well monitoring data for this 2021 annual report indicates that the regulatory requirements are being met and the gas generated by the Landfill is being adequately contained by the LFG collection and control system. The only exception is the minor methane level observed along the northeast perimeter of the site and along the western edge of the retention pond; these may well be associated with other decay processes as compared to emissions from the OBSWDC Landfill.

4.1.2 Building/Structure Gas Survey (Survey No. 2)

Combustible gas concentration data was collected within the selected structures onsite during one (1) individual monitoring event on September 21 & 22, 2021, in conjunction with the Perimeter Gas Well Monitoring Survey discussed in Section 4.1.1, and Zero Gas Migration Limitation Survey discussed in Section 4.1.4. The observed data indicates that no structures had combustible gas above the minimum detection limit (MDL) of the analyzer. The 6NYCRR Part 360 limit for combustible gas in structures is less than 25% of the LEL. Thus, the recorded 2021 data for the building/structure surveys indicate that the regulatory requirements were being met.

4.1.3 Supplemental Monitoring of Perimeter System (Survey No. 3)

This survey was not required during the 2021 reporting period.

4.1.4 Zero Gas Migration Limitation Survey (Survey No. 5)

The Zero Gas Migration Limitation Survey data, collected by RTP personnel on September 21 & 22, 2021, is provided in Attachment B of this report. This data was used to identify all points of combustible gas or

gas concentrations below combustible levels and, therefore, defined the zero percent combustible gas migration contour. As shown in Figure 3.3, the gas migration limit remained confined to within the landfill perimeter and the OBSWDC boundary.

The following conclusions are based on the site survey data:

- Combustible gas in concentrations of greater than or equal to 4% LEL were detected above the instrument MDL at four (4) locations. One location was along the west side of Winding Road, and an additional point was taken further out from the landfill boundary in accordance with the testing protocol, which stipulates that "*when combustible gas is identified, additional readings should be taken further away from the landfill boundary until a less than 1% of the LEL is observed.*" Several feet away and towards the roadway, a non-detect was recorded which satisfies the testing protocol. Additionally, this location is: (1) away from the landfill boundary where a 0% LEL limit applies, and (2) the point was below the 25% LEL limit for landfill property boundaries based on the recently added 6 NYCRR Part 363, which doesn't apply until the Consent Order expires. This point was also located outside of points along the toe of the Landfill. Three (3) additional locations exhibited concentrations between 4%-18% LEL along the western edge of the retention pond. Additional samples several feet away, radially outward from the landfill, indicated concentrations of 0% LEL. Additionally, the original samples were near the base of a large dirt/compost pile which may have significantly influenced these samples. RTP will re-monitor these points during the next annual test scheduled for the 4th quarter of 2022 to assure the zero methane levels are maintained at the boundary.

- Points adjacent to the ones in question resulted in zero or non-detect readings. Therefore, the Zero Gas Migration Limitation Survey for 2021 indicates that any LFG generated by the landfill is currently below the LEL at the perimeter of the Landfill and at the boundary of the OBSWDC.

- All other sampling locations monitored in the 2021 survey continue to show LFG migration remained stable and within the OBSWDC property boundaries. These locations include the areas east of Winding Road, the Nassau County Campground, the Senior Citizen Housing, the Nassau County Fire Training Center (NCFTC), and other adjoining areas as shown in Figure 3.3.

4.1.5 Weekly Perimeter Gas Collection System Vent Monitoring (Survey No. 6)

Town personnel measured methane concentration data in the perimeter gas collection system exhaust vent weekly. This data, which ranges from the beginning of the 3rd quarter of 2020 through the 3rd quarter of 2021, is contained in Table 3.3.

The average methane concentration for the reporting period was 0.54%. There were no instances during the testing period where the methane gas concentration exceeded the LEL threshold of 5% methane in the vent of the perimeter collection system. The highest measured value of 1.8% methane on November 18, 2020 was below the threshold.

4.2 2021 Landfill Gas Monitoring Program Conclusions

The following conclusions can be drawn based on the 2021 monitoring programs at the OBSWDC:

- The zero gas migration limitation data indicated that there are no combustible levels of LFG within the sampled areas at the toe of the Landfill; therefore, combustible levels of landfill gas are not likely extending beyond the capped landfill area. The area just off property to the northeast of the landfill property boundary had one (1) individual point where minor detectible methane levels were observed. Additionally, three (3) points with minor detectable methane levels were observed along the western edge of the retaining pond, along a dirt/compost pile. To investigate these points more thoroughly, RTP will be re-monitoring this area during the next annual test, scheduled for the 4th quarter of 2022, to assure off property levels are, at worst, very low and sporadic.

- The LFG perimeter collection/control system is limiting offsite gas migration and controlling combustible gas to levels that meet the requirements of the site Consent Decree, 6 NYCRR Part 360, and 6 NYCRR Part 363, based on the surveys performed as noted above.

- During the testing period, the methane concentration at the exhaust vent for the perimeter collection system averaged 0.54% over 66 weeks (43 observable methane data points).

REFERENCES

LKB, 1980. Preliminary Engineering Design Report: Phase 1 Gas Control and Recovery Program. Lockwood, Kessler & Bartlett, Inc., One Aerial Way, Syosset, New York, June, 1980. Submitted to: Town of Oyster Bay, Syosset, New York.

LKB, 1987. 1986 Annual Report Summarizing the Status of Landfill Gas Monitoring Programs and the Establishment of the Zero Percent Gas Migration Limitation at the Old Bethpage Landfill. Lockwood, Kessler & Bartlett, Inc., One Aerial Way, Syosset, New York, April 1987.
Submitted to: Town of Oyster Bay, Syosset, New York.

LKB, 2020 Discussions with LKB staff. Lockwood, Kessler & Bartlett, Inc., One Aerial Way, Syosset, New York, November 2020.

H&S, 2007. 2007 Annual Report, Summarizing the Results of Landfill Gas Monitoring Programs at the Old Bethpage Solid Waste Disposal Complex and Adjacent Areas.
Hazen and Sawyer, P.C., 498 Seventh Avenue, New York, New York, December 2007.

NYSDEC, 2012 Letter dated October 17, 2012 approving the Town of Oyster Bay's request to cease operation of the Thermal Oxidizer at the Old Bethpage Landfill.

NYSDEC, 2016 DEC Modified Consent Decree with Town of Oyster Bay dated: March 24, 2016.

ATTACHMENT A

GEM 2000 SPECIFICATION DATA
CALIBRATION GAS SPECIFICATION DATA

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC

128 Charlotte Ave.
Hicksville, NY 11801

Pine Environmental Services, Inc.

Instrument ID 14247
Description GEM 2000
Calibrated 9/20/2021 8:48:28AM

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

Intermountain Specialty Gases
520 N. Kings Road
Nampa, ID 83687 (USA)
Phone (800) 552-5003, Fax (208) 466-9143
www.isgases.com

"Your calibration gas manufacturer since 1992"

CERTIFICATE OF ANALYSIS

Composition	Certification	Analytical Accuracy (+/-)
Methane	2.5 %	2%
Carbon Monoxide	50 ppm	2%
Oxygen	20.9 %	2%
Nitrogen	Balance UHP	
Hydrogen Sulfide	25 ppm	5%

Lot #	**19-6916**
Mfg. Date:	6/20/2019
Expiration Date:	
Transfill Date:	see cylinder
Parent Cylinder ID Number:	EB0075450

Method of Preparation:

Gravimetric/Pressure Transfilled

Method of Analysis:

The cylinder(s) in this lot were transfilled from parent mixes. These mixes were prepared gravimetrically and are traceable to the NIST by certified weights (ID #CA10814) used to calibrate the scale. These parent mixes were analyzed against standards traceable to NIST on a GC and a carbon monoxide analyzer to verify accuracy of the components. The H2S was checked on a hydrogen sulfide analyzer on the fill date.

Analysis By: Tony Janquart
Title: Quality Assurance Manager
Certificate Date: 6/20/2019

ATTACHMENT B

2021 ZERO GAS MIGRATION LIMITATION SURVEY DATA
FARMINGDALE, NY METEOROLOGICAL DATA DURING SURVEY

ZERO GAS MIGRATION LIMITATION SURVEY DATA
September 21 and 22, 2021

Sample ID	% LEL	Northing	Easting
1	0	346704.52	65990.920
2	0	346696.28	66008.941
3	0	346685.38	66017.835
4	0	346672.57	66023.319
5	0	346653.69	66029.205
6	0	346642.91	66034.739
7	0	346626.23	66041.501
8	0	346610.89	66043.213
9	0	346597.41	66047.862
10	0	346584.50	66054.875
11	0	346583.17	66069.058
12	0	346579.14	66081.747
13	0	346570.37	66093.286
14	0	346556.51	66101.824
15	0	346547.51	66085.172
16	0	346540.53	66074.418
17	0	346531.02	66061.626
18	0	346523.96	66048.640
19	0	346519.11	66031.853
20	0	346515.14	66018.894
21	0	346510.56	66004.308
22	0	346507.32	65989.273
23	0	346505.77	65973.931
24	0	346503.96	65958.360
25	0	346502.17	65943.551
26	0	346500.36	65930.080
27	0	346499.20	65916.311
28	0	346497.30	65902.016
29	0	346496.17	65886.741
30	0	346493.44	65868.974
31	0	346492.37	65854.901
32	0	346489.95	65838.804
33	0	346488.57	65825.996
34	0	346476.32	65806.098
35	0	346477.66	65790.427
36	0	346471.28	65776.666
37	0	346467.44	65763.879
38	0	346460.73	65748.874
39	0	346455.14	65735.540
40	0	346444.61	65728.198
41	0	346427.61	65726.465
42	0	346411.93	65728.446
43	0	346396.95	65727.190
44	0	346380.40	65729.323
45	0	346364.69	65714.760
46	0	346351.39	65708.793
47	0	346337.80	65701.833
48	0	346322.54	65694.503

ZERO GAS MIGRATION LIMITATION SURVEY DATA
September 21 and 22, 2021

Sample ID	% LEL	Northing	Easting
49	0	346290.31	65676.537
50	0	346276.32	65668.727
51	0	346233.81	65631.381
52	0	346219.62	65645.755
53	0	346209.42	65659.475
54	0	346203.96	65670.155
55	0	346192.23	65677.945
56	0	346182.11	65692.420
57	0	346360.19	65840.535
58	0	346344.23	65846.614
59	0	346333.86	65855.372
60	0	346319.15	65858.943
61	0	346308.64	65849.323
62	0	346301.29	65835.308
63	0	346287.21	65829.651
64	0	346272.93	65823.770
65	0	346256.12	65815.621
66	0	346245.40	65810.008
67	0	346235.69	65802.327
68	0	346222.95	65789.329
69	0	346208.68	65776.934
70	0	346194.86	65765.834
71	0	346181.17	65760.102
72	0	346169.29	65751.611
73	0	346158.14	65741.570
74	0	346154.07	65731.909
75	0	346160.24	65714.114
76	0	346169.35	65701.349
77	0	346224.15	65620.873
78	0	346213.46	65605.363
79	0	346206.79	65591.686
80	0	346199.43	65579.917
81	0	346194.92	65564.543
82	0	346189.26	65547.279
83	0	346187.48	65536.282
84	0	346183.71	65517.855
85	0	346184.26	65499.847
86	0	346188.86	65482.873
87	0	346195.32	65469.904
88	0	346202.08	65453.895
89	0	346208.97	65438.500
90	0	346219.16	65424.535
91	0	346225.45	65412.763
92	0	346231.92	65399.495
93	0	346238.58	65380.465
94	0	346242.47	65367.061
95	0	346245.32	65355.321
96	0	346245.50	65343.436

ZERO GAS MIGRATION LIMITATION SURVEY DATA
September 21 and 22, 2021

Sample ID	% LEL	Northing	Easting
97	0	346244.96	65333.051
98	0	346241.41	65315.833
99	0	346245.22	65296.967
100	0	346254.54	65284.553
101	0	346236.38	65285.152
102	0	346234.40	65271.183
103	0	346234.07	65254.395
104	0	346235.37	65240.330
105	0	346236.62	65222.359
106	0	346237.39	65209.161
107	0	346240.49	65193.236
108	0	346245.27	65177.511
109	0	346248.82	65164.048
110	0	346254.89	65146.684
111	0	346262.44	65135.172
112	0	346273.60	65121.971
113	0	346285.87	65129.640
114	0	346296.48	65143.505
115	0	346302.78	65152.761
116	0	346309.29	65159.821
117	0	346324.21	65155.938
118	0	346335.90	65149.539
119	0	346350.86	65144.684
120	0	346375.18	65137.213
121	0	346384.37	65149.791
122	0	346394.59	65157.412
123	0	346404.23	65168.978
124	0	346410.11	65184.492
125	0	346416.27	65200.831
126	0	346425.31	65214.926
127	0	346434.02	65231.525
128	0	346446.66	65230.300
129	0	346459.18	65226.318
130	0	346473.03	65226.332
131	0	346488.31	65226.183
132	0	346501.33	65224.395
133	0	346513.87	65223.379
134	0	346527.04	65219.328
135	0	346532.82	65212.673
136	0	346544.36	65213.779
137	0	346545.28	65223.096
138	0	346550.07	65242.096
139	0	346556.65	65257.583
140	0	346562.58	65273.410
141	0	346568.33	65291.122
142	0	346572.68	65307.329
143	0	346576.71	65319.108
144	0	346579.61	65337.922

ZERO GAS MIGRATION LIMITATION SURVEY DATA
September 21 and 22, 2021

Sample ID	% LEL	Northing	Easting
145	0	346585.84	65351.781
146	0	346591.98	65366.271
147	0	346595.18	65382.096
148	0	346608.74	65387.109
149	0	346625.63	65382.673
150	0	346641.08	65378.086
151	0	346653.94	65373.805
152	0	346670.39	65369.888
153	0	346688.30	65364.316
154	0	346700.75	65359.919
155	0	346715.41	65357.209
156	0	346731.82	65354.059
157	0	346746.94	65353.633
158	0	346760.79	65350.351
159	0	346775.09	65345.848
160	0	346789.19	65341.392
161	0	346802.74	65334.895
162	0	346810.52	65346.519
163	0	346821.70	65362.877
164	0	346829.46	65376.259
165	0	346835.76	65391.886
166	0	346839.00	65404.457
167	0	346845.58	65418.304
168	0	346852.98	65433.810
169	0	346859.68	65447.533
170	0	346867.01	65464.834
171	0	346872.02	65481.322
172	0	346873.95	65493.956
173	0	346876.28	65510.204
174	0	346873.38	65527.797
175	0	346875.04	65544.885
176	0	346871.65	65560.972
177	0	346868.81	65573.406
178	0	346866.09	65589.006
179	0	346858.16	65602.033
180	0	346853.89	65621.765
181	0	346850.93	65638.836
182	0	346848.17	65656.415
183	0	346848.00	65671.696
184	0	346847.13	65685.367
185	0	346845.41	65704.271
186	0	346846.53	65719.000
187	0	346845.77	65734.704
188	0	346845.25	65749.487
189	0	346844.34	65765.340
190	0	346843.14	65784.437
191	0	346842.73	65798.509
192	0	346841.95	65813.807

