CONSTRUCTION COMPLETION REPORT
SUB-SLAB DEPRESSURIZATION SYSTEM

COLUMBIA CEMENT COMPANY SITE
159 HANSE AVENUE
FREEPORT, NEW YORK
SITE NO. 130052

Prepared for

Burmah Castrol Holding Company
201 Helios Way
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October 21, 2020

Prepared by

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Project No: 60481767

LIST OF ACRONYMS

TABLES

FIGURES

APPENDICES

LIST OF ACRONYMS

AECOM	AECOM USA, Inc.
AWQS	Ambient Water Quality Standards
CAMP	Community Air Monitoring Program
CCR	Construction Completion Report
CFM	cubic feet per minute
DMM	Division of Material Management
EC	engineering control
EE	environmental easement
EMI	electromagnetic induction
FER	Final Engineering Report
FS	Feasibility Study
GPR	ground-penetrating radar
GV	Guidance Value
HASP	health and safety plan
IC	institutional control
in. WC	inches of water column
IR	investigate and reduce
ITW	Illinois Tool Works
µg/l	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter
MI	mitigate
MO	monitor
MSL	mean sea level
NFA	no further action
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM&M	operation, maintenance and monitoring
OSHA	Occupational Safety and Health Administration
OU-1	Operable Unit No. 1
OU-2	Operable Unit No. 2
PDI	Pre-Design Investigation
PID	photoionization detector
PVC	poly-vinyl chloride
RAO	remedial action objective
RAWP	Remedial Action Work Plan

RI	Remedial Investigation
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan
ROD	Record of Decision
ROI	radius of influence
SCGs	standards, criteria and guidance
SMP	Site Management Plan
SSDS	sub-slab depressurization system
SSO	site safety officer
SVI	soil vapor intrusion
1,1,1-TCA	1,1,1-trichloroethane
TCE	trichloroethene
USEPA	U. S. Environmental Protection Agency
VI	vapor intrusion
VOC	volatile organic compound

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Certification

I, Daniel Servetas, certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Remedial Work Plan (or Remedial Design or Plans and Specifications) was implemented and that all construction activities were completed in substantial conformance with the DER-approved Remedial Work Plan (or Remedial Design or Plans and Specifications).

October 21, 2020

Daniel Servetas, P.E.
New York State Licensed Professional
Engineer No. 079068

October 21, 2020

In accordance with New York State Education Law, it is a violation for any person, unless they are acting under the direction of a licensed professional engineer, to alter this report in any way.

1.1 INTRODUCTION

AECOM USA, Inc. (AECOM) has prepared this Construction Completion Report (CCR) to document the installation and operation of a sub-slab depressurization system (SSDS) at the Columbia Cement Company Site, located in Nassau County, Freeport, New York (hereinafter referred to as the "Site"). The Site location is shown on **Figure 1**. This CCR is a required element of the remedial program for the Site. Burmah-Castrol Holdings, Inc. entered into the New York State Inactive Hazardous Waste Disposal Site Remedial Program, Site No. 130052, which is administered by the New York State Department of Environmental Conservation (NYSDEC) through a Consent Decree dated April 29, 1998.

The Site is identified as 2 parcels: Section 62, Block 230, Lot 65 and Section 62, Block 230, Lot 85 on the Nassau County Tax Map. The boundaries of the Site are more fully described in the metes and bounds site descriptions that are part of the Environmental Easement (EE) implemented for the Site. An EE was implemented for both parcels and recorded with Nassau County on June 11, 2020. The boundaries of the site are fully described in **Appendix A** which shows the property description and the survey map.

The remedial action work was performed at the site in accordance with multiple NYSDEC approved Remedial Action Work Plans (RAWPs) for soil and groundwater, as well as the Sub-Slab Depressurization System Design. This CCR will cover the sub-slab vapor mitigation actions conducted under the SSDS Design.

1.2 SITE LOCATION AND DESCRIPTION

The former Columbia Cement facility consists of approximately 2 acres in an area of Freeport, New York that is highly developed with commercial and industrial facilities. Freeport is located in Nassau County on the south shore of Long Island. The site location is shown on Figure 1. The Site building covers approximately 65,000 square feet, and consists of former offices, material storage, production rooms, and warehousing. Ten 8,000-gallon underground storage tanks (USTs) were located near the southeast corner of the property. The Site is bordered by a recycling facility to the north. BA 272, LLC borders the property to the east. Apollo Fine Spirits is located to the south of the property. The property is bordered by Hanse Avenue to the West. Farber Plastics and Love & Quiches bakery are located on the opposite (west) side of Hanse Avenue. A Site Plan is presented as **Figure 2**.

The Site is located on a peninsula on the south side of Long Island. Freeport Creek is located 500 feet west of the Site, and Stadium Park Canal is 1,000 feet east of the site. Stadium Park Canal merges with Freeport Creek approximately 1,500 feet southeast of the site. From this

point, surface water flows south through tidal marshes to the Atlantic Ocean, approximately 5 miles south of the Site. The Site is very flat, ranging from 5 to 8 feet above Mean Sea Level (MSL). Surface water at the site drains to the west toward Freeport Creek. Storm drains located on site, also drain to Freeport Creek.

1.3 SITE HISTORY

The former Columbia Cement Company, which was owned by Burmah Castrol, produced adhesives for a variety of applications. In 1988, while Columbia Cement operated the facility, approximately 1,760 gallons of 1,1,1-trichloroethane (1,1,1-TCA) was released to an unlined storm drain during filling of a storage tank due to a failure of a contractor's tanker truck. The spill was reported, and response measures were performed under regulatory oversight. In 1996, the property was sold to Illinois Tool Works (ITW). TACC, an ITW subsidiary operated the facility from 1996 to 2004 and manufactured adhesives also. In 1998, Burmah Castrol entered into a Consent Agreement (Index WI #W2-02-0813-98-05) with the NYSDEC regarding the 1,1,1-TCA spill. In 2001, BP purchased all Burmah Castrol holdings and assumed responsibility for the 1,1,1-TCA spill.

1.4 SUMMARY OF PREVIOUS INVESTIGATIONS

Numerous phases of a Remedial Investigation were conducted by Delaware Engineering (1997 through 2003) and URS (2003 through 2006). In December 2006, URS submitted a Supplemental Remedial Investigation Report, summarizing all data obtained up to that time. In January 2007, URS submitted a Feasibility Study (FS) Report that evaluated remedial alternatives to address subsurface impacts. In its March 8, 2007 letter, NYSDEC requested installation of monitoring wells adjacent to Freeport Creek to assess the extent of the plume.

In September 2007, BP installed two monitoring wells (MW-07-16S and MW-07-17D) downgradient from the Site and adjacent to Freeport Creek. Sampling results indicated that chloroethane was present in well MW-07-16S at a concentration exceeding the NYSDEC Ambient Groundwater Quality Standard. NYSDEC divided the site into two Operable Units. Operable Unit No. 1 (OU-1) consists of the on-site project area owned by ITW, located at 159 Hanse Avenue, which is approximately 2 acres in size. OU-2 consists of the offsite areas immediately surrounding OU-1. NYSDEC issued a Record of Decision (ROD) for OU1 on March 28, 2008 (NYSDEC, 2008), to select remedies for the Site. In October 2008, BP presented a Remedial Investigation Work Plan (RIWP) for OU-2 to NYSDEC. The RIWP presented a scope of work to evaluate subsurface impacts to OU-2 resulting from the 1988 1,1,1-TCA spill in OU-1.