ZERO GAS MIGRATION LIMITATION SURVEY DATA
September 21 and 22, 2021

Sample ID	% LEL	Northing	Easting
193	0	346841.46	65830.499
194	0	346843.59	65847.014
195	0	346836.32	65841.816
196	0	346818.38	65841.299
197	0	346802.99	65844.488
198	0	346789.21	65846.869
199	0	346778.02	65855.252
200	0	346767.76	65863.252
201	0	346753.05	65863.710
202	0	346735.20	65870.886
203	0	346726.22	65882.105
204	0	346717.97	65891.999
205	0	346710.47	65905.019
206	0	346703.70	65915.688
207	0	346702.27	65929.356
208	0	346698.27	65945.642
209	0	346699.02	65960.946
210	0	346700.55	65976.706
211	0	346394.48	65758.617
212	0	346409.05	65814.824
213	0	346410.51	65821.491
214	0	346414.18	65833.585
215	0	346418.40	65848.550
216	0	346423.34	65865.748
217	0	346427.25	65880.566
218	0	346430.75	65894.351
219	0	346437.15	65910.580
220	0	346440.27	65925.595
221	0	346443.41	65941.745
222	0	346446.98	65956.190
223	0	346451.90	65971.903
224	0	346454.72	65986.785
225	0	346459.82	66000.409
226	0	346465.26	66017.150
227	0	346470.10	66034.265
228	0	346473.43	66046.212
229	0	346478.89	66063.402
230	0	346483.44	66078.238
231	0	346487.73	66092.338
232	0	346492.59	66105.742
233	0	346495.06	66123.001
234	0	346498.40	66135.842
235	0	346503.12	66150.654
236	0	346508.42	66164.755
237	0	346512.35	66177.406
238	0	346515.52	66194.934
239	0	346518.20	66209.621
240	0	346522.28	66228.591

ZERO GAS MIGRATION LIMITATION SURVEY DATA
September 21 and 22, 2021

Sample ID	% LEL	Northing	Easting
241	0	346527.00	66239.814
242	0	346530.82	66256.149
243	0	346531.61	66272.145
244	0	346536.38	66282.823
245	0	346538.63	66294.647
246	0	346559.53	66290.888
247	0	346574.87	66287.294
248	0	346585.88	66280.630
249	0	346608.50	66272.990
250	0	346617.40	66275.853
251	0	346630.96	66274.207
252	0	346644.54	66270.762
253	0	346659.14	66267.630
254	0	346679.22	66262.865
255	0	346693.65	66259.189
256	0	346706.79	66256.206
257	0	346715.22	66250.763
258	0	346729.33	66250.988
259	0	346743.76	66247.372
260	0	346760.11	66244.175
261	0	346773.74	66240.656
262	0	346789.79	66238.059
263	0	346800.86	66235.692
264	0	346815.36	66231.466
265	0	346827.80	66218.736
266	0	346838.49	66207.026
267	0	346845.19	66192.480
268	0	346849.15	66181.091
269	0	346852.25	66166.994
270	0	346852.28	66155.574
271	0	346850.94	66142.810
272	0	346851.26	66124.383
273	0	346851.08	66107.709
274	0	346851.07	66092.356
275	0	346850.85	66078.624
276	0	346851.00	66077.987
277	4	346849.43	66060.601
278	0	346851.06	66059.824
279	0	346848.50	66046.762
280	0	346848.06	66034.478
281	0	346846.98	66017.287
282	0	346846.57	66000.519
283	0	346847.41	65981.439
284	0	346844.40	65962.306
285	0	346845.51	65940.881
286	0	346846.32	65927.784
287	0	346845.74	65910.615
288	0	346844.68	65900.574

ZERO GAS MIGRATION LIMITATION SURVEY DATA
September 21 and 22, 2021

Sample ID	% LEL	Northing	Easting
289	0	346846.91	65884.071
290	0	346848.37	65867.284
291	0	346848.46	65850.705
292	0	346442.69	65255.783
293	0	346432.62	65265.348
294	0	346420.76	65276.767
295	0	346413.96	65291.020
296	0	346410.73	65307.140
297	0	346408.00	65321.720
298	0	346403.69	65339.402
299	0	346397.87	65354.450
300	0	346391.14	65371.068
301	0	346373.89	65368.919
302	0	346360.62	65365.073
303	0	346344.63	65363.879
304	0	346330.50	65364.985
305	0	346307.80	65387.383
306	0	346303.85	65415.738
307	0	346287.27	65432.188
308	0	346286.20	65448.742
309	4	346286.61	65461.836
310	0	346281.54	65462.343
311	18	346289.01	65472.563
312	0	346285.18	65474.784
313	0	346289.48	65488.983
314	16	346289.80	65502.492
315	0	346285.41	65503.520
316	0	346289.17	65516.698
317	0	346289.72	65531.338
318	0	346294.79	65545.906
319	0	346305.50	65560.802
320	0	346346.54	65678.803
321	0	346351.31	65663.280
322	0	346355.98	65646.281
323	0	346352.67	65626.414
324	0	346360.68	65614.500
325	0	346359.84	65600.181
326	0	346359.41	65584.194
327	0	346360.59	65570.785
328	0	346359.75	65554.640
329	0	346358.42	65539.959
330	0	346355.25	65525.423
331	0	346352.67	65512.064
332	0	346353.52	65496.794
333	0	346351.21	65480.035
334	0	346353.03	65464.938
335	0	346355.36	65448.907
336	0	346356.62	65433.766

ZERO GAS MIGRATION LIMITATION SURVEY DATA
September 21 and 22, 2021

Sample ID	% LEL	Northing	Easting
337	0	346356.76	65416.982
338	0	346358.59	65400.090
339	0	346358.75	65386.334

FARMINGDALE, NY METEOROLOGICAL DATA DURING SURVEY
September 21 and 22, 2021

U.S. Department of Commerce
National Oceanic & Atmospheric Administration

Station: FARMINGDALE REPUBLIC AIRPORT, NY US 54787
Current Location: Elev: 81 ft. Lat: 40.7342° N Lon: -73.4169° W

Date & Time	Temperature (Fahrenheit)	Dew Point (Fahrenheit)	Feel (Fahrenheit)	Relative Humidity (Percent)	Wind Direction (Degrees)	Wind Speed (mph)	Wind Gust (mph)	Altimeter (inHg)	SLP (hPa)	Visibility (Miles)	Weather	Metar
9/21/2021 0:53	59	54		83.46	100	3.45		30.38	1028.6	10		KFRG 210453Z AUTO 10003KT 10SM CLR 15/12 A3038 RMK AO2 SLP286 T01500122 402390144
9/21/2021 1:53	59	54		83.46	50	4.6		30.37	1028.5	10		KFRG 210553Z AUTO 05004KT 10SM CLR 15/12 A3037 RMK AO2 SLP285 T01500122 10194 20144 58003
9/21/2021 2:53	59	54		83.46	60	5.75		30.36	1027.9	10		KFRG 210653Z AUTO 06005KT 10SM CLR 15/12 A3036 RMK AO2 SLP279 T01500122
9/21/2021 3:53	59	54		83.46	60	5.75		30.35		10		KFRG 210753Z AUTO 06005KT 10SM CLR 15/12 A3035 RMK AO2 SLPNO T01500122
9/21/2021 4:53	57.9	53.1		84	50	4.6		30.34	1027.5	10		KFRG 210853Z AUTO 05004KT 10SM CLR 14/12 A3034 RMK AO2 SLP275 T01440117 56010
9/21/2021 5:53	57.9	53.1		84	60	5.75		30.35	1027.6	10		KFRG 210953Z AUTO 06005KT 10SM CLR 14/12 A3035 RMK AO2 SLP276 T01440117
9/21/2021 6:53	**59**	**53.1**		**80.75**	**60**	**5.75**		**30.35**	**1027.7**	**10**		**KFRG 211053Z AUTO 06005KT 10SM CLR 15/12 A3035 RMK AO2 SLP277 T01500117**
9/21/2021 7:53	**63**	**53.1**		**70.07**	**70**	**5.75**		**30.36**	**1028.1**	**10**		**KFRG 211153Z AUTO 07005KT 10SM CLR 17/12 A3036 RMK AO2 SLP281 T01720117 10172 20144 53006**
9/21/2021 8:53	**66**	**54**		**65.21**	**80**	**5.75**		**30.37**	**1028.2**	**10**		**KFRG 211253Z AUTO 08005KT 10SM BKN035 19/12 A3037 RMK AO2 SLP282 T01890122**
9/21/2021 9:53	**70**	**57**		**63.37**	**100**	**5.75**		**30.37**	**1028.2**	**10**		**KFRG 211353Z AUTO 10005KT 10SM SCT042 21/14 A3037 RMK AO2 SLP282 T02110139**
9/21/2021 10:53	**72**	**59**		**63.61**	**90**	**8.05**		**30.37**	**1028.4**	**10**		**KFRG 211453Z AUTO 09007KT 10SM SCT022 BKN046 22/15 A3037 RMK AO2 SLP284 T02220150 53003**
9/21/2021 11:53	**73**	**62.1**		**68.66**	**110**	**9.2**		**30.36**	**1027.9**	**10**		**KFRG 211553Z 11008KT 10SM FEW023 SCT037 SCT050 23/17 A3036 RMK AO2 SLP279 T02280167**
9/21/2021 12:53	**75**	**63**		**66.27**	**140**	**13.8**		**30.34**	**1027.5**	**10**		**KFRG 211653Z 14012KT 10SM SCT024 SCT032 24/17 A3034 RMK AO2 SLP275 T02390172**
9/21/2021 13:53	**75**	**63**		**66.27**	**120**	**9.2**		**30.33**	**1027.1**	**10**		**KFRG 211753Z 12008KT 10SM FEW023 BKN034 OVC044 24/17 A3033 RMK AO2 SLP271 T02390172 10244 20172 56012**
9/21/2021 14:53	**75**	**64**		**68.64**	**120**	**12.65**		**30.32**	**1026.8**	**10**		**KFRG 211853Z 12011KT 10SM FEW024 SCT038 BKN047 24/18 A3032 RMK AO2 SLP268 T02390178**
9/21/2021 15:53	**75**	**64**		**68.64**	**140**	**12.65**		**30.31**	**1026.2**	**10**		**KFRG 211953Z 14011KT 10SM SCT023 BKN028 BKN035 24/18 A3031 RMK AO2 SLP262 T02390178**
9/21/2021 16:53	75	63		66.27	120	9.2		30.3	1026.0	10		KFRG 212053Z 12008KT 10SM BKN055 24/17 A3030 RMK AO2 SLP260 T02390172 56011
9/21/2021 17:53	73	64.9		75.75	120	10.35		30.29	1025.7	10		KFRG 212153Z 12009KT 10SM FEW049 SCT060 23/18 A3029 RMK AO2 SLP257 T02280183
9/21/2021 18:53	72	64.9		78.35	110	6.9		30.29	1025.6	10		KFRG 212253Z 11006KT 10SM SCT024 BKN033 OVC042 22/18 A3029 RMK AO2 SLP256 T02220183
9/21/2021 19:53	71.1	64.9		80.78	110	9.2		30.28	1025.4	10		KFRG 212353Z 11008KT 10SM FEW017 SCT038 BKN050 22/18 A3028 RMK AO2 SLP254 T02170183 10250 20217 56006
9/21/2021 20:53	71.1	64.9		80.78	110	9.2		30.28	1025.2	10		KFRG 220053Z AUTO 11008KT 10SM SCT045 BKN055 OVC070 22/18 A3028 RMK AO2 SLP252 T02170183
9/21/2021 21:53	71.1	66		83.93	100	6.9		30.26	1024.8	10		KFRG 220153Z AUTO 10006KT 10SM BKN016 OVC041 22/19 A3026 RMK AO2 SLP248 T02170189
9/21/2021 22:53	71.1	66		83.93	0	0		30.26	1024.5	10		KFRG 220253Z 00000KT 10SM OVC009 22/19 A3026 RMK AO2 CIG 008V012 SLP245 T02170189 58009
9/22/2021 5:53	72	69.1		90.59	150	10.35		30.16	1021.3	10		KFRG 220953Z AUTO 15009KT 10SM OVC007 22/21 A3016 RMK AO2 SLP213 T02220206 $
9/22/2021 6:53	**73**	**70**		**90.32**	**150**	**12.65**		**30.16**	**1021.2**	**10**		**KFRG 221053Z AUTO 15011KT 10SM BKN005 OVC016 23/21 A3016 RMK AO2 CIG 005V010 SLP212 T02280211**
9/22/2021 7:53	**73**	**70**		**90.32**	**170**	**12.65**		**30.16**	**1021.1**	**10**		**KFRG 221153Z 17011KT 10SM BKN006 OVC012 23/21 A3016 RMK AO2 SLP211 T02280211 10228 20222 56005**
9/22/2021 8:53	**75**	**70**		**84.46**	**170**	**13.8**		**30.15**	**1020.9**	**10**		**KFRG 221253Z 17012KT 10SM OVC007 24/21 A3015 RMK AO2 CIG 006V011 SLP209 T02390211**
9/22/2021 10:53	**75.9**	**70**		**81.96**	**180**	**14.95**		**30.14**	**1020.5**	**10**		**KFRG 221453Z 18013KT 10SM FEW028 SCT060 24/21 A3014 RMK AO2 SLP205 T02440211 58006**
9/22/2021 11:53	**78.1**	**71.1**		**79.1**	**170**	**13.8**		**30.13**	**1020.1**	**10**		**KFRG 221553Z 17012KT 10SM BKN011 OVC027 26/22 A3013 RMK AO2 SLP201 T02560217**
9/22/2021 12:53	78.1	70		76.19	160	17.25		30.1	1019.3	10		KFRG 221653Z 16015KT 10SM BKN011 26/21 A3010 RMK AO2 SLP193 T02560211
9/22/2021 13:53	78.1	68		71.14	170	13.8		30.08		10		KFRG 221753Z 17012KT 10SM CLR 26/20 A3008 RMK AO2 SLPNO T02560200 10267 20228 58020
9/22/2021 14:53	80.1	69.1	83.01	69.18	170	16.1		30.06	1017.8	10		KFRG 221853Z 17014KT 10SM CLR 27/21 A3006 RMK AO2 SLP178 T02670206
9/22/2021 15:53	79	70		73.97	160	14.95		30.05	1017.4	10		KFRG 221953Z 16013KT 10SM BKN013 26/21 A3005 RMK AO2 SLP174 T02610211
9/22/2021 16:53	77	70		79.02	170	14.95		30.04	1017.1	10		KFRG 222053Z 17013KT 10SM BKN011 25/21 A3004 RMK AO2 SLP171 T02500211 56015
9/22/2021 17:53	75.9	70		81.96	160	13.8		30.03	1016.8	10		KFRG 222153Z 16012KT 10SM OVC016 24/21 A3003 RMK AO2 SLP168 T02440211
9/22/2021 18:53	75	69.1		81.9	160	14.95		30.03	1016.8	10		KFRG 222253Z AUTO 16013KT 10SM SCT080 OVC095 24/21 A3003 RMK AO2 SLP168 T02390206
9/22/2021 19:53	75	70		84.46	150	16.1		30.03	1016.7	10		KFRG 222353Z AUTO 15014KT 10SM SCT046 BKN070 BKN090 24/21 A3003 RMK AO2 SLP167 T02390211 10272 20239 56004
9/22/2021 20:53	73.9	69.1		84.97	150	14.95		30.03	1016.7	10		KFRG 230053Z 15013KT 10SM BKN060 23/21 A3003 RMK AO2 SLP167 T02330206
9/22/2021 21:53	75	69.1		81.9	150	14.95		30.03	1016.9	10		KFRG 230153Z 15013KT 10SM BKN060 OVC090 24/21 A3003 RMK AO2 SLP169 T02390206
9/22/2021 22:53	73.9	69.1		84.97	150	13.8		30.02	1016.6	10		KFRG 230253Z 15012KT 10SM BKN075 23/21 A3002 RMK AO2 SLP166 T02330206 58001
9/22/2021 23:53	73.9	69.1		84.97	140	11.5		30.02	1016.6	10		KFRG 230353Z AUTO 14010KT 10SM CLR 23/21 A3002 RMK AO2 SLP166 T02330206

*Bold values are conditions during testing

APPENDIX C

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

PERIMETER LANDFILL GAS EXHAUST VENT STACK TEST

2021 Emissions Report

APPENDIX C

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

PERIMETER LANDFILL GAS EXHAUST VENT STACK TEST

2021 Emissions Report

Prepared for:

Town of Oyster Bay
Department of Public Works
Syosset, New York

Prepared by:

RTP Environmental Associates, Inc.
400 Post Avenue
Westbury, New York

December 2021

APPENDIX C

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

PERIMETER LANDFILL GAS
EXHAUST VENT STACK TEST

2021 Emissions Report

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

ATTACHMENTS

APPENDIX C

TOWN OF OYSTER BAY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

PERIMETER LANDFILL GAS EXHAUST VENT TEST

2021 Emissions Report

1.0 INTRODUCTION

RTP Environmental Associates, Inc. (RTP) was retained by the Town of Oyster Bay (Town) to conduct emission measurements at the Town of Oyster Bay Solid Waste Disposal Complex (OBSWDC) facility located on Old Bethpage Sweet Hollow Road in Melville, New York. The Town landfill site contains a landfill gas collection and control system (GCCS) that collects subsurface landfill gases along the perimeter of the Landfill and discharges the gases via an exhaust vent at the onsite blower station. In 2016, the New York State Department of Environmental Conservation (NYSDEC), in conjunction with other modifications to the post-closure monitoring requirements, instituted the annual exhaust vent test program. The Town developed a test protocol that was approved by the NYSDEC for conducting the tests; it is included in Attachment A.

Emission measurements were conducted at the exhaust vent stack for the perimeter collection system. The data generated from this program will be used to determine if the Town is meeting NYSDEC stipulated emission requirements.

The program was conducted by Mr. Kenneth J. Skipka and Dr. Gary Grunseich of RTP on August 11, 2021. The NYSDEC did not require that a member of their staff observe the test program.

The remainder of this document provides the technical approach used during this test program and the test results. A summary of the results is presented in Section 2.0. Section 3.0 presents a description of the facility specific to the GCCS and its operating parameters. Section 4.0 presents a discussion of the sampling and analytical methods. Section 5.0 describes the quality assurance (QA) procedures applied to this program.

2.0 SUMMARY AND DISCUSSION OF RESULTS

Triplicate 60-minute samples were collected from the GCCS exhaust vent on August 11, 2021. The tests were conducted to determine the 2021 emission rates of speciated Volatile Organic Compounds (VOCs) and then determine ambient impacts using an EPA reference method dispersion model SCREEN 3. The impacts were then compared to NYSDEC ambient air quality guidelines and Title V permit thresholds. In addition, stack flowrates were measured and converted to standard conditions and applied to measured concentrations

for very conservative direct comparisons to the regulatory threshold and NYSDEC ambient guidelines. During a pre-test site visit, RTP was informed by Town staff that the GCCS was being operated one (1) day per week with only blower #1 in operation during the past year. On August 9, 2021, 2 days prior to exhaust vent sampling, the Town turned on blower #1 to allow for the system to operate for 48 hours before testing. RTP initiated the first 1-hour test run at 7:56 on August 11, 2021 with only blower #1 in operation. In between the first and second test runs, Town staff turned on blower #3 to represent the maximum potential draw of gas out of the GCCS. Similar to 2020, blower #2 continues to remain offline. Blowers #1 and #3 were operated for the second and third test runs. It is worth noting that during the first test run, the average flow with only blower #1 running was 239.4 acfm. During the second and third test runs the average flow was 278.9 and 276.8 acfm, respectively. The addition of blower #3 equated to roughly a 16% increase in exhaust vent flow.

Table 2.1 provides the annual average 2021 emission rate per compound based on the concentrations observed during the three (3) 1- hour test runs. The results were averaged together to provide a combined speciated VOC emission rate for the year, based on the listed concentrations. The annual emission rate was equivalent to 2.545 pounds per year for all speciated VOCs via EPA Method TO-15; this total does not include concentrations for compounds that were below the minimum detection threshold for the TO-15 Method. This emission rate is significantly above the averages observed in 2019 and 2020 (0.771 & 0.346 pounds per year, respectively), and we believe the differences may be attributable to: 1) the new 1-day per week operating procedure, which no longer collects gas on a continual basis; 2) the new GCCS operating procedure could increase gas build up within the landfill prior to the system turning on each week or, 3) potential blockages in the GCCS that arbitrarily favor gas collection in certain parts of the landfill over others. The 2021 VOC emission rate is well below the Title V permit threshold for non-category sources (25 tons per year) in designated non-attainment areas, and well below the hazardous air pollutant (HAP) emission thresholds for individual air pollutants (10 tons per year) and combined HAPs (25 tons per year).

The test did not include the measurement of total non-methane VOCs via EPA Method 25 that is typically used for determining non-methane organic compound (NMOC) release rates from industrial stacks. Other NMOC release rates for other emission sources on the property were not included; thus, the actual pound per year NMOC release rate for the entire facility was not calculated. However, it should be noted that there does not appear to be any significant stationary sources of VOCs at the OBSWDC except for possibly the Municipal Solid Waste (MSW) transfer facility, located on the southern portion of the site.

Table 2.1 also provides the individual sample speciated VOC concentrations for the three (3) samples collected during the test. Considering all individual test results, three (3) of the speciated VOCs detected via Method TO-15 were in excess of the level of respective NYSDEC annual guideline concentrations (AGC). All three test runs exceeded the AGC for benzene, which ranged from 1.0 to 1.6 $\mu g/m^3$. The vinyl chloride AGC was also exceeded for all three test runs with samples ranging from 0.54-0.93 $\mu g/m^3$. The AGC for

Naphthalene was exceeded during the third test run with a concentration of 12.8 $\mu g/m^3$. Several compounds have individual AGCs that are below the detection limits afforded by Method TO-15. Some of these may have exceeded the level of the standard as well. No compounds exceeded the level of the respective short-term guideline concentration (SGC) threshold for individual compounds. These values are in-stack concentration levels and not directly comparable to ambient air levels in this case. The actual impact on ambient air quality is considerably lower as atmospheric dilution will reduce in-stack concentrations significantly.

An air quality impact analysis was completed using the EPA recommended SCREEN3 air dispersion model. SCREEN3 estimates conservative impacts compared to EPA recommended refined air dispersion modeling software such as AERMOD. Using the calculated average release rate of each of the constituents with values above the reporting limit and other parameters measured during sampling, the modeled maximum off-property annual and 1-hour concentrations were computed and were in compliance with the respective NYSDEC AGC and SGC values. The model results, shown in the far-right columns of Table 2.1, indicate all the compounds over the laboratory reporting limit are well below their respective AGC and SGC values at all receptors beyond the property fence line.

Table 2.1
TOWN OF OYSTER BAY, NY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

2021 LFG CONCENTRATION SUMMARY FOR VENT STACK

All concentration values in µg/std-m^3

DATE:	11-Aug-21	11-Aug-21	11-Aug-21	HIGHEST REPORTING LIMIT ($\mu g/m^3$)	NYSDEC CURRENT AGC	NYSDEC 1-HOUR SGC	AVERAGE CONSTITUENT RELEASE RATE (LBS/YR)	MODELED MAXIMUM OFFSITE:	
LOCATION:	Vent Stack	Vent Stack	Vent Stack					ANNUAL CONCENTRATION (µg/m3)	1-HOUR CONCENTRATION (µg/m3)
SAMPLE ID:	OBAY21:LFG1	OBAY21:LFG2	OBAY21:LFG3						
VACUUM START:	-31.00	-30.00	-31.00						
TIME START:	7:56	9:20	10:28						
VACUUM END:	-7.00	-7.00	-7.50						
TIME END:	8:56	10:20	11:28						
WIND DIRECTION/SPEED:	S / 6 mph	SW / 9 mph	SW / 7 mph						
Acetone	93.6	133.0	105	10.10	30,000	180,000	0.9136	0.0213	0.2659
Acetonitrile					60.0	---			
Acrolein					0.35	2.5			
Acrylonitrile					0.015	---			
alpha-Pinene					270	---			
Benzene	**1.3**	**1.0**	**1.6**	0.55	0.13	27	0.0107	0.0002	0.0031
Benzyl Chloride				4.40	0.02	240			
Bromodichloromethane				2.30	70.0	---			
Bromoform				8.80	0.91	---			
Bromomethane				1.30	5.0	3,900			
Carbon Disulfide				1.10	700	6,200			
Carbon Tetrachloride				2.20	0.17	1,900			
Chlorobenzene				1.60	60.0	---			
Chloroethane				0.90	10,000	---			
Chloroform				0.83	14.7	150			
Chloromethane	5.5	3.9	5.7	0.71	90.0	22,000	0.0416	0.0010	0.0121
cis-1,2-Dichloroethene					63.0	---			
cis-1,3-Dichloropropene					0.25	---			
Cumene					400	---			
Cyclohexane	8	5.3	6.4	2.90	6,000	---	0.054	0.0013	0.0158
Dibromochloromethane				2.90	0.10	---			
Dichlorodifluoromethane (CFC 12)	16.8	10.7	14.3	1.70	12,000	---	0.1152	0.0027	0.0335
d-Limonene					---	---			
Ethanol	17.4	18.6	17.4	3.20	45,000	---	0.147	0.0034	0.0428
Ethyl Acetate		1.3		1.20	3,400	---	0.011	0.0003	0.0031
Ethylbenzene				1.50	1,000	---			
m,p-Xylenes		4.3	3.3	3.00	100	22,000	0.0314	0.0007	0.0091
Methyl Methacrylate					700	41,000			
Methyl tert-Butyl Ether				6.10	3.8	---			
Methylene Chloride				5.90	60.0	14,000			
Naphthalene			**12.8**	4.50	3.0	7,900	0.106	0.0025	0.0308
n-Butyl Acetate					17,000	95,000			
n-Heptane	5.2	3.4	4.3	1.40	3,900	210,000	0.036	0.0008	0.0103
n-Hexane	12.8	7.4	10.4	1.20	700	---	0.084	0.0020	0.0245
n-Nonane					25,000	---			
n-Octane					3,300	---			
n-Propylbenzene					1,000	54,000			
o-Xylene		1.6		1.50	100	22,000	0.0132	0.0003	0.0038
Propene	40.3	27.3	33	1.50	3,000	---	0.277	0.0065	0.0807
Styrene				1.50	1,000	17,000			
Tetrachloroethene	2	1.5	1.9	1.20	4.0	300	0.0149	0.0003	0.0043
Tetrahydrofuran (THF)	1.1	1.1		1.00	350	30,000	0.009	0.0002	0.0026
Toluene	1.8	8.3	4.6	1.30	5,000	37,000	0.0405	0.0009	0.0118
trans-1,2-Dichloroethene				0.00	63.0	---			
trans-1,3-Dichloropropene				0.00	0.25	---			
Trichloroethene				0.92	0.20	14,000			
Trichlorofluoromethane	3.7	4.3	7	1.90	5,000	9,000	0.0413	0.0010	0.0120
Trichlorotrifluoroethane					180,000	960,000			
Vinyl Acetate				1.20	200	5,300			
Vinyl Chloride	**0.93**	**0.54**	**0.76**	0.44	0.11	180,000	0.0061	0.0001	0.0018
1,1,1-Trichloroethane				1.90	5,000	9,000			
1,1,2,2-Tetrachloroethane				2.40	16.0	---			
1,1,2-Trichloro-1,2,2-trifluoroethane			3	2.60	---	---	0.025	0.0006	0.0072
1,1,2-Trichloroethane				0.93	1.4	---			
1,1-Dichloroethane				1.40	0.63	---			
1,1-Dichloroethene				1.40	200	---			
1,2,4-Trichlorobenzene				12.40	---	3,700			
1,2,4-Trimethylbenzene				1.70	6.0	---			
1,2-Dibromo-3-chloropropane					0.2	---			
1,2-Dibromoethane				1.30	0.0017	---			
1,2-Dichlorotetrafluoroethane	64.1	36.6	49.5	2.40	17,000	---	0.4138	0.0096	0.1205
1,2-Dichlorobenzene				5.10	200	30,000			
1,2-Dichloroethane				1.40	0.038	---			
1,2-Dichloropropane				1.60	4.0	---			
1,3,5-Trimethylbenzene				1.70	6.0	---			
1,3-Butadiene				0.76	0.033	---			
1,3-Dichlorobenzene				5.10	10.0	---			
Hexachlorobutadiene				9.10	0.045	---			
1,4-Dichlorobenzene				5.10	0.09	---			
1,4-Dioxane					0.20	3,000			
2-Butanone (Methyl ethyl ketone)		6.1		5.00	5,000	13,000	0.0504	0.0012	0.0147
2-Hexanone (Methyl butyl ketone)				7.00	30.0	4,000			
2-Propanol (Isopropyl Alcohol)	14	9.8	13.6	4.20	7,000	98,000	0.103	0.0024	0.0300
3-Chloro-1-propene (Allyl Chloride)					1.0	600			
4-Ethyltoluene					---	---			
4-Methyl-2-pentanone (Methyl isobutyl ketone)				7.00	3,000	31,000			
						Total lbs/yr:	***2.545***		

Notes:

- All samples were tested by Pace Analytical for VOCs using EPA TO-15 with TIC analysis.
- AGC/SGC values are current as of June 2020.
- Shaded values indicate stack concentration exceeds the AGC.
- Values below laboratory reporting limit are considered non-detect and therefore left blank.
- Method blank for this test was below reporting limit.
- Modeled maximum annual concentrations were calculated using the EPA's SCREEN3 model.
- Model inputs included a stack height of 12 ft, stack diameter of 8.25 in, flow rate of 265.04 acfm, exit temperature of 68.0 F, flat terrain options, and rural environment.
- Closest building in the model had dimensions of Height: 10 ft, Length: 75 ft, and Width: 45 ft. Closest fence line was 10 ft away from stack.

3.0 PROCESS DESCRIPTION

The Town owns and operates a GCCS at the OBSWDC. The GCCS provides a control mechanism for landfill gases generated by the formerly active Oyster Bay Landfill. The GCCS includes a Blower Station containing three (3) blower skids, rated at 500 cubic feet per minute (cfm) per skid. Each blower is connected to the perimeter header that collects subsurface landfill gas (LFG) emissions that have migrated to extraction wells in the Landfill and along portions of its perimeter. In the past, the Town was able to combust the landfill gases via a thermal oxidizer (TO); however, that unit is no longer operational.