A Remedial Investigation (RI) was conducted at OU-2 in 2008 and 2009. A Draft RI/FS was submitted to NYSDEC on December 23, 2009. Pilot testing and remedial action were conducted at OU-1 from 2009 through 2012, documented in separate reports. Following the positive results of these actions, NYSDEC requested BP to revise the OU-2 Remedial Investigation Report to incorporate newly acquired data and to revise the FS to take into consideration the effectiveness of the remedy at OU-1. The *Revised Remedial Investigation Report, Operable Unit No. 2 (OU-2) Off-Site Areas, Former Columbia Cement Company, Inc. Facility, 159 Hanse Avenue, Freeport, New York* (RIR) was submitted to NYSDEC on September 18, 2012. On February 18, 2015, a Supplemental Remedial Investigation Report for OU-2 was submitted to NYSDEC summarizing the results of groundwater sampling conducted in 2013 and 2014 in OU-2. The NYSDEC issued a ROD for OU2 on March 16, 2017.

2.1 SUMMARY OF OBJECTIVES

The remedial action objectives (RAOs) for the Site as defined in the OU1 ROD (NYSDEC, March 2008) are to eliminate or reduce to the extent practicable:

- Exposures of persons at or around the Site to VOCs in soil;
- Exposures of persons at or around the Site to VOCs in groundwater;
- Off-site migration of contaminants in groundwater;
- Discharge of contaminated groundwater to the Freeport Creek;
- The release of contaminants from soil into groundwater that may create exceedences of groundwater quality standards; and
- The release of contaminants from subsurface soil and groundwater into indoor air through soil vapor.

Furthermore, the remediation goals for the Site include attaining to the extent practicable:

- The NYSDEC Ambient Water Quality Standards (AWQS) and/or Guidance Values (GV) (June 1998);
- Soil cleanup goals in TAGM-4046 (Determination of Soil Cleanup and Objectives and Cleanup Levels) and 6 NYCRR Subpart 375-6 (Remedial Program Soil Cleanup Objectives);
- October 2006 New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York; and
- NYSDEC Surface Water Quality Standards.

This CCR addresses only soil vapor and indoor air. Measures to address soil, groundwater and surface water will be addressed in a Final Engineering Report (FER), to be submitted at a later date.

The Standards, Criteria and Guidance (SCGs) applicable to sub-slab vapor and indoor air at the Site are presented in **Table 2-1**, which reports the contaminants of concern as determined by the OU1 ROD for Site sub-slab soil vapor and indoor air along with their respective air guidelines.

Table 2-1: Sub-Slab Vapor and Indoor Air Contaminants of Concern and NYSDOH Air Guidelines

Contaminants of Concern	NYSDOH Air Guidelines (µg/m^3)[1]	NYSDOH Decision Matrix
1,1,1-Trichloroethane	Not available	Matrix B
Trichloroethene	2[2]	Matrix A
Tetrachloroethene	30[3]	Matrix B
cis-1,2-Dichloroethene	Not available	Matrix A

[1] NYSDOH (2006)
[2] Revised as of August 2015
[3] Revised as of September 2013

The primary guidance document governing soil vapor work in New York is the *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (October 2006; updated September 2013, August 2015 and May 2017). Two decision matrices have been developed as part of this guidance by the NYSDOH as risk management tools that provide specified actions based on the concentrations of individual compounds in the indoor air and sub-slab soil vapor. See Tables 2-2 and 2-3, respectively. The Site soil vapor contaminants are assigned one of two decision matrices: Matrix A (**Table 2-2**) or Matrix B (**Table 2-3**) based on the guidance. Four actions are possible from these matrices: no further action (NFA), identify and reduce (IR) sources within the structure, monitor (MO) of indoor air and sub-slab soil vapor, and mitigate (MI).

Table 2-2 NYSDOH Decision Matrix A

Sub-Slab Vapor (µg/m^3)	Indoor Air (µg/m^3)		
	< 0.2	0.2 to < 1	1 and above
< 6	NFA	NFA	IR
6 to < 60	NFA	MO	MI
60 and above	MI	MI	MI

NFA – No Further Action
IR – Identify and Reduce
MO – Monitor Only
MI – Mitigate

Table 2-3 NYSDOH Decision Matrix B

Sub-Slab Vapor (µg/m^3)	Indoor Air (µg/m^3)		
	< 3	3 to < 10	10 and above
<100	NFA	NFA	IR
100 to <1,000	NFA	MO	MI
1,000 and above	MI	MI	MI

See Table 2-2 for explanation of acronym/abbreviation

2.2 DESCRIPTION OF THE SELECTED REMEDY

The vapor intrusion risk at the Site was mitigated in accordance with the remedy selected by the NYSDEC in the 2008 ROD. The remedial actions were performed in accordance with the Sub-Slab Depressurization System Design (AECOM 2019d).

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8.

2.2.1 Summary of the ROD and the Selected Soil Vapor Remedy

The remedy selected by the NYSDEC to address SVI issues described in the March 2008 OU1 ROD for Site includes the following:

- The OU1 ROD reviewed the sub-slab vapor and indoor air sampling conducted at the Site in 2006. The following were the components of the selected remedy as specified in the ROD:

1. A remedial design program will be implemented to provide the details necessary for the installation, operation, maintenance, and monitoring of the remedial program.

2. Imposition of an institutional control in the form of an EE that will require (a) limiting the use and development of the property to commercial or industrial use (b) compliance with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) the property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.

3. Development of a site management plan which will include the following institutional and engineering controls: (a) continued evaluation of the potential for vapor intrusion for any buildings developed on the Site, including provision for mitigation of any impacts identified; (b) monitoring of soil, soil vapor, groundwater and indoor air; (c) identification of any use restrictions on the Site; (d) vapor intrusion management, including but not limited to, an active SSDS in the existing building to prevent soil

vapor intrusion inside the building; and (e) provisions for the performance monitoring and continued proper operation and maintenance of the sub-slab depressurization system, including any required post-installation indoor air quality sampling.

4. The property owner, or designated representative, will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the NYSDEC, until the NYSDEC notifies the property owner in writing that this certification is no longer needed. This submittal will: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the Site; and (c) state that nothing has occurred that will impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the department.

5. The operation of the components of the remedy will continue until the remedial objectives have been achieved, or until the NYSDEC determines that continued operation is technically impracticable or not feasible.

2.2.2 Pre-Design Study

The OU1 ROD requirement for an SSDS is based on VI sampling conducted in 2006. TACC ceased operation in 2004 and the Site has been vacant since then. ITW contacted NYSDEC in January 2019 to request enforcement of the ROD requirement because a party was interested in purchasing the property but would not be permitted to occupy the building without the SSDS in operation. To gather information for design of the SSDS, AECOM conducted a pre-design investigation (PDI). The PDI included additional radius of influence (ROI) testing and VI sampling in 2019. ROI testing was performed at nine locations in the Site building. The ROI tests consisted of drilling a hole through the slab, applying a vacuum and measuring the sub-slab vacuum at multiple distances and directions form the vacuum source. Vapor intrusion sampling included collection of sub-slab vapor samples from nine rooms and indoor air samples form three rooms, as well as an outdoor ambient air sample. In addition, AECOM obtained building architectural plans from the Freeport Building Department. Results were presented to NYSDEC and NYSDOH in a report dated April 2019 (AECOM 2019a). The PDI results indicated that:

- The concentration of 1,1,1-TCA and trichloroethene in the sub-slab vapor sample collected in Room 2, when applied to the NYSDOH Decision Matrices indicated that mitigation is necessary to prevent VI exposure to building occupants.