Currently, the landfill gases are collected by GCCS perimeter and extraction wells. These gases are then directed to a common header that encircles the Landfill. The header enters the Blower Station and through a series of valves is connected to the operating blowers. The blowers exhaust into an exhaust header that is connected to the perimeter LFG vent stack. Typically, one to two blowers operated continuously with the third blower serving as a standby unit. The methane concentrations in the perimeter gas have been insufficient for several years to maintain steady state operations of the TO. As a result, the NYSDEC allowed the collected landfill gases to exhaust to the atmosphere untreated. The NYSDEC placed an additional condition on the operation of the GCCS since the TO was decommissioned. The requirement includes the testing of the GCCS vent stack annually to determine if the in-vent gas concentrations exceed the State ambient air guidelines provided in DAR-1 for speciated VOCs, and to determine if the total speciated VOCs being released exceed the Title V threshold limits for VOCs.

During the 2021 annual test one (1) GCCS blower was in operation during the first test run while two (2) were on during the subsequent two (2) test runs. The blowers are not equipped with variable speed drives and the active blower was operating below the design rate of 500 cfm. The actual flowrate is typically less than the design value because of the back pressure caused by the header and the extraction wells. It should be noted during the test that the flowrates were much lower than the rates observed in 2018 & 2019 and comparable to the flowrates in 2020.

4.0 SAMPLING AND ANALYTICAL METHODS

The emission tests included measurements of flow velocity, moisture content, temperature, atmospheric pressure, and concentrations of speciated VOCs only. The following sections present a brief discussion of the various equipment and test methods used during the test program.

4.1 Pollutant Emissions Monitoring

Triplicate 60-minute emission tests were conducted on the exhaust from the GCCS vent stack. One (1) blower was in operation during the entire test period. Samples of the exhaust gases were collected in SUMMA canisters using a 5-foot length of Teflon ¼-inch tubing that was inserted into the middle of the exhaust stack via the west stack port. Each 6-Liter SUMMA canister was equipped with a dedicated flow controller configured to collect slightly less than 6-Liters of exhaust gas over the 1-hour sampling period.

The field team assembled the equipment prior to the test. Flow measurements were made using a TSI 9565-P VelociCalc Multi-function Ventilation Meter and TSI 964 Probe. Temperature, humidity, atmospheric pressure, and flow velocity were recorded according to EPA Methods 1 and 2; these variables were recorded before and after each test.

The sampling of the exhaust gases began after the above variables were measured. A SUMMA Canister was attached to a clean ¼-inch Teflon line and the line was inserted into the exhaust stack via the west stack port. The pertinent field data were recorded and the initial vacuum, start time, and other data were recorded on the field data sheet. The sample run was stopped after 1-hour of elapsed time and the SUMMA canister was resealed, labelled, and stored for shipment. The remaining samples followed the same sequence and the final flow readings were taken at the conclusion of the test. Samples were returned to shipping boxes and returned to Pace Analytical Services, Inc. (Pace) with a completed chain-of-custody form. The chain-of-custody form and the laboratory results are provided in Attachment B.

4.2 Volumetric Flowrate Measurements

The volumetric flowrate of the exhaust gases from the vent stack was measured in accordance with EPA Methods 1 and 2. The stack internal diameter was 8.25 inches and, therefore, according to Section 11.3.1.1 of Method 1, six (6) traverse points were selected on two (2) perpendicular diameters, shown in Table 1-2 of Method 1, and presented in Figure 4.1. The flow data was then used to calculate scfm flow volumes to determine the annual average emission rates for the individual compounds listed in Table 2.1.

Figure 4.1

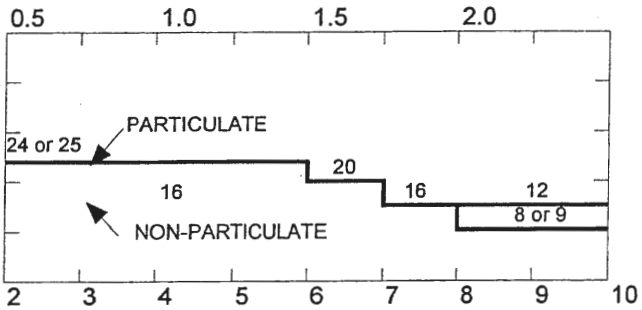
TOWN OF OYSTER BAY, NY
OLD BETHPAGE SOLID WASTE DISPOSAL COMPLEX

Landfill Gas Vent Stack
EPA Method 1 Data Sheet

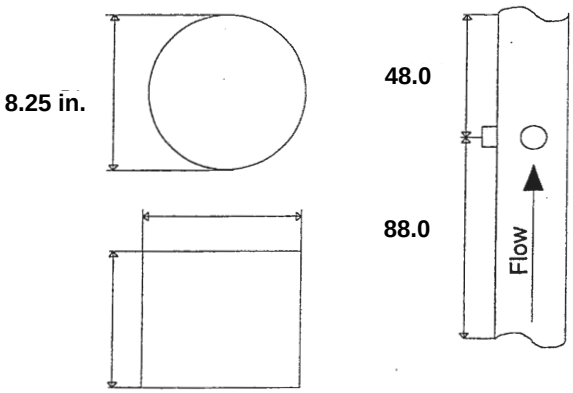
Firm: Town of Oyster Bay		Total Traverse Points Required	12
Location: Perimeter LFG Exhaust Vent Stack		Number of Ports	2
Diameters Upstream of Exit:	4.0	Points per Port	6
Diameters Downstream of Disturb.	8.0	Traverse (Horizontal or Vertical)	Horizontal
Nipple Size (in.)	1.0		

Minimum Number of Traverse Points For Particulate and Non-Particulate Traverses

Duct Diameters Upstream From Flow Disturbance



Duct Diameters Downstream From Flow Disturbance



Cross-Sectional Layout For Rectangular Stacks	
Total Traverse Points	Matrix
9	3x3
12	4x3
16	4x4
20	5x4
25	5x5

Location of Points on a Circular Stack

Point Number on a Diameter	(Percent of Stack Diameter from inside Wall to Traverse Point) No. of Traverse Points on a Diameter				
	4	6	8	10	12
1	6.7	4.4	3.2	2.6	2.1
2	25.0	14.6	10.5	8.2	6.7
3	75.0	29.6	19.4	14.6	11.8
4	93.3	70.4	32.3	22.6	17.7
5		85.4	67.7	34.2	25.0
6		95.6	80.6	65.8	35.6
7			89.5	77.4	64.4
8			96.8	85.4	75.0
9				91.8	82.3
10				97.4	88.2
11					93.3
12					97.9

Traverse Point Location

Point Number	Distance From Wall (in.)	Total Distance (in.)
1	0.4	0.4
2	1.2	1.6
3	2.4	2.8
4	5.8	6.2
5	7.0	7.4
6	7.9	8.3

Test Number:		T-1	T-2	T-3	
Date:		August 11, 2021	August 11, 2021	August 11, 2021	
Time:		07:56-08:56	09:20-10:20	10:28-11:28	Average
Volumetric Flowrate	dscfm	227.52	265.06	263.05	**251.87**
	acfm	239.4	278.9	276.8	**265.04**

The actual average flowrate calculated during the collection of the three (3) samples in 2021 was below the 500 cfm design capacity of the blower. The average actual flowrate in 2021 was 265.04 acfm, which is lower than the 554.70 acfm and 509.02 acfm flowrates in 2018 and 2019, respectively and comparable to the 2020 flowrate of 262.27 acfm.

4.3 Moisture Measurements

The moisture content of the exhaust gases was measured during the test by a TSI 9565-P VelociCalc Multi-function Ventilation Meter and TSI 964 Probe. The calibration documentation for this unit is provided in Attachment A.

5.0 QUALITY ASSURANCE

The RTP quality assurance program (QA) is designed to ensure that emissions measurement work is performed by qualified staff using proper equipment and following written procedures in order to provide accurate, defensible data. This program is based on the EPA Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III (EPA-600/4-77-027b).

5.1 Measurement Methods

Sampling and measurement equipment, including any other pertinent apparatus uniquely identified, underwent preventive maintenance, and were calibrated before and after the test program. Most calibrations were performed with standards traceable to the National Institute for Standards and Technology (NIST) or other appropriate references. Records of all calibration data are maintained within RTP files and are available to the Town and onsite personnel.

During the field tests, sampling performance and progress were continually evaluated, and deviations from sampling method criteria were reported to the Field Team Leader who determined the validity of the test run. All field data were recorded on prepared field data sheets.

5.2 Emissions Monitoring System

The emissions monitoring system, which includes SUMMA canisters with pressure gauges and flow controllers, was prepared by Pace Laboratories. Pace provided evacuated 6.0 Liter SUMMA canisters with 1-hour calibrated flow controllers. Each flow controller was equipped with a calibrated pressure gauge. Initial and final pressures were recorded by RTP staff during the tests. During the data reduction process, all calculations were reviewed by a senior scientist. These quality control checks provided a means to ensure that the calculations were performed correctly.

ATTACHMENT A

TEST PROTOCOL, FIELD DATA, AND CALIBRATION SHEETS

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau E
625 Broadway, 12th Floor, Albany, NY 12233-7017
P: (518) 402-9813 I F: (518) 402-9819
www.dec.ny.gov

March 24, 2016

Honorable Richard T. Betz
Commissioner
Town of Oyster Bay
Department of Public Works
150 Miller Place
Syosset, New York 11791-5699

RE: Modification to Air Emissions Monitoring Program
Old Bethpage Solid Waste Disposal Complex
Consent Decree 83 CIV 5357
Site No. 130001

Dear Commissioner Betz:

The New York State Department of Environmental Conservation (Department) has reviewed the Town of Oyster Bay (Town) January 5, 2016 Petition for Reduction of Landfill Gas Monitoring at the Old Bethpage Landfill, prepared by D&B Engineers and Architects, P.C.

In response to the Town's initial submission, the Department requested, by email on February 5, 2016, that the methane collection system vent be sampled for Volatile Organic Chemicals on an annual basis. The Town agreed to perform this monitoring and provided the Old Bethpage Landfill Perimeter Gas Collection System Exhaust Testing Protocol (Attachment A) on March 11, 2016.

Pursuant to Consent Decree 83 CIV 5357 Appendix A - Remedial Action Plan, Attachment 2 - Old Bethpage Landfill Supplemental Gas Monitoring Program (Attachment B), with incorporation of the Town-prepared Old Bethpage Landfill Perimeter Gas Collection System Exhaust Testing Protocol, the Department approves the reduction of air and gas monitoring programs from quarterly to annually. Methane monitoring of the gas collection system exhaust shall continue on a weekly basis, with results presented in the quarterly Remedial Action Plan report. The Town shall report the findings of the annual air and gas monitoring program in the Annual Remedial Action Plan Report.

If you have questions or would like to discuss this matter further, please contact me by telephone at (518) 402-9813 or by email at benjamin.rung@dec.ny.gov.

Sincerely,

Benjamin Rung, P.E.
Project Manager
Remedial Section C, Remedial Bureau E
Division of Environmental Remediation

ec: M. Cruden, DER
B. Putzig, DER
W. Parish, Region 1
R. Ockerby, NYSDOH
E. Maccarone, lmaccarone@oysterbay-ny.gov
M. Russo, mrusso@oysterbay-ny.gov
N. Bergin, nbergin@oysterbay-ny.gov

Attachment A

Old Bethpage Landfill Perimeter Gas Collection System Exhaust - Proposed VOC Testing Protocol

In accordance with the request from the New York State Department of Environmental Conservation, the Town of Oyster Bay will initiate an annual sampling program to quantify the concentrations of Volatile Organic Compounds (VOCs) in the Old Bethpage Landfill perimeter gas collection system exhaust. This sampling event will be completed as part of the air emissions sampling program as dictated in Consent Decree 83 CIV 5357 with the State of New York for the Old Bethpage Landfill, as currently modified.

Each annual event shall entail collecting three 1-hour representative samples of the exhaust in a laboratory-prepared 6-Liter SUMMA canister (or equivalent) equipped with a flow regulator. Sample analysis shall be via EPA Method TO-14A, and performed by a New York State-certified environmental laboratory.

Notes

1. Sampling to be performed by the Town's Air Emissions Sampling (Air) consultant, currently RTP Environmental Associates, Inc., Westbury, New York
2. Analysis to be performed by the Town's Laboratory Analysis (Lab) consultant, currently Pace Analytical, Inc., Melville, New York

Procedures

1. When the field sampling event is scheduled, the Air consultant shall order the necessary sampling media from the Lab.
2. The Lab shall supply three (3) certified-clean SUMMA canisters equipped with a calibrated flow regulator set to a 1-hour fill time.
3. Once in the field, the Air consultant shall measure the current flow rate, temperature, humidity, and cross-sectional area of stack exhaust. This information shall be used later on to compute the volume of VOCs emitted by the stack exhaust.
4. The Air consultant shall record the precise start and finish time of the sampling, and verify the flow rate of the regulator.
5. Sufficient vacuum shall remain in the SUMMA canister to verify the sample's integrity.
6. The canister sample shall be properly identified by the Air consultant.
7. The Air consultant shall deliver the canister sample under Chain-of-Custody to the Lab consultant.
8. The Lab consultant shall analyze the sample in accordance with EPA Method TO-14A using gas chromatography and measured by a mass spectrometer.
9. The Lab consultant will provide the Air consultant with the analytical results.
10. The Air consultant will convert the data as required and compare the results to the DAR-1 short-term and annual guideline concentrations (SGCs and AGCs), and to Title V permit thresholds.
11. The results of this program shall be incorporated into the overall Air sampling program report.

Attachment B

RAP Attachment 2

OLD BETHPAGE LANDFILL
SUPPLEMENTAL GAS MONITORING PROGRAM

The supplemental landfill gas monitoring program for the Old Bethpage Landfill Remediation Program contains five components. These are 1) the collection of ambient air samples; 2) the collection of subsurface gas samples at a depth of 30"; 3) the collection of subsurface gas samples at depths of 10', 20', 30' and 40'; 4) the collection of thermal oxidizer emission samples (stack testing); and 5) the measurement of gas pressure to ascertain negative pressure created by the gas collection system. These data requirements supplement the existing methane gas monitoring program and will be reported in the annual reports produced under that program.

The location of the proposed sampling points are shown on Drawing No. 1, entitled "Old Bethpage Landfill Zero Percent Methane Gas Migration Contours, 1986 Annual Site Survey". A description of the various components of this program follows.

Ambient Air Samples

Ambient air samples (24 hr. samples) will be collected at three locations around the landfill as shown on Drawing No. 1. One location will be along Winding Road to the east and southeast of the landfill (near M-3 shown on Drawing No. 1). One location will be to the west of the landfill along Round Swamp Road (near M-33). A third location will be north of the landfill (between M-17 and M-22). Samples at these locations will be collected quarterly during the initial year of the program and, if approved by the State, on an annual basis thereafter. Samples will be analyzed for volatile organic compounds.

30" Deep Subsurface Gas Samples

Fourteen subsurface gas samples will be collected at a depth of 30" at the following locations surrounding the landfill as shown on Drawing No. 1: F-1, M-2, M-4, M-5, M-6, M-13, M-16, M-21, M-22, M-28, M-31, M-34, M-37 and M-39. Samples will be collected on a quarterly basis during the initial year of the program and, if approved by the State, on an annual basis thereafter. Samples will be analyzed for volatile organic compounds.

Subsurface Gas Samples at Various Depths

Subsurface gas samples will be collected at depths of 10', 20', 30', and 40' at location M-9 (to be repaired or replaced) shown on Drawing No. 1. Samples will be collected on a quarterly basis during the initial year of the program and, if approved by the State, on an annual basis thereafter. Samples will analyzed for volatile organic compounds.

Thermal Oxidizer Emissions

Thermal oxidizer emissions will be sampled (in the incinerator stack) on a quarterly basis during the initial year of the program. The emissions will be related to oxidizer incinerator temperatures during this initial year of sampling. Thereafter, the oxidizer temperatures will be monitored on a monthly basis to insure that temperatures needed to volatilize the organics are being maintained in the oxidizer. The emissions will continue to be sampled on an annual basis. Samples will be analyzed for volatile organic compounds.

Pressure Readings

Pressure readings will be taken at three locations around the perimeter of the gas collection system to ascertain whether a vacuum is created around the system. This data will assist in monitoring the effectiveness of the system and in determining whether the system needs adjustment or enhancement. One reading will be taken to the south of the landfill at either F-6 or F-9 (existing probes) shown on Drawing No. 1. A new probe will be installed and a reading taken to the northwest of landfill between LGV 16 and LGV 17. The third probe will be installed and a reading taken to the southeast of the landfill between TGV-1 and LGV-9. Pressure readings will be taken on a quarterly basis during the initial year of the program and, if approved by the State, on an annual basis thereafter.

Town of Oyster Bay Solid Waste Disposal Complex

Stack Vent Test Field Data Sheet

Site Location: Perimeter Blower Exhaust Vent at Blower Station

Date: 8/11/21

Operators: KTS / GG

Vent Stack Test

Run 1 * START			Run 2 **			Run 3 **			Run 4 **		
Port ID	Point ID	Velocity (ft/sec)	Port ID	Point ID	Velocity (ft/sec)	Port ID	Point ID	Velocity (ft/sec)	Port ID	Point ID	Velocity (ft/sec)
West	1	550	West	1	679	West	1	660	West	1	632
	2	615		2	733		2	706		2	682
	3	651		3	768		3	738		3	737
	4	678		4	794		4	781		4	785
	5	665		5	799		5	790		5	802
	6	620		6	603		6	697		6	721
South	1	648	South	1	762	South	1	757	South	1	757
	2	669		2	795		2	764		2	775
	3	691		3	810		3	775		3	796
	4	682		4	806		4	775		4	772
	5	670		5	782		5	756		5	766
	6	623		6	765		6	737		6	734
Time:		7:45	Time:		9:12	Time:		10:20	Time:		11:30
RH (Stack) (%):		36.6	RH (Stack) (%):		34.8	RH (Stack) (%):		32.0	RH (Stack) (%):		26.5
Temp (Stack) (°F):		96.3	Temp (Stack) (°F):		97.5	Temp (Stack) (°F):		102.3	Temp (Stack) (°F):		110.8
RH (Ambient) (%):		88	RH (Ambient) (%):		79	RH (Ambient) (%):		77	RH (Ambient) (%):		72
Temp (Ambient) (°F):		75	Temp (Ambient) (°F):		80.1	Temp (Ambient) (°F):		82.2	Temp (Ambient) (°F):		85
Baro. Pressure:		30.05	Baro. Pressure:		30.05	Baro. Pressure:		30.05	Baro. Pressure:		30.05
Landtec GEM 2000 CH_4 (%):		0.5	CH_4 (%):		0.4	CH_4 (%):		0.4	CH_4 (%):		0.7
CO_2 (%):		0.8	CO_2 (%):		0.5	CO_2 (%):		0.5	CO_2 (%):		0.7
O_2 (%):		19.6	O_2 (%):		19.5	O_2 (%):		20.0	O_2 (%):		19.5
Bal (%):		79.2	Bal (%):		79.6	Bal (%):		79.1	Bal (%):		79.1

SUMMA Canister Test

	Sample 1	Sample 2	Sample 3
Sample ID:	OBSWDC:LFGV1	OBSWDC:LFGV2	OBSWDC:LFGV3
Canister/Serial #:	0146	0728	1714
Flow Controller #:	FC1300	FC1297	FC1346
Time On:	0756	0920	1028
Time Off:	0856	1020	1128
Vacuum On:	-31.0	-30.0	-31.0
Vacuum at 20 mins:	-22.5	-22.0	-23.0
Vacuum at 40 mins:	-14.5	-14.0	-14.5
Vacuum Off:	-7.0	-7.0	-7.5
Wind Direction (deg):	S	SW	SW
Wind Speed (mph):	6	9	7

Comments: * 1 Blower running.

** 2 Blowers running

Sample Batch # Sample #1 : 24849

Sample #2 : 24847

Sample #3 :

RTP Environmental Associates, Inc.
400 Post Avenue, Suite 405
Westbury, New York 11590

Intermountain Specialty Gases
520 N. Kings Road
Nampa, ID 83687 (USA)
Phone (800) 552-5003, Fax (208) 466-9143
www.isgases.com

"Your calibration gas manufacturer since 1992"

CERTIFICATE OF ANALYSIS

Composition	Certification	Analytical Accuracy (+/-)
Methane	2.5 %	2%
Carbon Monoxide	50 ppm	2%
Oxygen	20.9 %	2%
Nitrogen	Balance UHP	
Hydrogen Sulfide	25 ppm	5%

Lot #	**19-6916**
Mfg. Date:	6/20/2019
Expiration Date:	
Transfill Date:	see cylinder
Parent Cylinder ID Number:	EB0075450

Method of Preparation:

Gravimetric/Pressure Transfilled

Method of Analysis:

The cylinder(s) in this lot were transfilled from parent mixes. These mixes were prepared gravimetrically and are traceable to the NIST by certified weights (ID #CA10814) used to calibrate the scale. These parent mixes were analyzed against standards traceable to NIST on a GC and a carbon monoxide analyzer to verify accuracy of the components. The H2S was checked on a hydrogen sulfide analyzer on the fill date.

Analysis By: Tony Janquart
Title: Quality Assurance Manager
Certificate Date: 6/20/2019

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC
128 Charlotte Ave.
Hicksville, NY 11801

Pine Environmental Services, Inc.

Instrument ID 14247
Description GEM 2000
Calibrated 8/9/2021 10:45:22AM

Manufacturer CES Landtec
Model Number GEM2000
Serial Number/ Lot Number GM11394/08
Location Hicksville
Department

State Certified
Status Pass
Temp °C 24.1
Humidity % 54

Calibration Specifications

Group # 1
Group Name Methane
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
50.00 / 50.00	%Volume	50.00	%Volume	50.00	50.00	0.00%	Pass

Group # 2
Group Name Carbon Dioxide
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
35.00 / 35.00	%Volume	35.00	%Volume	35.10	35.00	0.00%	Pass

Group # 3
Group Name Oxygen
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
20.90 / 20.90	%Volume	20.90	%Volume	20.50	20.90	0.00%	Pass

Test Instruments Used During the Calibration **(As Of Cal Entry Date)**

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Next Cal Date / Last Cal Date/ Expiration Date Opened Date

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Sam Tidd

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC

128 Charlotte Ave.
Hicksville, NY 11801

Pine Environmental Services, Inc.

Instrument ID 14247
Description GEM 2000
Calibrated 8/9/2021 10:45:22AM

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC
128 Charlotte Ave.
Hicksville, NY 11801

Pine Environmental Services, Inc.

Instrument ID 39495
Description TSI VelociCalc 9565
Calibrated 8/9/2021 10:24:22AM

Manufacturer	Tsi	**State Certified**	
Model Number	9565	**Status**	Pass
Serial Number/ Lot Number	9565P1232015	**Temp °C**	24
Location	Hicksville	**Humidity %**	54
Department			

Calibration Specifications

Group # 1
Group Name Functional, Pressure Test and Download

Test Performed: Yes **As Found Result: Pass** **As Left Result: Pass**

Test Instruments Used During the Calibration **(As Of Cal Entry Date)**

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Last Cal Date/ Opened Date	Next Cal Date / Expiration Date

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Sam Tidd

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Pine Environmental Services LLC
128 Charlotte Ave.
Hicksville, NY 11801

Pine Environmental Services, Inc.

Instrument ID A05271
Description Tsi 964
Calibrated 8/9/2021 10:25:56AM

Manufacturer Tsi
Model Number Velocity Probe
Serial Number/ Lot Number p10070032
Location Hicksville
Department

State Certified
Status Pass
Temp °C 24
Humidity % 55

Calibration Specifications

Group # 1
Group Name Functional, Pressure Test and Download

Test Performed: Yes **As Found Result: Pass** **As Left Result: Pass**

Test Instruments Used During the Calibration **(As Of Cal Entry Date)**

Test Standard ID	Description	Manufacturer	Model Number	Serial Number / Lot Number	Next Cal Date / Last Cal Date/ Expiration Date Opened Date

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Sam Tidd

All instruments are calibrated by Pine Environmental Services LLC according to the manufacturer's specifications, but it is the customer's responsibility to calibrate and maintain this unit in accordance with the manufacturer's specifications and/or the customer's own specific needs.

Notify Pine Environmental Services LLC of any defect within 24 hours of receipt of equipment
Please call 800-301-9663 for Technical Assistance

INSTRUMENT CALIBRATION REPORT

Advanced Labs, Inc.

Pine Environmental Services, Inc

Instrument ID 39495
Description TSI 9565P VelociCalc
Calibrated 6/30/2021

Manufacturer TSI
Model Number 9565P
Serial Number 9565P1232015
Location New Jersey
Temp 82

Classification
Status pass
Frequency Yearly
Department Lab
Humidity 29

Calibration Specifications

Group # 1
Group Name Barometric Pressure
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 2.0000
Plus/Minus 0.000

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
30.000 / 29.870	inHg	29.870	inHg	29.860	-----	-0.03%	Pass
30.000 / 29.870	inHg	29.870	inHg	-----	29.870	0.00%	Pass

Group # 2
Group Name Differential Pressure
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 1.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
-4.00 / -3.98	inH2O	-3.98	inH2O	-4.04	-----	1.51%	Fail
-4.00 / -4.06	inH2O	-4.06	inH2O	-----	-4.06	0.00%	Pass
4.00 / 4.01	inH2O	4.01	inH2O	4.07	-----	1.50%	Fail
4.00 / 4.15	inH2O	4.15	inH2O	-----	4.14	-0.24%	Pass
8.00 / 7.90	inH2O	7.90	inH2O	7.97	-----	0.89%	Pass
8.00 / 7.95	inH2O	7.95	inH2O	-----	7.96	0.13%	Pass
12.00 / 11.93	inH2O	11.93	inH2O	12.02	-----	0.75%	Pass
12.00 / 12.12	inH2O	12.12	inH2O	-----	12.14	0.17%	Pass

Test Instruments Used During the Calibration

Test Instrument ID	Description	Manufacturer	Serial Number	(As Of Cal Entry Date) Last Cal Date	Next Cal Date
DWYER 477AV	Dwyer 477AV-000 Digital Manometer	Dwyer	005TRQ	10/12/2020	10/12/2021
DWYER 477AV-1	Dwyer 477AV-1 Digital Manometer	Dwyer	005PM2	10/12/2020	10/12/2021
DWYER 477AV-3	Dwyer 477AV-3 Digital Manometer	Dwyer	005PM1	10/12/2020	10/12/2021
OMEGA HX93AC/DP25-E	Omega HX93AC/DP25-E	Omega Engineering	1010368 035025 035026	11/25/2020	11/25/2022
OMEGA PX02K1-16A5T /DP25-E-A	Omega PX02K1-16A5T/DP25-E-A	Omega Engineering	168377/8375030	11/25/2020	11/25/2022
OMEGA WT4401-D	Omega WT4401-D	Omega Engineering	101105	11/25/2020	11/25/2022

INSTRUMENT CALIBRATION REPORT

Advanced Labs, Inc.

Pine Environmental Services, Inc

Instrument ID 39495
Description TSI 9565P VelociCalc
Calibrated 6/30/2021

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Kevin Cole

Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

INSTRUMENT CALIBRATION REPORT

Advanced Labs, Inc.

Pine Environmental Services, Inc

Instrument ID A05271
Description TSI 964 Probe
Calibrated 7/22/2021

Manufacturer TSI
Model Number 964
Serial Number P10070032
Location New Jersey
Temp 80

Classification
Status pass
Frequency Yearly
Department Lab
Humidity 28

Calibration Specifications

Group # 1
Group Name Relative Humidity
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
30.00 / 29.40	%	29.40	%	39.00	29.50	0.34%	Pass

Group # 2
Group Name Temperature
Stated Accy Plus / Minus
Range Acc % 0.0000
Reading Acc % 0.0000
Plus/Minus 0.50

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
70.00 / 80.00	°F	80.00	°F	80.00	80.00	0.00%	Pass

Group # 3
Group Name Velocity
Stated Accy Pct of Reading
Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
0.00 / 0.00	ft/min	0.00	ft/min	0.00	0.00	0.00%	Pass
40.00 / 40.00	ft/min	40.00	ft/min	41.00	41.00	2.50%	Pass
70.00 / 70.00	ft/min	70.00	ft/min	72.00	72.00	2.86%	Pass
100.00 / 100.00	ft/min	100.00	ft/min	103.00	103.00	3.00%	Pass
150.00 / 150.00	ft/min	150.00	ft/min	154.00	154.00	2.67%	Pass
325.00 / 325.00	ft/min	325.00	ft/min	326.00	326.00	0.31%	Pass
700.00 / 700.00	ft/min	700.00	ft/min	695.00	695.00	-0.71%	Pass
1000.00 / 1000.00	ft/min	1000.00	ft/min	980.00	980.00	-2.00%	Pass
1500.00 / 1500.00	ft/min	1500.00	ft/min	1,490.00	1,490.00	-0.67%	Pass
2000.00 / 2000.00	ft/min	2000.00	ft/min	1,960.00	1,960.00	-2.00%	Pass
5000.00 / 5000.00	ft/min	5000.00	ft/min	5,050.00	5,050.00	1.00%	Pass
8000.00 / 8000.00	ft/min	8000.00	ft/min	7,940.00	7,940.00	-0.75%	Pass

INSTRUMENT CALIBRATION REPORT

Advanced Labs, Inc.