- Sub-slab vapor sampling results for 1,1,1-TCE, trichloroethene and cis-1,2-dichloroethene from Room 1 results suggested a possible need for monitoring or mitigation, depending on indoor air sample results. No indoor air samples

were collected in Room 1 and no other indoor air results, when combined with the Room sub-slab vapor results, indicated a need for mitigation. However, the building exterior is not airtight making results questionable.

- ROI testing indicated that in most areas of the building, good sub-slab communication was achieved and a ROI of at least 30 feet in at least one direction was observed at eight of ten test locations.

- The results of the methane evaluation were presented to NYSDEC Division of Environmental Remediation and Division of Material Management (DMM) and NYSDOH on October 30, 2019 in a separate submittal. Methane was not detected at any test location and no lower explosive limit (LEL) over 0% was measured. Although no methane was detected in sub-slab vapors during the evaluation, the system was designed to be explosion-proof, in the event methane is present at or above its LEL at some point in the future.

- Building plans showed that Rooms 2, 4 and 8 constituted an addition to the original building. Therefore, the sub-slab environment of these rooms is separated from the main part of the building by the building footing.

The Site building was constructed over a former municipal landfill. Therefore, the potential presence of methane in sub-slab vapors was also considered in the design of the SSDS. Per 6-NYCRR 363-9.7 c, any building constructed over an inactive landfill must include a methane monitoring system with continuous gas methane sensors installed inside the building that will trigger an audible alarm notification signal to emergency personnel when methane gas concentrations are detected; and periodic methane gas monitoring inside all buildings and underground utilities as per the DMM. ITW installed a methane monitoring system in the Site building that was activated in June 2020 (Woodard & Curran, 2020). The design of the SSDS takes into account the potential for sub-slab methane to be present beneath Rooms 2, 4 and 8. On October 29, 2019 AECOM conducted an evaluation of sub-slab methane at the Site. At 12 locations throughout the building, a hole was drilled through the slab, tubing was inserted into the hole and sealed, and the tubing was connected to a landfill gas meter, a 4-gas meter and a photoionization detector (PID). Methane was not detected at any test location and no lower explosive limit (LEL) over 0% was measured. The results of the methane evaluation were presented to NYSDEC and NYSDOH on October 30, 2019 in a separate submittal. Although no methane was detected in sub-slab vapors during the evaluation, the system was designed to be explosion-proof, in the event methane is present at or above its LEL at some point in the future.

Based on these findings, AECOM proposed to NYSDEC and NYSDOH to install the SSDS only in Rooms 2, 4 and 8, instead of the entire building In the event that future indoor air sample results from Room 1 indicate mitigation is needed, NYSDOH requested that contingency extraction points be installed in Room 1. The points would be installed through the slab, like those in Rooms 2, 4 and 8, but would be not be connected to the blower, but rather capped approximately 10 feet above the floor. The draft Design Report was submitted to NYSDEC and NYSDOH on June 5, 2019 (AECOM 2019b). Following multiple revisions, the Final Design Report was submitted on December 27, 2019 (AECOM 2019d).

The SVI remedy for this site was performed as a single project, and no interim remedial measures, operable units or separate construction contracts were performed.

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved *Sub-Slab Depressurization System Design (*AECOM 2019d*)*. **Figure 2** provides an as built layout view of the SSDS layout. All deviations from the SSDS Design are noted below.

4.1 GOVERNING DOCUMENTS

4.1.1 Health and Safety Plan

All work performed during installation and operation of the SSDS at the Columbia Cement site was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal Occupational Safety and Health Administration (OSHA). The site-specific Health and Safety Plan (HASP) (AECOM 2019c) was complied with for all remedial and invasive work performed at the Site. Furthermore, a designated Site Safety Officer (SSO) was present at the Site while operations were taking place. The Site Supervisor/SSO directed work operations in accordance with the SSDS Design and provided safety oversight in the field.

4.1.2 Community Air Monitoring Plan

Community air monitoring was conducted in accordance with the NYS DOH Generic CAMP (NYSDEC Technical Guidance for Site Investigation and Remediation [DER-10], Appendix 1A) in the vicinity of where the building slab was being cored. Air monitoring consisted of VOC monitoring with a photoionization detector (PID) and a dust monitor. In addition, a landfill gas meter was used to monitor for methane in the work zone. The PID, dust monitor and landfill gas meter were placed on a tripod adjacent to the work area. Readings were recorded in 15-minute intervals while work was being performed. No exceedances of the CAMP-specified action levels were observed Community Air Monitoring Program (CAMP) results are discussed in Section 4.2.5 of this document.

4.2 REMEDIAL PROGRAM ELEMENTS

4.2.1 Contractors and Consultants

The following list provides a summary of key project personnel, contractors, subcontractors and their associated tasks.

AECOM acted as both the environmental consultant and contractor for the project. AECOM provided design and consulting services, prepared project documents on behalf of Burmah Castrol Holdings, Inc. and provided field operation oversight for the remedial action installation. AECOM Construction Services performed the SSDS installation.

CorBuilt, LLC performed a sub-slab utility scan using electromagnetic induction and ground-penetrating radar. Ocean Electric connected the SSDS equipment to the building electric supply.

4.2.2 Site Preparation

Site preparation activities for the SVI mitigation system installation included the following activities:

- Visual survey of building interior to determine constructability as designed;
- Coordination of building owner for building access and clearing of debris outside the building;
- Obtaining a building permit from the Village of Freeport;
- A utility scan to identify sub-slab utilities and foundation structures.

The SSDS Design (AECOM, 2019d) provides a detailed account of the objective of the SSDS installation and operation. After the SSDS Design was accepted by NYSDEC and NYSDOH, full scale mobilization activities commenced. Documentation of agency approvals required by the SSDS Design is included in **Appendix B**. The Village of Freeport issued the Building Permit on January 7, 2020.

The sub-slab utility scan was performed by CorBuilt on January 15, 2020. CorBuilt utilized electromagnetic induction (EMI) and ground-penetrating radar (GPR) for the utility scan. The scan identified sub-slab sewer and electric lines, as well as thickened sections of concrete, grade beams and other foundation features. Some planned vapor extraction point locations were adjusted based on the results of the utility scan.

AECOM mobilized to the Site on January 20 to begin installation of the SSDS. AECOM staff reviewed the SSDS design, Health and Safety procedures and CAMP monitoring requirements. Equipment and material were delivered to the Site on January 20, 2020.

4.2.3 General Site Controls

The Site is a vacant building in a light industrial area. The Site building is not in use, but a neighboring business has an agreement with the property owner allowing for parking vehicles and storing equipment outside the building. The majority of the SSDS installation work took place inside the Site building so no additional control measures were required to secure the work area.

4.2.4 Nuisance Controls

The nature of the remedial action installation work did not cause any nuisances at the Site. As stated previously, most work occurred inside the Site building, isolated from the public. CAMP monitoring was implemented during all intrusive work to monitor for dust and odors relating to site work. The coring machine used to breach the building slab was equipped with a water source to control the dust during coring.