Pine Environmental Services, Inc

Instrument ID A05271
Description TSI 964 Probe
Calibrated 7/22/2021

Test Instruments Used During the Calibration

				(As Of Cal Entry Date)	
Test Instrument ID	**Description**	**Manufacturer**	**Serial Number**	**Last Cal Date**	**Next Cal Date**
MICHELL DM-509-TX-01	Relative Humidity Meter	Michell	273296	11/3/2020	11/3/2021
OMEGA HX93AC/DP25-E	Omega HX93AC/DP25-E	Omega Engineering	1010368 035025 035026	11/25/2020	11/25/2022
OMEGA PX02K1-16A5T /DP25-E-A	Omega PX02K1-16A5T/DP25-E-A	Omega Engineering	168377/8375030	11/25/2020	11/25/2022
OMEGA WT4401-D	Omega WT4401-D	Omega Engineering	101105	11/25/2020	11/25/2022

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated David Galego

Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

ATTACHMENT B

LABORATORY CHAIN-OF-CUSTODY FORM AND ANALYTICAL DATA

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

August 17, 2021

Ken Skipka
RTP Environmental
400 Post Avenue (Ste.405)
Westbury, NY 11590

RE: Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Dear Ken Skipka:

Enclosed are the analytical results for sample(s) received by the laboratory on August 11, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicolette Lovari

Nicolette M. Lovari
nicolette.lovari@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Gary Grunseich, RTP Environmental

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
A2LA Certification #: 2926.01*
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
*Please Note: Applicable air certifications are denoted with an asterisk (*).

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

SAMPLE ANALYTE COUNT

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70183703001	**OBAY21:LFG1**	TO-15	MJL	61	PASI-M
70183703002	**OBAY21:LFG2**	TO-15	MJL	61	PASI-M
70183703003	**OBAY21:LFG3**	TO-15	MJL	61	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Sample: OBAY21:LFG1 **Lab ID: 70183703001** Collected: 08/11/21 08:56 Received: 08/11/21 12:35 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
Acetone	**93.6**	ug/m3	9.9	1.64		08/15/21 17:00	67-64-1	
Benzene	**1.3**	ug/m3	0.53	1.64		08/15/21 17:00	71-43-2	
Benzyl chloride	**<4.3**	ug/m3	4.3	1.64		08/15/21 17:00	100-44-7	
Bromodichloromethane	**<2.2**	ug/m3	2.2	1.64		08/15/21 17:00	75-27-4	
Bromoform	**<8.6**	ug/m3	8.6	1.64		08/15/21 17:00	75-25-2	
Bromomethane	**<1.3**	ug/m3	1.3	1.64		08/15/21 17:00	74-83-9	
1,3-Butadiene	**<0.74**	ug/m3	0.74	1.64		08/15/21 17:00	106-99-0	
2-Butanone (MEK)	**<4.9**	ug/m3	4.9	1.64		08/15/21 17:00	78-93-3	
Carbon disulfide	**<1.0**	ug/m3	1.0	1.64		08/15/21 17:00	75-15-0	
Carbon tetrachloride	**<2.1**	ug/m3	2.1	1.64		08/15/21 17:00	56-23-5	
Chlorobenzene	**<1.5**	ug/m3	1.5	1.64		08/15/21 17:00	108-90-7	
Chloroethane	**<0.88**	ug/m3	0.88	1.64		08/15/21 17:00	75-00-3	
Chloroform	**<0.81**	ug/m3	0.81	1.64		08/15/21 17:00	67-66-3	
Chloromethane	**5.5**	ug/m3	0.69	1.64		08/15/21 17:00	74-87-3	
Cyclohexane	**8.0**	ug/m3	2.9	1.64		08/15/21 17:00	110-82-7	
Dibromochloromethane	**<2.8**	ug/m3	2.8	1.64		08/15/21 17:00	124-48-1	
1,2-Dibromoethane (EDB)	**<1.3**	ug/m3	1.3	1.64		08/15/21 17:00	106-93-4	
1,2-Dichlorobenzene	**<5.0**	ug/m3	5.0	1.64		08/15/21 17:00	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ug/m3	5.0	1.64		08/15/21 17:00	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ug/m3	5.0	1.64		08/15/21 17:00	106-46-7	
Dichlorodifluoromethane	**16.8**	ug/m3	1.7	1.64		08/15/21 17:00	75-71-8	
1,1-Dichloroethane	**<1.3**	ug/m3	1.3	1.64		08/15/21 17:00	75-34-3	
1,2-Dichloroethane	**<1.3**	ug/m3	1.3	1.64		08/15/21 17:00	107-06-2	
1,1-Dichloroethene	**<1.3**	ug/m3	1.3	1.64		08/15/21 17:00	75-35-4	
cis-1,2-Dichloroethene	**<1.3**	ug/m3	1.3	1.64		08/15/21 17:00	156-59-2	
trans-1,2-Dichloroethene	**<1.3**	ug/m3	1.3	1.64		08/15/21 17:00	156-60-5	
1,2-Dichloropropane	**<1.5**	ug/m3	1.5	1.64		08/15/21 17:00	78-87-5	
cis-1,3-Dichloropropene	**<3.8**	ug/m3	3.8	1.64		08/15/21 17:00	10061-01-5	
trans-1,3-Dichloropropene	**<3.8**	ug/m3	3.8	1.64		08/15/21 17:00	10061-02-6	
Dichlorotetrafluoroethane	**64.1**	ug/m3	2.3	1.64		08/15/21 17:00	76-14-2	
Ethanol	**17.4**	ug/m3	3.1	1.64		08/15/21 17:00	64-17-5	
Ethyl acetate	**<1.2**	ug/m3	1.2	1.64		08/15/21 17:00	141-78-6	
Ethylbenzene	**<1.4**	ug/m3	1.4	1.64		08/15/21 17:00	100-41-4	
4-Ethyltoluene	**<4.1**	ug/m3	4.1	1.64		08/15/21 17:00	622-96-8	
n-Heptane	**5.2**	ug/m3	1.4	1.64		08/15/21 17:00	142-82-5	
Hexachloro-1,3-butadiene	**<8.9**	ug/m3	8.9	1.64		08/15/21 17:00	87-68-3	
n-Hexane	**12.8**	ug/m3	1.2	1.64		08/15/21 17:00	110-54-3	
2-Hexanone	**<6.8**	ug/m3	6.8	1.64		08/15/21 17:00	591-78-6	
Methylene Chloride	**<5.8**	ug/m3	5.8	1.64		08/15/21 17:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<6.8**	ug/m3	6.8	1.64		08/15/21 17:00	108-10-1	
Methyl-tert-butyl ether	**<6.0**	ug/m3	6.0	1.64		08/15/21 17:00	1634-04-4	
Naphthalene	**<4.4**	ug/m3	4.4	1.64		08/15/21 17:00	91-20-3	
2-Propanol	**14.0**	ug/m3	4.1	1.64		08/15/21 17:00	67-63-0	
Propylene	**40.3**	ug/m3	1.4	1.64		08/15/21 17:00	115-07-1	
Styrene	**<1.4**	ug/m3	1.4	1.64		08/15/21 17:00	100-42-5	
1,1,2,2-Tetrachloroethane	**<2.3**	ug/m3	2.3	1.64		08/15/21 17:00	79-34-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Sample: OBAY21:LFG1 **Lab ID: 70183703001** Collected: 08/11/21 08:56 Received: 08/11/21 12:35 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
	Pace Analytical Services - Minneapolis							
Tetrachloroethene	**2.0**	ug/m3	1.1	1.64		08/15/21 17:00	127-18-4	
Tetrahydrofuran	**<0.98**	ug/m3	0.98	1.64		08/15/21 17:00	109-99-9	
Toluene	**1.8**	ug/m3	1.3	1.64		08/15/21 17:00	108-88-3	
1,2,4-Trichlorobenzene	**<12.4**	ug/m3	12.4	1.64		08/15/21 17:00	120-82-1	
1,1,1-Trichloroethane	**<1.8**	ug/m3	1.8	1.64		08/15/21 17:00	71-55-6	
1,1,2-Trichloroethane	**<0.91**	ug/m3	0.91	1.64		08/15/21 17:00	79-00-5	
Trichloroethene	**<0.90**	ug/m3	0.90	1.64		08/15/21 17:00	79-01-6	
Trichlorofluoromethane	**3.7**	ug/m3	1.9	1.64		08/15/21 17:00	75-69-4	
1,1,2-Trichlorotrifluoroethane	**<2.6**	ug/m3	2.6	1.64		08/15/21 17:00	76-13-1	
1,2,4-Trimethylbenzene	**<1.6**	ug/m3	1.6	1.64		08/15/21 17:00	95-63-6	
1,3,5-Trimethylbenzene	**<1.6**	ug/m3	1.6	1.64		08/15/21 17:00	108-67-8	
Vinyl acetate	**<1.2**	ug/m3	1.2	1.64		08/15/21 17:00	108-05-4	
Vinyl chloride	**0.93**	ug/m3	0.43	1.64		08/15/21 17:00	75-01-4	
m&p-Xylene	**<2.9**	ug/m3	2.9	1.64		08/15/21 17:00	179601-23-1	
o-Xylene	**<1.4**	ug/m3	1.4	1.64		08/15/21 17:00	95-47-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Sample: OBAY21:LFG2 **Lab ID: 70183703002** Collected: 08/11/21 10:20 Received: 08/11/21 12:35 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
Acetone	**133**	ug/m3	10.1	1.68		08/15/21 17:59	67-64-1	
Benzene	**0.97**	ug/m3	0.55	1.68		08/15/21 17:59	71-43-2	
Benzyl chloride	**<4.4**	ug/m3	4.4	1.68		08/15/21 17:59	100-44-7	
Bromodichloromethane	**<2.3**	ug/m3	2.3	1.68		08/15/21 17:59	75-27-4	
Bromoform	**<8.8**	ug/m3	8.8	1.68		08/15/21 17:59	75-25-2	
Bromomethane	**<1.3**	ug/m3	1.3	1.68		08/15/21 17:59	74-83-9	
1,3-Butadiene	**<0.76**	ug/m3	0.76	1.68		08/15/21 17:59	106-99-0	
2-Butanone (MEK)	**6.1**	ug/m3	5.0	1.68		08/15/21 17:59	78-93-3	
Carbon disulfide	**<1.1**	ug/m3	1.1	1.68		08/15/21 17:59	75-15-0	
Carbon tetrachloride	**<2.2**	ug/m3	2.2	1.68		08/15/21 17:59	56-23-5	
Chlorobenzene	**<1.6**	ug/m3	1.6	1.68		08/15/21 17:59	108-90-7	
Chloroethane	**<0.90**	ug/m3	0.90	1.68		08/15/21 17:59	75-00-3	
Chloroform	**<0.83**	ug/m3	0.83	1.68		08/15/21 17:59	67-66-3	
Chloromethane	**3.9**	ug/m3	0.71	1.68		08/15/21 17:59	74-87-3	
Cyclohexane	**5.3**	ug/m3	2.9	1.68		08/15/21 17:59	110-82-7	
Dibromochloromethane	**<2.9**	ug/m3	2.9	1.68		08/15/21 17:59	124-48-1	
1,2-Dibromoethane (EDB)	**<1.3**	ug/m3	1.3	1.68		08/15/21 17:59	106-93-4	
1,2-Dichlorobenzene	**<5.1**	ug/m3	5.1	1.68		08/15/21 17:59	95-50-1	
1,3-Dichlorobenzene	**<5.1**	ug/m3	5.1	1.68		08/15/21 17:59	541-73-1	
1,4-Dichlorobenzene	**<5.1**	ug/m3	5.1	1.68		08/15/21 17:59	106-46-7	
Dichlorodifluoromethane	**10.7**	ug/m3	1.7	1.68		08/15/21 17:59	75-71-8	
1,1-Dichloroethane	**<1.4**	ug/m3	1.4	1.68		08/15/21 17:59	75-34-3	
1,2-Dichloroethane	**<1.4**	ug/m3	1.4	1.68		08/15/21 17:59	107-06-2	
1,1-Dichloroethene	**<1.4**	ug/m3	1.4	1.68		08/15/21 17:59	75-35-4	
cis-1,2-Dichloroethene	**<1.4**	ug/m3	1.4	1.68		08/15/21 17:59	156-59-2	
trans-1,2-Dichloroethene	**<1.4**	ug/m3	1.4	1.68		08/15/21 17:59	156-60-5	
1,2-Dichloropropane	**<1.6**	ug/m3	1.6	1.68		08/15/21 17:59	78-87-5	
cis-1,3-Dichloropropene	**<3.9**	ug/m3	3.9	1.68		08/15/21 17:59	10061-01-5	
trans-1,3-Dichloropropene	**<3.9**	ug/m3	3.9	1.68		08/15/21 17:59	10061-02-6	
Dichlorotetrafluoroethane	**36.6**	ug/m3	2.4	1.68		08/15/21 17:59	76-14-2	
Ethanol	**18.6**	ug/m3	3.2	1.68		08/15/21 17:59	64-17-5	
Ethyl acetate	**1.3**	ug/m3	1.2	1.68		08/15/21 17:59	141-78-6	
Ethylbenzene	**<1.5**	ug/m3	1.5	1.68		08/15/21 17:59	100-41-4	
4-Ethyltoluene	**<4.2**	ug/m3	4.2	1.68		08/15/21 17:59	622-96-8	
n-Heptane	**3.4**	ug/m3	1.4	1.68		08/15/21 17:59	142-82-5	
Hexachloro-1,3-butadiene	**<9.1**	ug/m3	9.1	1.68		08/15/21 17:59	87-68-3	
n-Hexane	**7.4**	ug/m3	1.2	1.68		08/15/21 17:59	110-54-3	
2-Hexanone	**<7.0**	ug/m3	7.0	1.68		08/15/21 17:59	591-78-6	
Methylene Chloride	**<5.9**	ug/m3	5.9	1.68		08/15/21 17:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<7.0**	ug/m3	7.0	1.68		08/15/21 17:59	108-10-1	
Methyl-tert-butyl ether	**<6.1**	ug/m3	6.1	1.68		08/15/21 17:59	1634-04-4	
Naphthalene	**<4.5**	ug/m3	4.5	1.68		08/15/21 17:59	91-20-3	
2-Propanol	**9.8**	ug/m3	4.2	1.68		08/15/21 17:59	67-63-0	
Propylene	**27.3**	ug/m3	1.5	1.68		08/15/21 17:59	115-07-1	
Styrene	**<1.5**	ug/m3	1.5	1.68		08/15/21 17:59	100-42-5	
1,1,2,2-Tetrachloroethane	**<2.4**	ug/m3	2.4	1.68		08/15/21 17:59	79-34-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Sample: OBAY21:LFG2 **Lab ID: 70183703002** Collected: 08/11/21 10:20 Received: 08/11/21 12:35 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
Tetrachloroethene	**1.5**	ug/m3	1.2	1.68		08/15/21 17:59	127-18-4	
Tetrahydrofuran	**1.1**	ug/m3	1.0	1.68		08/15/21 17:59	109-99-9	
Toluene	**8.3**	ug/m3	1.3	1.68		08/15/21 17:59	108-88-3	
1,2,4-Trichlorobenzene	**<12.7**	ug/m3	12.7	1.68		08/15/21 17:59	120-82-1	
1,1,1-Trichloroethane	**<1.9**	ug/m3	1.9	1.68		08/15/21 17:59	71-55-6	
1,1,2-Trichloroethane	**<0.93**	ug/m3	0.93	1.68		08/15/21 17:59	79-00-5	
Trichloroethene	**<0.92**	ug/m3	0.92	1.68		08/15/21 17:59	79-01-6	
Trichlorofluoromethane	**4.3**	ug/m3	1.9	1.68		08/15/21 17:59	75-69-4	
1,1,2-Trichlorotrifluoroethane	**<2.6**	ug/m3	2.6	1.68		08/15/21 17:59	76-13-1	
1,2,4-Trimethylbenzene	**<1.7**	ug/m3	1.7	1.68		08/15/21 17:59	95-63-6	
1,3,5-Trimethylbenzene	**<1.7**	ug/m3	1.7	1.68		08/15/21 17:59	108-67-8	
Vinyl acetate	**<1.2**	ug/m3	1.2	1.68		08/15/21 17:59	108-05-4	
Vinyl chloride	**0.54**	ug/m3	0.44	1.68		08/15/21 17:59	75-01-4	
m&p-Xylene	**4.3**	ug/m3	3.0	1.68		08/15/21 17:59	179601-23-1	
o-Xylene	**1.6**	ug/m3	1.5	1.68		08/15/21 17:59	95-47-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Sample: OBAY21:LFG3 **Lab ID: 70183703003** Collected: 08/11/21 11:28 Received: 08/11/21 12:35 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
Acetone	**105**	ug/m3	9.9	1.64		08/15/21 18:57	67-64-1	
Benzene	**1.6**	ug/m3	0.53	1.64		08/15/21 18:57	71-43-2	
Benzyl chloride	**<4.3**	ug/m3	4.3	1.64		08/15/21 18:57	100-44-7	
Bromodichloromethane	**<2.2**	ug/m3	2.2	1.64		08/15/21 18:57	75-27-4	
Bromoform	**<8.6**	ug/m3	8.6	1.64		08/15/21 18:57	75-25-2	
Bromomethane	**<1.3**	ug/m3	1.3	1.64		08/15/21 18:57	74-83-9	
1,3-Butadiene	**<0.74**	ug/m3	0.74	1.64		08/15/21 18:57	106-99-0	
2-Butanone (MEK)	**<4.9**	ug/m3	4.9	1.64		08/15/21 18:57	78-93-3	
Carbon disulfide	**<1.0**	ug/m3	1.0	1.64		08/15/21 18:57	75-15-0	
Carbon tetrachloride	**<2.1**	ug/m3	2.1	1.64		08/15/21 18:57	56-23-5	
Chlorobenzene	**<1.5**	ug/m3	1.5	1.64		08/15/21 18:57	108-90-7	
Chloroethane	**<0.88**	ug/m3	0.88	1.64		08/15/21 18:57	75-00-3	
Chloroform	**<0.81**	ug/m3	0.81	1.64		08/15/21 18:57	67-66-3	
Chloromethane	**5.7**	ug/m3	0.69	1.64		08/15/21 18:57	74-87-3	
Cyclohexane	**6.4**	ug/m3	2.9	1.64		08/15/21 18:57	110-82-7	
Dibromochloromethane	**<2.8**	ug/m3	2.8	1.64		08/15/21 18:57	124-48-1	
1,2-Dibromoethane (EDB)	**<1.3**	ug/m3	1.3	1.64		08/15/21 18:57	106-93-4	
1,2-Dichlorobenzene	**<5.0**	ug/m3	5.0	1.64		08/15/21 18:57	95-50-1	
1,3-Dichlorobenzene	**<5.0**	ug/m3	5.0	1.64		08/15/21 18:57	541-73-1	
1,4-Dichlorobenzene	**<5.0**	ug/m3	5.0	1.64		08/15/21 18:57	106-46-7	
Dichlorodifluoromethane	**14.3**	ug/m3	1.7	1.64		08/15/21 18:57	75-71-8	
1,1-Dichloroethane	**<1.3**	ug/m3	1.3	1.64		08/15/21 18:57	75-34-3	
1,2-Dichloroethane	**<1.3**	ug/m3	1.3	1.64		08/15/21 18:57	107-06-2	
1,1-Dichloroethene	**<1.3**	ug/m3	1.3	1.64		08/15/21 18:57	75-35-4	
cis-1,2-Dichloroethene	**<1.3**	ug/m3	1.3	1.64		08/15/21 18:57	156-59-2	
trans-1,2-Dichloroethene	**<1.3**	ug/m3	1.3	1.64		08/15/21 18:57	156-60-5	
1,2-Dichloropropane	**<1.5**	ug/m3	1.5	1.64		08/15/21 18:57	78-87-5	
cis-1,3-Dichloropropene	**<3.8**	ug/m3	3.8	1.64		08/15/21 18:57	10061-01-5	
trans-1,3-Dichloropropene	**<3.8**	ug/m3	3.8	1.64		08/15/21 18:57	10061-02-6	
Dichlorotetrafluoroethane	**49.5**	ug/m3	2.3	1.64		08/15/21 18:57	76-14-2	
Ethanol	**17.4**	ug/m3	3.1	1.64		08/15/21 18:57	64-17-5	
Ethyl acetate	**<1.2**	ug/m3	1.2	1.64		08/15/21 18:57	141-78-6	
Ethylbenzene	**<1.4**	ug/m3	1.4	1.64		08/15/21 18:57	100-41-4	
4-Ethyltoluene	**<4.1**	ug/m3	4.1	1.64		08/15/21 18:57	622-96-8	
n-Heptane	**4.3**	ug/m3	1.4	1.64		08/15/21 18:57	142-82-5	
Hexachloro-1,3-butadiene	**<8.9**	ug/m3	8.9	1.64		08/15/21 18:57	87-68-3	
n-Hexane	**10.4**	ug/m3	1.2	1.64		08/15/21 18:57	110-54-3	
2-Hexanone	**<6.8**	ug/m3	6.8	1.64		08/15/21 18:57	591-78-6	
Methylene Chloride	**<5.8**	ug/m3	5.8	1.64		08/15/21 18:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<6.8**	ug/m3	6.8	1.64		08/15/21 18:57	108-10-1	
Methyl-tert-butyl ether	**<6.0**	ug/m3	6.0	1.64		08/15/21 18:57	1634-04-4	
Naphthalene	**12.8**	ug/m3	4.4	1.64		08/15/21 18:57	91-20-3	
2-Propanol	**13.6**	ug/m3	4.1	1.64		08/15/21 18:57	67-63-0	
Propylene	**33.0**	ug/m3	1.4	1.64		08/15/21 18:57	115-07-1	
Styrene	**<1.4**	ug/m3	1.4	1.64		08/15/21 18:57	100-42-5	
1,1,2,2-Tetrachloroethane	**<2.3**	ug/m3	2.3	1.64		08/15/21 18:57	79-34-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Sample: OBAY21:LFG3 **Lab ID: 70183703003** Collected: 08/11/21 11:28 Received: 08/11/21 12:35 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15 Pace Analytical Services - Minneapolis							
Tetrachloroethene	**1.9**	ug/m3	1.1	1.64		08/15/21 18:57	127-18-4	
Tetrahydrofuran	**<0.98**	ug/m3	0.98	1.64		08/15/21 18:57	109-99-9	
Toluene	**4.6**	ug/m3	1.3	1.64		08/15/21 18:57	108-88-3	
1,2,4-Trichlorobenzene	**<12.4**	ug/m3	12.4	1.64		08/15/21 18:57	120-82-1	
1,1,1-Trichloroethane	**<1.8**	ug/m3	1.8	1.64		08/15/21 18:57	71-55-6	
1,1,2-Trichloroethane	**<0.91**	ug/m3	0.91	1.64		08/15/21 18:57	79-00-5	
Trichloroethene	**<0.90**	ug/m3	0.90	1.64		08/15/21 18:57	79-01-6	
Trichlorofluoromethane	**7.0**	ug/m3	1.9	1.64		08/15/21 18:57	75-69-4	
1,1,2-Trichlorotrifluoroethane	**3.0**	ug/m3	2.6	1.64		08/15/21 18:57	76-13-1	
1,2,4-Trimethylbenzene	**<1.6**	ug/m3	1.6	1.64		08/15/21 18:57	95-63-6	
1,3,5-Trimethylbenzene	**<1.6**	ug/m3	1.6	1.64		08/15/21 18:57	108-67-8	
Vinyl acetate	**<1.2**	ug/m3	1.2	1.64		08/15/21 18:57	108-05-4	
Vinyl chloride	**0.76**	ug/m3	0.43	1.64		08/15/21 18:57	75-01-4	
m&p-Xylene	**3.3**	ug/m3	2.9	1.64		08/15/21 18:57	179601-23-1	
o-Xylene	**<1.4**	ug/m3	1.4	1.64		08/15/21 18:57	95-47-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