4.2.5 CAMP Results

CAMP monitoring was conducted during the slab coring work at the Site. Data was recorded at the specified intervals. There were no reported exceedances for the duration of the project. The landfill gas meter did not record data on all days but no action levels were exceeded on field spot checks and no methane was detected during the SSD installation. Copies of all recorded instrument data relating to the SSDS installation work are provided in **Appendix C**.

4.3 IMPLEMENTATION OF THE REMEDIAL PROGRAM

4.3.1 Installation of the SSDS

The SSDS extraction points and piping were installed between January 20, 2020 and February 4, 2020. The equipment shed was delivered to the Site on February 18, 2020 and was connected to the building electric supply on February 19, 2020. The system was started and tested on March 2, 2020. The vacuum monitoring points and pipe protectors were installed On February 3 and 4, 2020.

SSDS installation was initiated on January 20, 2020. The installation was performed by AECOM Construction Services. A photographic log of the installation activities is presented in Appendix A. The four-inch diameter poly vinyl chloride (PVC) piping was secured to walls and ceiling joists using clamps, pipe hangars and associated support hardware. As mentioned previously, some extraction point locations were adjusted based on the findings of the utility scan. The points were generally moved adjacent to the nearest wall or support column to avoid having to cross and possibly compromise grade beams.

The slab was cored with a 6-inch diameter core bit. The coring machine was equipped with a water source to suppress dust during coring. The CAMP station was positioned near the coring location. The CAMP station contained a photoionization detector to monitoring for VOCs, a dust monitor to monitor for airborne particulates and a landfill gas meter to monitor for methane. An LEL meter was also used in the work zone to monitor for methane from sub-slab vapors. No VOCs, particulates, or methane were detected during the intrusive work at the established action levels.

The sub-slab material consisted of aggregate overlying fine sand fill between the grade beams, with up to one inch of void space beneath the concrete. The concrete was approximately six inches thick in most places. At some locations in Rooms 2 and 4, the concrete slab is approximately 12 inches thick to support the manufacturing machinery used by Columbia Cement and TACC. Extraction point EP-07 is locate in one of the areas with 12 inches thick concrete.

The extraction points were constructed of PVC pipe flush with the bottom of the slab and sealed with cement caulk within the annulus and at the surface. At each extraction point, approximately one cubic foot of aggregate and sand was removed, and the space was backfilled with clean pea gravel in order to minimize the amount of dust that enters the systems. Steel pipe protectors were installed around the extraction point to protect them from damage during future site operations. Each extraction point was constructed with a ball valve which can be used to balance the system. Details of the extraction point construction are presented on **Figure 3**.

As described in Section 2.2.2, NYSDOH requested that contingency points be installed in Room 1 that could be connected to a blower at a later date, if sampling results indicate a need for mitigation. In accordance with the approved SSDS Design, seven additional extraction points were installed in Room 1. There were constructed like those in Rooms 2,4, and 8, but were capped 10 feet above the floor. A photographic log of the SSDS installation is presented in **Appendix D**.

The SSDS equipment shed was installed outside the building on February 17, 2020. The shed contained the blower and knockout tank. The blower is a Rotron® Model EN757F72XL sealed regenerative blower with an explosion-proof motor. The EN757F72XL is a 5.0 horsepower, 3-phase blower that operates at 60 Hz. It is capable of a maximum flow rate of 310 SCFM at 75 in. WC vacuum. The control panel attached to the equipment shed includes an autodialer to notify project personnel in the event of a system malfunction. The system was connected to the building electric supply on February 19, 2020. The connection was done by Ocean Electric of Freeport, New York, a licensed electrician. The equipment shed also contains an explosion-proof fan and an explosion-proof light fixture. A schematic diagram of the SSDS is presented on **Figure 4**.

Based on the February 2019 sub-slab vapor sampling results, no vapor treatment equipment was installed in the equipment shed. The exhaust from the SSDS is discharged to the atmosphere through a stack which has the following minimum characteristics in accordance with NYSDOH guidance:

- 12 inches above the roof of the building;
- 10 feet above the ground surface;
- 10 feet away from any window or opening that is less than two feet below the exhaust point; and,
- 10 feet from any other building, window, or building intake

The exhaust piping is equipped with a sample port to collect vapor samples. Exhaust piping is equipped with a ½-inch by ½-inch screen to prevent objects/animals from entering the piping system. A rain cover was installed on the exhaust stack to prevent moisture from entering the system and to prevent blockage from snow/ice.

As required by the NYSDOH, a visual pressure gauge was installed with the blower to allow for monitoring of system performance. The SSDS was fitted with a flexible U-tube manometer filled with red fluid with an expected life span of at least 10 years.

Rooms 2, 4 and 8 were inspected for the presence of cracks that might allow the intrusion of vapors or decrease system performance. No cracks larger than hairline cracks were observed. All readily accessible cracks were sealed with a non-shrink caulk to eliminate the vapor pathway between the indoor air and sub-slab vapor. The SSDS is connected to a dedicated electrical panel inside the Site building. The electrical circuit used to control the SSDS is labeled as "Sub-Slab Depressurization System".

4.3.2 Methane Monitoring System

ITW completed installation of the methane monitoring system required by 6-NYCRR 363-9.7 c and activated the system in June 2020 (Woodard & Curran 2020). The system is programmed with an initial alarm level of 15% LEL and a secondary alarm level of 25% LEL. The system is connected to the SSDS auto-dialer which will notify response personnel of any alarm or system malfunction. For all alarm conditions, a visible and audible alarm will alert building staff and the auto-dialer will notify response personnel. Upon notification of elevated methane levels, the building will be evacuated and ventilated. Building personnel will be allowed to re-enter the building only after continuously monitored LEL levels drop below 25% LEL. If methane levels exceed 25% LEL, the DMM of NYSDEC will be notified. The property owner is responsible for implementing the methane monitoring system OM&M program. ITW is responsible for OM&M on the system, but if the property is sold, the responsibility will transfer to the new owner. The regular OM&M program includes system confirmation of system operation, downloading and review of monitoring data, ambient air and sub-slab vapor LEL monitoring, and routine maintenance. An Operation, Maintenance and Monitoring Plan is

included in the Methane Monitoring System Installation Report and will be included in the SMP. The property is currently vacant. If the property is sold or becomes occupied, the list of response personnel and alarm notifications will be updated accordingly.

4.3.3 SSDS Operation

The system was started on March 3, 2020. After confirming air flow in the system, the auto-dialer was tested by simulating system errors. During the testing, the auto-dialer performed the proper notifications. To monitor the vacuum produced by the SSDS, Vapor Pin® sub-slab vapor monitoring points were installed at nine locations around the perimeter of Rooms 2, 4 and 8. The Vapor Pin ® locations were chosen to obtain measurements at the greatest distance from the extraction points within the treated area. The Vapor Pin ® locations are shown on Figure 2. After installation, vacuum measurements were made with a manometer and the Vapor Pins were also screened with a PID. Measurements are presented in Table 1. After almost six hours of operation, no vacuum measurement was measured in points VP-07 and VP-09. The vacuum in the remaining points ranged from -0.02 inches water column (in. WC) in VP-03 to -0.42 in. WC in VP-02. No VOCs were detected with the PID. Points VP-07 and VP-09 were located in a narrow space between a grade beam and the footing of the northern wall of the mitigated area. The points were relocated to the south side of the grade beam (approximately 4 feet from the northern wall). After relocation, the vacuum in VP-07 and VP-09 both measured -0.02 in. WC. At that point the vacuum readings in all of the Vapor Pins were all greater than the required -0.004 in WC. Vacuum readings were also made on March 18, 2020 and the vacuum readings ranged from -0.025 in WC in VP-03 to -0.395 in. WC in VP-02. The system measurements and vacuum readings taken on March 18, 2020 are presented in Tables 4-1 and 4-2, respectively.