QC Batch: 763571
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 70183703001, 70183703002, 70183703003

METHOD BLANK: 4071406 Matrix: Air
Associated Lab Samples: 70183703001, 70183703002, 70183703003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	<1.1	1.1	08/15/21 11:30	
1,1,2,2-Tetrachloroethane	ug/m3	<1.4	1.4	08/15/21 11:30	
1,1,2-Trichloroethane	ug/m3	<0.56	0.56	08/15/21 11:30	
1,1,2-Trichlorotrifluoroethane	ug/m3	<1.6	1.6	08/15/21 11:30	
1,1-Dichloroethane	ug/m3	<0.82	0.82	08/15/21 11:30	
1,1-Dichloroethene	ug/m3	<0.81	0.81	08/15/21 11:30	
1,2,4-Trichlorobenzene	ug/m3	<7.5	7.5	08/15/21 11:30	
1,2,4-Trimethylbenzene	ug/m3	<1.0	1.0	08/15/21 11:30	
1,2-Dibromoethane (EDB)	ug/m3	<0.78	0.78	08/15/21 11:30	
1,2-Dichlorobenzene	ug/m3	<3.1	3.1	08/15/21 11:30	
1,2-Dichloroethane	ug/m3	<0.82	0.82	08/15/21 11:30	
1,2-Dichloropropane	ug/m3	<0.94	0.94	08/15/21 11:30	
1,3,5-Trimethylbenzene	ug/m3	<1.0	1.0	08/15/21 11:30	
1,3-Butadiene	ug/m3	<0.45	0.45	08/15/21 11:30	
1,3-Dichlorobenzene	ug/m3	<3.1	3.1	08/15/21 11:30	
1,4-Dichlorobenzene	ug/m3	<3.1	3.1	08/15/21 11:30	
2-Butanone (MEK)	ug/m3	<3.0	3.0	08/15/21 11:30	
2-Hexanone	ug/m3	<4.2	4.2	08/15/21 11:30	
2-Propanol	ug/m3	<2.5	2.5	08/15/21 11:30	
4-Ethyltoluene	ug/m3	<2.5	2.5	08/15/21 11:30	
4-Methyl-2-pentanone (MIBK)	ug/m3	<4.2	4.2	08/15/21 11:30	
Acetone	ug/m3	<6.0	6.0	08/15/21 11:30	
Benzene	ug/m3	<0.32	0.32	08/15/21 11:30	
Benzyl chloride	ug/m3	<2.6	2.6	08/15/21 11:30	
Bromodichloromethane	ug/m3	<1.4	1.4	08/15/21 11:30	
Bromoform	ug/m3	<5.2	5.2	08/15/21 11:30	
Bromomethane	ug/m3	<0.79	0.79	08/15/21 11:30	
Carbon disulfide	ug/m3	<0.63	0.63	08/15/21 11:30	
Carbon tetrachloride	ug/m3	<1.3	1.3	08/15/21 11:30	
Chlorobenzene	ug/m3	<0.94	0.94	08/15/21 11:30	
Chloroethane	ug/m3	<0.54	0.54	08/15/21 11:30	
Chloroform	ug/m3	<0.50	0.50	08/15/21 11:30	
Chloromethane	ug/m3	<0.42	0.42	08/15/21 11:30	
cis-1,2-Dichloroethene	ug/m3	<0.81	0.81	08/15/21 11:30	
cis-1,3-Dichloropropene	ug/m3	<2.3	2.3	08/15/21 11:30	
Cyclohexane	ug/m3	<1.8	1.8	08/15/21 11:30	
Dibromochloromethane	ug/m3	<1.7	1.7	08/15/21 11:30	
Dichlorodifluoromethane	ug/m3	<1.0	1.0	08/15/21 11:30	
Dichlorotetrafluoroethane	ug/m3	<1.4	1.4	08/15/21 11:30	
Ethanol	ug/m3	<1.9	1.9	08/15/21 11:30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

METHOD BLANK: 4071406 Matrix: Air
Associated Lab Samples: 70183703001, 70183703002, 70183703003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethyl acetate	ug/m3	<0.73	0.73	08/15/21 11:30	
Ethylbenzene	ug/m3	<0.88	0.88	08/15/21 11:30	
Hexachloro-1,3-butadiene	ug/m3	<5.4	5.4	08/15/21 11:30	
m&p-Xylene	ug/m3	<1.8	1.8	08/15/21 11:30	
Methyl-tert-butyl ether	ug/m3	<3.7	3.7	08/15/21 11:30	
Methylene Chloride	ug/m3	<3.5	3.5	08/15/21 11:30	
n-Heptane	ug/m3	<0.83	0.83	08/15/21 11:30	
n-Hexane	ug/m3	<0.72	0.72	08/15/21 11:30	
Naphthalene	ug/m3	<2.7	2.7	08/15/21 11:30	
o-Xylene	ug/m3	<0.88	0.88	08/15/21 11:30	
Propylene	ug/m3	<0.88	0.88	08/15/21 11:30	
Styrene	ug/m3	<0.87	0.87	08/15/21 11:30	
Tetrachloroethene	ug/m3	<0.69	0.69	08/15/21 11:30	
Tetrahydrofuran	ug/m3	<0.60	0.60	08/15/21 11:30	
Toluene	ug/m3	<0.77	0.77	08/15/21 11:30	
trans-1,2-Dichloroethene	ug/m3	<0.81	0.81	08/15/21 11:30	
trans-1,3-Dichloropropene	ug/m3	<2.3	2.3	08/15/21 11:30	
Trichloroethene	ug/m3	<0.55	0.55	08/15/21 11:30	
Trichlorofluoromethane	ug/m3	<1.1	1.1	08/15/21 11:30	
Vinyl acetate	ug/m3	<0.72	0.72	08/15/21 11:30	
Vinyl chloride	ug/m3	<0.26	0.26	08/15/21 11:30	

LABORATORY CONTROL SAMPLE: 4071407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	59.3	65.9	111	70-130	
1,1,2,2-Tetrachloroethane	ug/m3	75.4	92.0	122	70-132	
1,1,2-Trichloroethane	ug/m3	59.6	67.5	113	70-134	
1,1,2-Trichlorotrifluoroethane	ug/m3	83.6	90.3	108	70-130	
1,1-Dichloroethane	ug/m3	43.9	48.5	110	70-133	
1,1-Dichloroethene	ug/m3	43.5	47.6	109	70-130	
1,2,4-Trichlorobenzene	ug/m3	177	191	108	69-132	SS
1,2,4-Trimethylbenzene	ug/m3	54	60.0	111	70-142	
1,2-Dibromoethane (EDB)	ug/m3	82.5	95.9	116	70-138	
1,2-Dichlorobenzene	ug/m3	66.2	84.3	127	70-146	
1,2-Dichloroethane	ug/m3	44.4	52.4	118	70-132	
1,2-Dichloropropane	ug/m3	50.6	58.3	115	70-134	
1,3,5-Trimethylbenzene	ug/m3	53.7	59.7	111	70-143	
1,3-Butadiene	ug/m3	24.2	28.1	117	70-136	
1,3-Dichlorobenzene	ug/m3	66.3	85.3	129	70-145	
1,4-Dichlorobenzene	ug/m3	66.3	69.4	105	70-140	
2-Butanone (MEK)	ug/m3	32.3	37.7	117	50-139	
2-Hexanone	ug/m3	44.8	58.6	131	70-148	CH
2-Propanol	ug/m3	149	167	112	67-135	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