Table 4-1: SSDS System Measurement – March 18, 2020

System Vacuum (in. WC)	17.5
System Flow (in. WC)	4.2
System Flow (cfm)	121
Effluent PID (ppm)	0.0

Table 4-2: Vacuum Measurements – March 18, 2020

Vapor Point	Vacuum (in. WC)	PID (ppm)
VP-01	0.095	0.0
VP-01	0.395	0.0
VP-03	0.025	0.0
VP-04	0.122	0.0
VP-05	0.030	0.0
VP-06	0.205	0.0
VP-07	0.039	0.0
VP-08	0.105	0.0
VP-09	0.210	0.0

See Figure 2 for vapor point locations

On March 18, after a round of vacuum readings, the SSDS was turned off. The impending property sale has not occurred, and the Site building remains empty. When the Site building is sold and/or becomes occupied on a regular basis, the SSDS will be restarted and a regular monitoring schedule will be established.

4.4 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING

Remedial performance sampling will be performed on a regular schedule for on-site soil vapor to document concentrations of VOCs at the Site. SVI mitigation systems will be monitored for sub-slab pressure differentials on a quarterly basis at the nine vapor monitoring points in Rooms 2, 4 and 8.

In accordance with the SSDS Design, post mitigation indoor and outdoor air sampling will be conducted in all areas of the building where the SSDS is installed, as well as the other part of the building which will not contain an SSDS. As directed in The Guidance, air samples will be conducted at least 30 days after the completion of the SSDS, but no longer than the end of the next heating season (November 15 through April 15). Three indoor air samples and one outdoor ambient air sample will be collected in locations consistent with the pre-mitigation samples. In addition, a sample of the SSDS effluent will also be collected. Samples will be collected in 6-liter summa canisters over an 8-hour period and will be analyzed using EPA Method TO-15. NYSDOH Matrix A and C compounds will be analyzed using Method TO-15 SIM to attain a detection limit of 0.2 $\mu g/m^3$. All other compounds will have a detection limit of 1.0 $\mu g/m^3$. Samples will also be analyzed for methane by USEPA Method 18. Sample collection methods will be consistent with past methods and will continue to follow the guidelines set forth in The Guidance. Air concentrations will be tabulated, compared to NYSDOH air guidelines and analyzed to ensure that the SSDS is providing adequate protection of human health.

The Operation Maintenance and Monitoring (OM&M) Plan presented in **Appendix E** provides a detailed account of the monitoring and sampling requirements/procedures and operation and maintenance of the SSDS at the Site and will also be included in the SMP.

4.5 CONTAMINATION REMAINING AT THE SITE

4.5.1 Soil Vapor

During the 2019 PDI SVI sampling TCE was detected at 72 $\mu g/m^3$ in the sub-slab vapor in Room 2. 1,1,1-TCA was detected at 5,700 $\mu g/m^3$ in sub-slab vapor and at 3.3 $\mu g/m^3$ in indoor air in Room 2. These concentrations require mitigation per the NYSDOH decision matrices and are addressed by the SSDS. Trichloroethene (41 $\mu g/m^3$), cis-1,2-dichloroethene (9.2 $\mu g/m^3$) and 1,1,1-trichloroethane (350 $\mu g/m^3$) were detected in sub-slab vapor in Room 1. As discussed in Section 2.2.2, these values could indicate the need for monitoring or mitigation depending on paired indoor air sampling results. Indoor air in Room 1 will be sampled during the 2020-2021 heating season. Depending on sampling results, appropriate response measures will be taken to protect the health of building occupants. Groundwater in the spill area immediately east of Room 2 has concentrations of 1,1,1-trichloroethane, 1,1-dichloroethane and chloroethane at concentrations exceeding the NYSDEC Class GA Groundwater Standard of 5 µg/l, as well as soil with concentration of 1,1,1-trichloroethane, 1,1-dichloroethane and chloroethane at concentrations exceeding their respective NYSDEC Protection of Groundwater Soil Cleanup Objectives. These residual VOCs may continue to act as a source for sub-slab vapor in Room 2 for the near future

4.6 OTHER ENGINEERING CONTROLS

The implemented remedy for the site included the installation of the SSDS.

Procedures for monitoring, operating and maintaining the SSDS are provided in the Operation and Maintenance Plan submitted under separate cover and to be included in the SMP. The Monitoring Plan also addresses inspection procedures that must occur after any severe weather condition has taken place that may affect on-site ECs.

4.7 INSTITUTIONAL CONTROLS

Since remaining contamination exists at the Site, ICs are required to be implemented. The Site remedy requires that EEs be placed on the entire Columbia Cement Property. The purpose of the EEs are to (1) implement, maintain and monitor the ECs; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to commercial/industrial uses only.

The EEs for the site were executed by the Department on May 8, 2020 and filed with the Nassau County Clerk on June 12, 2020. The County Recording Instrument number for this filing is 2020-00046221. A copy of the easements and proof of filing will be provided in the SMP.

The EEs, will be implemented to: (1) require compliance with the SMP; (2) restrict the use of groundwater as a source of potable or process water without the necessary water quality treatment as determined by NYSDOH; (3) require any new structures in the area of the groundwater contamination to include sub-slab construction that allows for the installation and operation of mitigation systems; and (4) require the property owner or designated representative to complete and submit to NYSDEC a periodic certification of institutional and engineering controls. The EE will be implemented for the entire property parcels (Tax Map IDs 230-62-65 and 230-62-85).

ICs identified in the EEs may not be discontinued without an amendment to or extinguishment of the EEs. Adherence to these ICs will be required by the EEs and will be implemented under the SMP.

These ICs are:

- All ECs must be operated and maintained as specified in the SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from NYSDEC;
- Any new structures in the area of the groundwater contamination shall include sub-slab construction that allows for the installation and operation of mitigation systems, or be constructed with vapor barriers incorporated into the slab;
- Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP;

- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in the SMP;

Access to all parcels addressed by the EE must be provided to agents, employees, or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the EEs.

Overall the installation of the SSDS were conducted as planned in the SSDS Design. The primary deviations were:

- Extraction point locations were moved from their planned locations. The points were moved from their planned locations to the nearest wall or column. This was done to avoid extending the sub-slab piping through grade beams which would require cutting the grade beams and compromising the building foundation. Also, the beam that point EP-09 was adjacent to had been cut and removed from the building, so EP-09 was relocated to the nearest beam on the north side of Room 2. The relocation of the extraction points did not affect the SSDS performance as all of the vapor monitoring points registered vacuum readings of greater than the required -0.004 in. WC during system operation.

- Vapor monitoring points VP-07 and VP-09 were relocated approximately two feet from their original locations. They were originally installed adjacent to the northern wall of Rooms 4 and 2, respectively. After SSDS startup, no vacuum was measured at either point. The points were installed in a narrow gap between the northern wall footer and a grade beam. The points were re-installed on the south side of the grade beam (about 4 feet from the wall) and registered the required vacuum.

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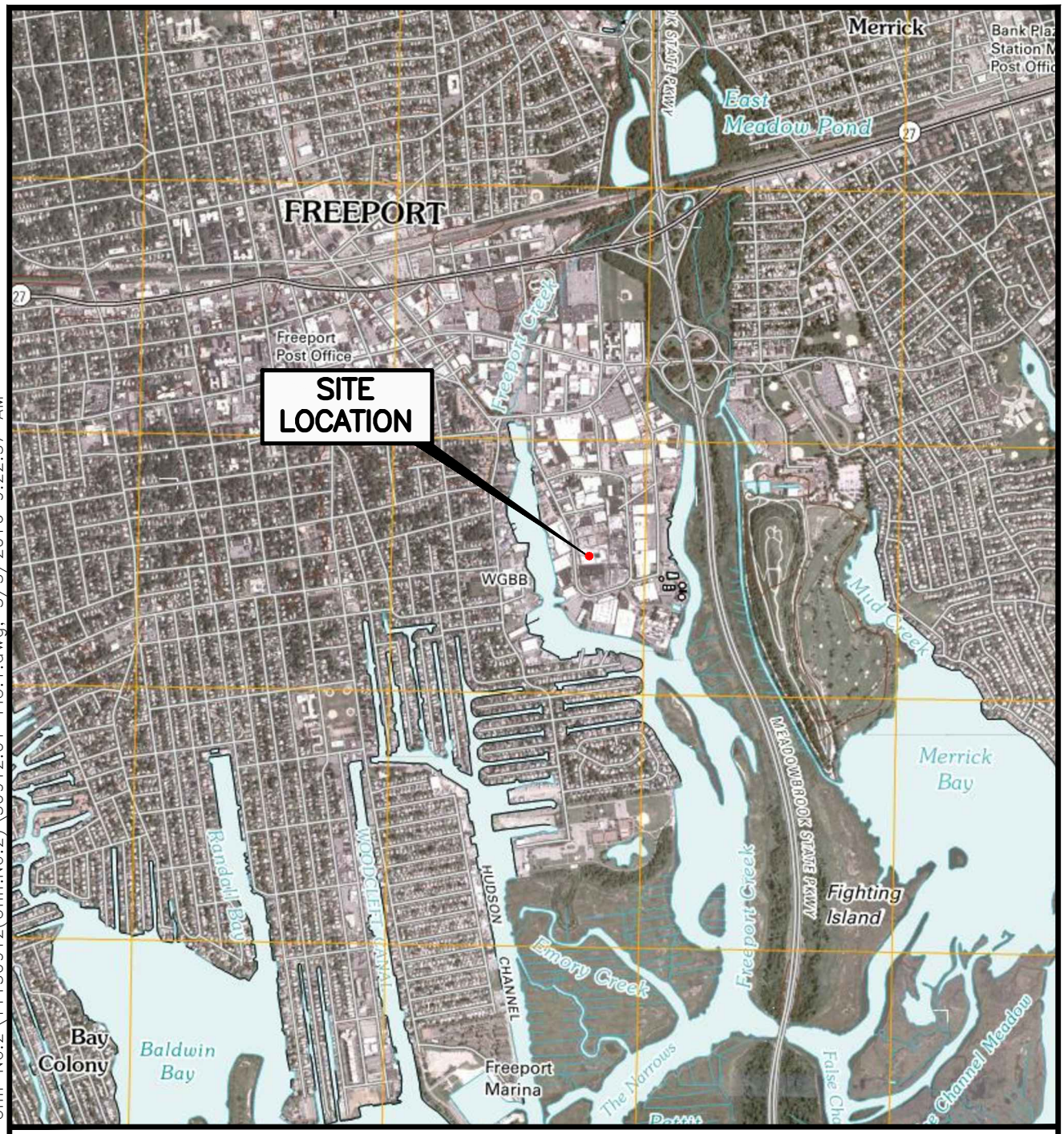
URS, 2008. *Revised Feasibility Study Report, Operable Unit No. 1, Former Columbia Cement Company, Inc. Facility, 159 Hanse Avenue, Freeport, New York.* February, 2008.

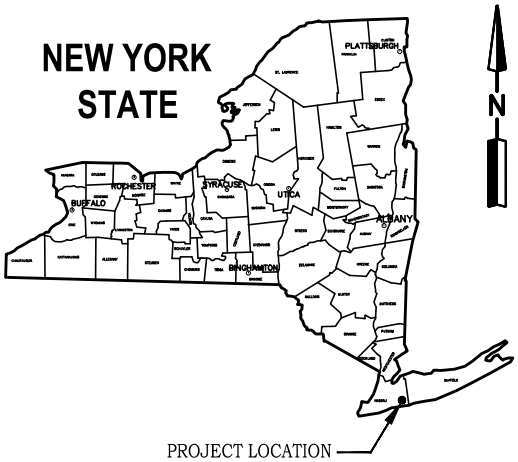
URS, 2012. *Revised Remedial Investigation Report, Operable Unit No. 2 (OU-2) Off-Site Areas, Former Columbia Cement Company, Inc. Facility, 159 Hanse Avenue, Freeport, New York.* September 2012.

URS, 2015. *Supplemental Remedial Investigation Report, Operable Unit No. 2, Former Columbia Cement Company Facility, Freeport, New York.* February 19, 2015.

Woodard & Curran, 2020. *Methane Monitoring System Installation Report, Former Columbia Cement Company Facility, 159 Hanse Avenue, Freeport, New York, NYSDEC Site No 130052.* September 2020.

FIGURES





N

0 2000 4000

SCALE IN FEET

REFERENCE:
U.S.G.S. 7.5 MINUTE QUADRANGLE:
FREEPORT, NY (2010)

SITE LOCATION MAP
FORMER COLUMBIA CEMENT COMPANY, INC.
SITE NO. 130052
159 HANSE AVENUE
FREEPORT, NEW YORK

AECOM
1255 Broad Street
Clifton, New Jersey 07013
PHONE: (973) 883-8500
FAX: (973) 883-8501

DATE: 01/23/15

JOB: 11130912

FIGURE 1

K:\Cadd\Columbia Cement\Columbia Cement-Unit No.2\11130912(Unit.No.2)\30912.01-FIG.1.dwg, 5/5/2016 9:22:57 AM

WARNING

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NO.	MADE BY	APPROVED BY	DATE	DESCRIPTION

REVISIONS

DESIGNED BY: GW
DRAWN BY: DS
CHECKED BY: MB
PROJ. ENGR. DS

AECOM
New York
40 BRITISH AMERICAN BLVD.
LATHAM, New York 12210
(518) 951 - 2200

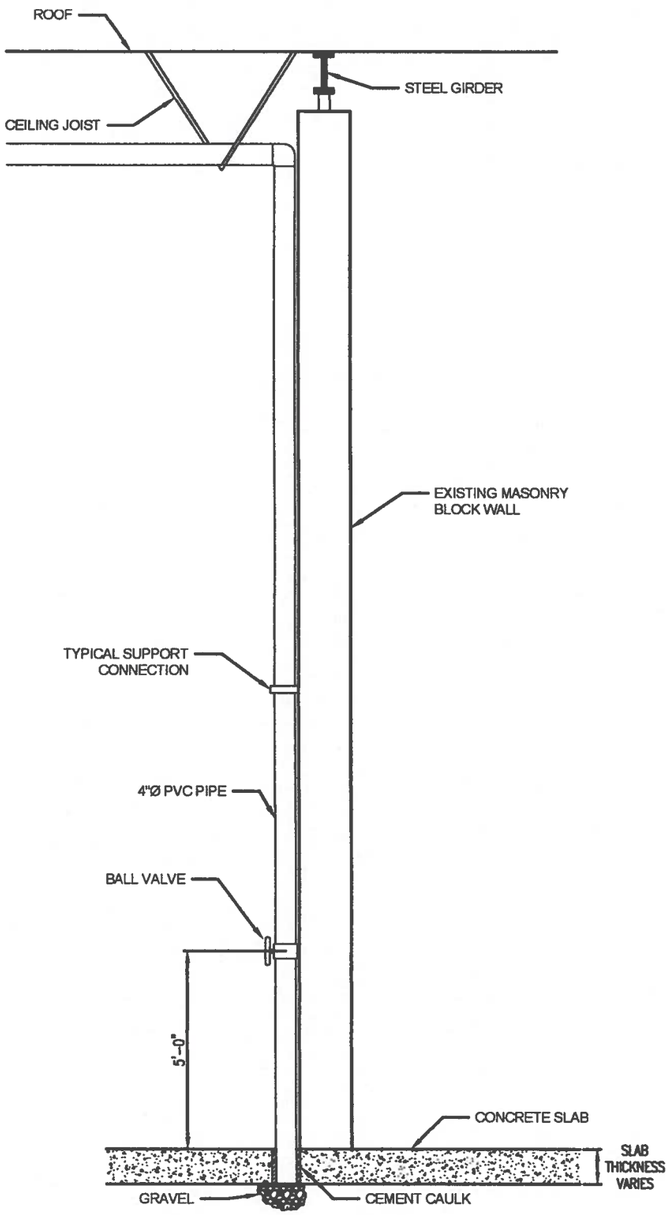
JOB NO. 60481767

STATE OF NEW YORK · DANIEL T. SERVETAS · 079068 · LICENSED PROFESSIONAL ENGINEER
10/21/2020

COLUMBIA CEMENT
SUB-SLAB DEPRESSURIZATION
SYSTEMS AS-BUILT
NYSDEC SITE 130052

SUB-SLAB DEPRESSURIZATION
SYSTEM LAYOUT

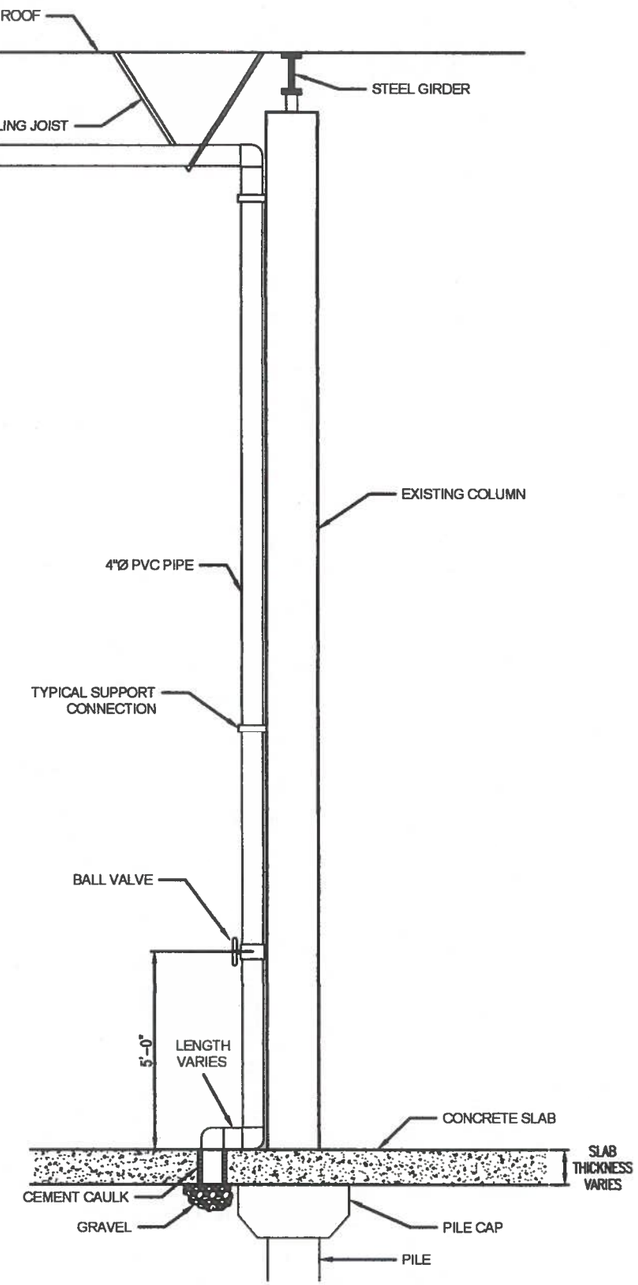
SCALE: 1" = 20' | DATE: JUN. 2020 | FIG. NO. 2



TYPICAL EXTRACTION POINT INSTALLATION DETAIL (TYPE 1)

1 | 3 8

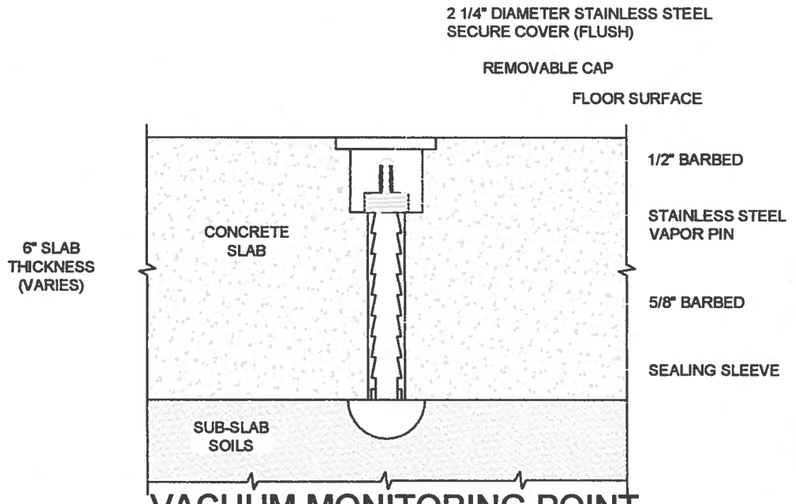
NOT TO SCALE



TYPICAL EXTRACTION POINT INSTALLATION DETAIL (TYPE 2)

2 | 3 8

NOT TO SCALE



VACUUM MONITORING POINT DETAIL

NOTES:

1. ALL 4" ϕ PVC PIPE SHALL BE SUPPORTED EVERY 4' HORIZONTALLY AND EVERY 10' VERTICALLY.
2. ALL PIPES SHALL BE INSTALLED ABOVE EXISTING SPRINKLERS
3. BUTTERFLY VALVES AND SAMPLE PORTS SHALL BE LOCATED APPROXIMATELY 5 FEET ABOVE THE FLOOR.

NO.	BY	APPROVED BY	DATE	DESCRIPTION

REVISIONS

DESIGNED BY: GW
DRAWN BY: DS
CHECKED BY: MB
PROJ. ENGR. DS

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New York
40 BRITISH AMERICAN BLVD.
LATHAM, New York 12210
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STATE OF NEW YORK · DANIEL T. SERVETAS · 079068 · LICENSED PROFESSIONAL ENGINEER

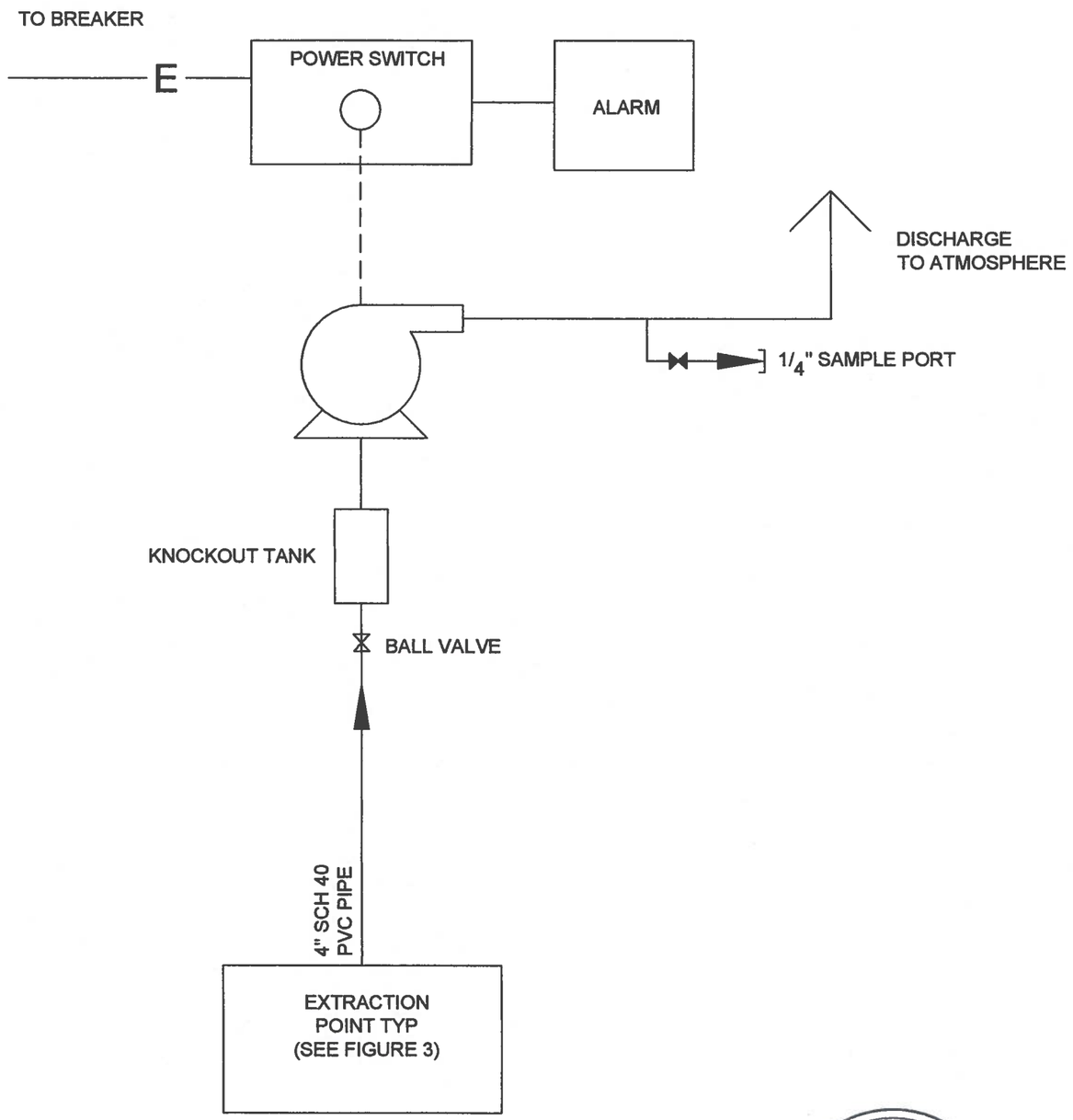
12/21/20

COLUMBIA CEMENT
SUB-SLAB DEPRESSURIZATION SYSTEMS SCHEMATIC
NYSDEC SITE 130052

TYPICAL EXTRACTION POINT INSTALLATION DETAILS

DATE: SEP. 2020

FIGURE 3



NO.	MADE BY	APPROVED BY	DATE	DESCRIPTION
REVISIONS				

DESIGNED BY: GW
DRAWN BY: DS
CHECKED BY: MB
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JOB NO. 60481767

STATE OF NEW YORK
DANIEL T. SERVETAS
079068
LICENSED PROFESSIONAL ENGINEER
10/21/20

COLUMBIA CEMENT
SUB-SLAB DEPRESSURIZATION
SYSTEMS SCHEMATIC
NYSDEC SITE 130052

PROCESS
DETAILS

DATE: SEP. 2020

FIGURE 4

APPENDIX A
ENVIRONMENTAL EASEMENT

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 8th day of May, 2020 between Owner ITW Polymers Sealants North America Inc., as successor in interest to TACC International Corporation, having an office at 155 Harlem Avenue, Glenview, Illinois 60025, (the "Grantor"), and The People of the State of New York (the "Grantee"), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 159 Hanse Avenue in the Village of Freeport, Town of Hempstead, County of Nassau and State of New York, known and designated on the tax map of the County Clerk of Nassau as tax map parcel number: Section 62 Block 230 Lots 65 and 85, being the same as that property conveyed to Grantor by deed dated August 8, 1997 and recorded in the Nassau County Clerk's Office in Liber and Page 10815/804. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 2.30 +/- acres, and is hereinafter more fully described in the Land Title Survey dated April 16, 2019 and last revised March 3, 2020 prepared by Lucas J. Boyer, L.L.S. of Maser Consulting, P.A., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation

established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: W1-0813-98-05, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Nassau County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining

contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation

pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: 130052
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

ITW Polymers Sealants North America Inc.,
as successor in interest to ~~TACC International~~ Corporation

By: _____

Print Name: David D. Livingston

Title: Vice President Date: 4-27-20

Grantor's Acknowledgment

STATE OF ILLINOIS)
) ss:
COUNTY OF COOK)

On the 27th day of April, in the year 2020, before me, the undersigned, personally appeared David D. Livingston, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of Illinois

"OFFICIAL SEAL"
PHILLIP J. MCGOVERN
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires 12/12/2021

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting by and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Michael J. Ryan, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 8th day of May, in the year 2020, before me, the undersigned, personally appeared Michael J. Ryan, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

JENNIFER ANDALORO
Notary Public, State of New York
No. 02AN6098246
Qualified in Albany County
Commission Expires January 14, 2024

SCHEDULE "A" PROPERTY DESCRIPTION

ENVIRONMENTAL EASEMENT
TO BE GRANTED TO THE NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
VILLAGE OF FREEPORT, COUNTY OF NASSAU, STATE OF NEW YORK

Parcel One (For Information Only: Tax Lot 85):

All that certain plot, piece or parcel of land, situate, lying and being in the Incorporated Village of Freeport, County of Nassau and State of New York, bounded and described as follows:

Beginning at a point on the easterly side of Hanse Avenue, distant 630.87 feet southerly from the corner formed by the intersection of the southerly side of Rider Place and the easterly side of Hanse Avenue; running thence North 88°40'30" East (North 88°00'30" East Deed), a distance of 415.40 feet to a point; thence South 12°18'52" West, a distance of 71.84 feet to a point; thence North 85°17'30" West, a distance of 403.60 feet to the easterly side of Hanse Avenue; thence along the easterly side of Hanse Avenue, North 04°42'30" East, a distance of 27.55 feet to the point of beginning.