LABORATORY CONTROL SAMPLE: 4071407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Ethyltoluene	ug/m3	53.7	65.5	122	70-145	
4-Methyl-2-pentanone (MIBK)	ug/m3	44.9	53.7	120	70-139	
Acetone	ug/m3	128	135	105	64-130	
Benzene	ug/m3	34.8	37.1	107	70-131	
Benzyl chloride	ug/m3	57.6	61.2	106	70-130	
Bromodichloromethane	ug/m3	73.1	82.6	113	70-133	
Bromoform	ug/m3	114	131	115	70-137	
Bromomethane	ug/m3	42.5	45.0	106	64-134	
Carbon disulfide	ug/m3	34.4	38.1	111	70-131	
Carbon tetrachloride	ug/m3	69.4	66.6	96	70-131	
Chlorobenzene	ug/m3	50.2	56.5	113	70-130	
Chloroethane	ug/m3	28.8	31.9	110	69-141	
Chloroform	ug/m3	52.4	56.2	107	70-130	
Chloromethane	ug/m3	22.6	26.0	115	70-130	
cis-1,2-Dichloroethene	ug/m3	43.4	50.0	115	70-137	
cis-1,3-Dichloropropene	ug/m3	49.4	58.1	118	70-144	
Cyclohexane	ug/m3	37.4	42.3	113	70-137	
Dibromochloromethane	ug/m3	93.2	105	113	70-132	
Dichlorodifluoromethane	ug/m3	54.6	61.1	112	70-130	
Dichlorotetrafluoroethane	ug/m3	71.2	79.6	112	70-130	
Ethanol	ug/m3	124	156	126	63-133	
Ethyl acetate	ug/m3	38.9	45.1	116	70-136	
Ethylbenzene	ug/m3	47.8	53.8	112	70-142	
Hexachloro-1,3-butadiene	ug/m3	133	164	123	70-135	
m&p-Xylene	ug/m3	95.4	103	108	70-141	
Methyl-tert-butyl ether	ug/m3	39.6	44.2	112	70-143	
Methylene Chloride	ug/m3	190	214	112	70-130	
n-Heptane	ug/m3	44.6	49.5	111	70-137	
n-Hexane	ug/m3	38	43.5	114	70-135	
Naphthalene	ug/m3	65.2	70.0	107	67-132	
o-Xylene	ug/m3	47.6	53.8	113	70-141	
Propylene	ug/m3	18.9	21.3	113	70-130	
Styrene	ug/m3	47	57.5	122	70-142	
Tetrachloroethene	ug/m3	73.4	78.8	107	70-130	
Tetrahydrofuran	ug/m3	32.1	37.5	117	70-136	
Toluene	ug/m3	41.6	46.1	111	70-138	
trans-1,2-Dichloroethene	ug/m3	43.6	47.7	109	70-130	
trans-1,3-Dichloropropene	ug/m3	50.5	64.7	128	70-145	
Trichloroethene	ug/m3	58.4	64.8	111	70-130	
Trichlorofluoromethane	ug/m3	62	66.2	107	69-135	
Vinyl acetate	ug/m3	46.4	47.9	103	70-146	
Vinyl chloride	ug/m3	28	31.1	111	70-137	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

SAMPLE DUPLICATE: 4071636

Parameter	Units	70183703001 Result	Dup Result	RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	<1.8	<1.8		
1,1,2,2-Tetrachloroethane	ug/m3	<2.3	<2.3		
1,1,2-Trichloroethane	ug/m3	<0.91	<0.91		
1,1,2-Trichlorotrifluoroethane	ug/m3	<2.6	<2.6		
1,1-Dichloroethane	ug/m3	<1.3	<1.3		
1,1-Dichloroethene	ug/m3	<1.3	<1.3		
1,2,4-Trichlorobenzene	ug/m3	<12.4	<12.4		
1,2,4-Trimethylbenzene	ug/m3	<1.6	<1.6		
1,2-Dibromoethane (EDB)	ug/m3	<1.3	<1.3		
1,2-Dichlorobenzene	ug/m3	<5.0	<5.0		
1,2-Dichloroethane	ug/m3	<1.3	<1.3		
1,2-Dichloropropane	ug/m3	<1.5	<1.5		
1,3,5-Trimethylbenzene	ug/m3	<1.6	<1.6		
1,3-Butadiene	ug/m3	<0.74	<0.74		
1,3-Dichlorobenzene	ug/m3	<5.0	<5.0		
1,4-Dichlorobenzene	ug/m3	<5.0	<5.0		
2-Butanone (MEK)	ug/m3	<4.9	<4.9		
2-Hexanone	ug/m3	<6.8	<6.8		
2-Propanol	ug/m3	14.0	14.6	4	
4-Ethyltoluene	ug/m3	<4.1	<4.1		
4-Methyl-2-pentanone (MIBK)	ug/m3	<6.8	<6.8		
Acetone	ug/m3	93.6	95.4	2	
Benzene	ug/m3	1.3	1.3	5	
Benzyl chloride	ug/m3	<4.3	<4.3		
Bromodichloromethane	ug/m3	<2.2	<2.2		
Bromoform	ug/m3	<8.6	<8.6		
Bromomethane	ug/m3	<1.3	<1.3		
Carbon disulfide	ug/m3	<1.0	<1.0		
Carbon tetrachloride	ug/m3	<2.1	<2.1		
Chlorobenzene	ug/m3	<1.5	<1.5		
Chloroethane	ug/m3	<0.88	<0.88		
Chloroform	ug/m3	<0.81	<0.81		
Chloromethane	ug/m3	5.5	<0.69		
cis-1,2-Dichloroethene	ug/m3	<1.3	<1.3		
cis-1,3-Dichloropropene	ug/m3	<3.8	<3.8		
Cyclohexane	ug/m3	8.0	8.2	2	
Dibromochloromethane	ug/m3	<2.8	<2.8		
Dichlorodifluoromethane	ug/m3	16.8	16.7	1	
Dichlorotetrafluoroethane	ug/m3	64.1	64.9	1	
Ethanol	ug/m3	17.4	18.3	5	
Ethyl acetate	ug/m3	<1.2	<1.2		
Ethylbenzene	ug/m3	<1.4	<1.4		
Hexachloro-1,3-butadiene	ug/m3	<8.9	<8.9		
m&p-Xylene	ug/m3	<2.9	<2.9		
Methyl-tert-butyl ether	ug/m3	<6.0	<6.0		
Methylene Chloride	ug/m3	<5.8	<5.8		
n-Heptane	ug/m3	5.2	5.4	3	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

SAMPLE DUPLICATE: 4071636

Parameter	Units	70183703001 Result	Dup Result	RPD	Qualifiers
n-Hexane	ug/m3	12.8	12.9	1	
Naphthalene	ug/m3	<4.4	<4.4		
o-Xylene	ug/m3	<1.4	<1.4		
Propylene	ug/m3	40.3	42.4	5	
Styrene	ug/m3	<1.4	<1.4		
Tetrachloroethene	ug/m3	2.0	2.0	1	
Tetrahydrofuran	ug/m3	<0.98	<0.98		
Toluene	ug/m3	1.8	1.8	0	
trans-1,2-Dichloroethene	ug/m3	<1.3	<1.3		
trans-1,3-Dichloropropene	ug/m3	<3.8	<3.8		
Trichloroethene	ug/m3	<0.90	<0.90		
Trichlorofluoromethane	ug/m3	3.7	3.7	1	
Vinyl acetate	ug/m3	<1.2	<1.2		
Vinyl chloride	ug/m3	0.93	0.93	0	

SAMPLE DUPLICATE: 4071637

Parameter	Units	70183703002 Result	Dup Result	RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	<1.9	<1.9		
1,1,2,2-Tetrachloroethane	ug/m3	<2.4	<2.4		
1,1,2-Trichloroethane	ug/m3	<0.93	<0.93		
1,1,2-Trichlorotrifluoroethane	ug/m3	<2.6	<2.6		
1,1-Dichloroethane	ug/m3	<1.4	<1.4		
1,1-Dichloroethene	ug/m3	<1.4	<1.4		
1,2,4-Trichlorobenzene	ug/m3	<12.7	<12.7		
1,2,4-Trimethylbenzene	ug/m3	<1.7	<1.7		
1,2-Dibromoethane (EDB)	ug/m3	<1.3	<1.3		
1,2-Dichlorobenzene	ug/m3	<5.1	<5.1		
1,2-Dichloroethane	ug/m3	<1.4	<1.4		
1,2-Dichloropropane	ug/m3	<1.6	<1.6		
1,3,5-Trimethylbenzene	ug/m3	<1.7	<1.7		
1,3-Butadiene	ug/m3	<0.76	<0.76		
1,3-Dichlorobenzene	ug/m3	<5.1	<5.1		
1,4-Dichlorobenzene	ug/m3	<5.1	<5.1		
2-Butanone (MEK)	ug/m3	6.1	6.3	3	
2-Hexanone	ug/m3	<7.0	<7.0		
2-Propanol	ug/m3	9.8	9.8	0	
4-Ethyltoluene	ug/m3	<4.2	<4.2		
4-Methyl-2-pentanone (MIBK)	ug/m3	<7.0	<7.0		
Acetone	ug/m3	133	140	5	
Benzene	ug/m3	0.97	1.0	6	
Benzyl chloride	ug/m3	<4.4	<4.4		
Bromodichloromethane	ug/m3	<2.3	<2.3		
Bromoform	ug/m3	<8.8	<8.8		
Bromomethane	ug/m3	<1.3	<1.3		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

SAMPLE DUPLICATE: 4071637

Parameter	Units	70183703002 Result	Dup Result	RPD	Qualifiers
Carbon disulfide	ug/m3	<1.1	<1.1		
Carbon tetrachloride	ug/m3	<2.2	<2.2		
Chlorobenzene	ug/m3	<1.6	<1.6		
Chloroethane	ug/m3	<0.90	<0.90		
Chloroform	ug/m3	<0.83	<0.83		
Chloromethane	ug/m3	3.9	3.9	1	
cis-1,2-Dichloroethene	ug/m3	<1.4	<1.4		
cis-1,3-Dichloropropene	ug/m3	<3.9	<3.9		
Cyclohexane	ug/m3	5.3	4.9	9	
Dibromochloromethane	ug/m3	<2.9	<2.9		
Dichlorodifluoromethane	ug/m3	10.7	10.9	2	
Dichlorotetrafluoroethane	ug/m3	36.6	37.0	1	
Ethanol	ug/m3	18.6	18.2	2	
Ethyl acetate	ug/m3	1.3	1.4	8	
Ethylbenzene	ug/m3	<1.5	<1.5		
Hexachloro-1,3-butadiene	ug/m3	<9.1	<9.1		
m&p-Xylene	ug/m3	4.3	4.4	1	
Methyl-tert-butyl ether	ug/m3	<6.1	<6.1		
Methylene Chloride	ug/m3	<5.9	<5.9		
n-Heptane	ug/m3	3.4	3.4	1	
n-Hexane	ug/m3	7.4	7.7	4	
Naphthalene	ug/m3	<4.5	<4.5		
o-Xylene	ug/m3	1.6	1.6	0	
Propylene	ug/m3	27.3	28.0	2	
Styrene	ug/m3	<1.5	<1.5		
Tetrachloroethene	ug/m3	1.5	1.5	2	
Tetrahydrofuran	ug/m3	1.1	<1.0		
Toluene	ug/m3	8.3	8.3	1	
trans-1,2-Dichloroethene	ug/m3	<1.4	<1.4		
trans-1,3-Dichloropropene	ug/m3	<3.9	<3.9		
Trichloroethene	ug/m3	<0.92	<0.92		
Trichlorofluoromethane	ug/m3	4.3	4.5	4	
Vinyl acetate	ug/m3	<1.2	<1.2		
Vinyl chloride	ug/m3	0.54	0.52	2	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
SS	This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value.

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RTP ENVIRONMENTAL 8/11
Pace Project No.: 70183703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70183703001	**OBAY21:LFG1**	TO-15	763571		
70183703002	**OBAY21:LFG2**	TO-15	763571		
70183703003	**OBAY21:LFG3**	TO-15	763571		

WO# : 70183703

70183703

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

51083

Page: 1 of 1

Section A Required Client Information:

Company: RTP Environmental
Address: 400 Post Ave, Suite 405, Westbury, NY 11590
Email To: SKipka@rtpenv.com
Phone: 516-333-4526 Fax: 516-333-4571
Requested Due Date/TAT:

Section B Required Project Information:

Report To:
Copy To:
Purchase Order No.:
Project Name:
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #:

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☐ Dry Clean ☐ RCRA ☐ Other

Location of Sampling by State: _____

Reporting Units: ug/m³ ___ mg/m³ ___ PPBV ___ PPMV ___ Other ___

Report Level: II. ___ III. ___ IV. ___ Other ___

'Section D Required Client Information

AIR SAMPLE ID

Sample IDs MUST BE UNIQUE

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	AIR SAMPLE ID	MEDIA CODE	PID Reading (Client only)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	Canister Pressure (Initial Field - in Hg)	Canister Pressure (Final Field - in Hg)	Summa Can Number	Flow Control Number	Method: TO-14A	Pace Lab ID
1	OBAY21:LFG1			8/11/21	7:56	8/11/21	8:56	31.0	7.0	0146	1300	✓	
2	OBAY21:LFG2			8/11/21	9:20	8/11/21	10:20	30.0	7.0	0728	1297	✓	
3	OBAY21:LFG3			8/11/21	10:28	8/11/21	11:28	31.0	7.5	1714	1346	✓	
4													
5													
6													
7													
8													
9													
10													
11													
12													

Comments :

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Gary Grunseich / RTP Environmental	8/11/21		[signature]	8/11/21	12:35

SAMPLE CONDITIONS

	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Gary Grunseich

SIGNATURE of SAMPLER: Gary Grunseich DATE Signed (MM / DD / YY): 8/11/21

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical®

WO#: 70183703

PM: NML **Due Date: 08/25/21**

CLIENT: TOY

Client Name: RTP Environmental

Project #

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☐ None ☑ Other

Thermometer Used: TH091 Correction Factor: +0.0

Cooler Temperature(°C): 25.4 Cooler Temperature Corrected(°C): 25.4

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Temperature Blank Present: ☐ Yes ☑ No

Type of Ice: Wet Blue (None)

☐ Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer

Date and Initials of person examining contents: MW 8/11/21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples orignate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☑Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☑Yes	☐No		12.
-Includes date/time/ID, Matrix: SL WT OIL (AR)				
All containers needing preservation have been checked?	☐Yes	☐No	☐N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	☐Yes	☐No	☐N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☐Yes	☐No	☐N/A	14.
KI starch test strips Lot #				Positive for Res. Chlorine? Y N
Residual chlorine strips Lot #				
SM 4500 CN samples checked for sulfide?	☐Yes	☐No	☐N/A	15.
Lead Acetate Strips Lot #				
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☐N/A	16.
Trip Blank Present:	☐Yes	☐No	☐N/A	17.
Trip Blank Custody Seals Present	☐Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS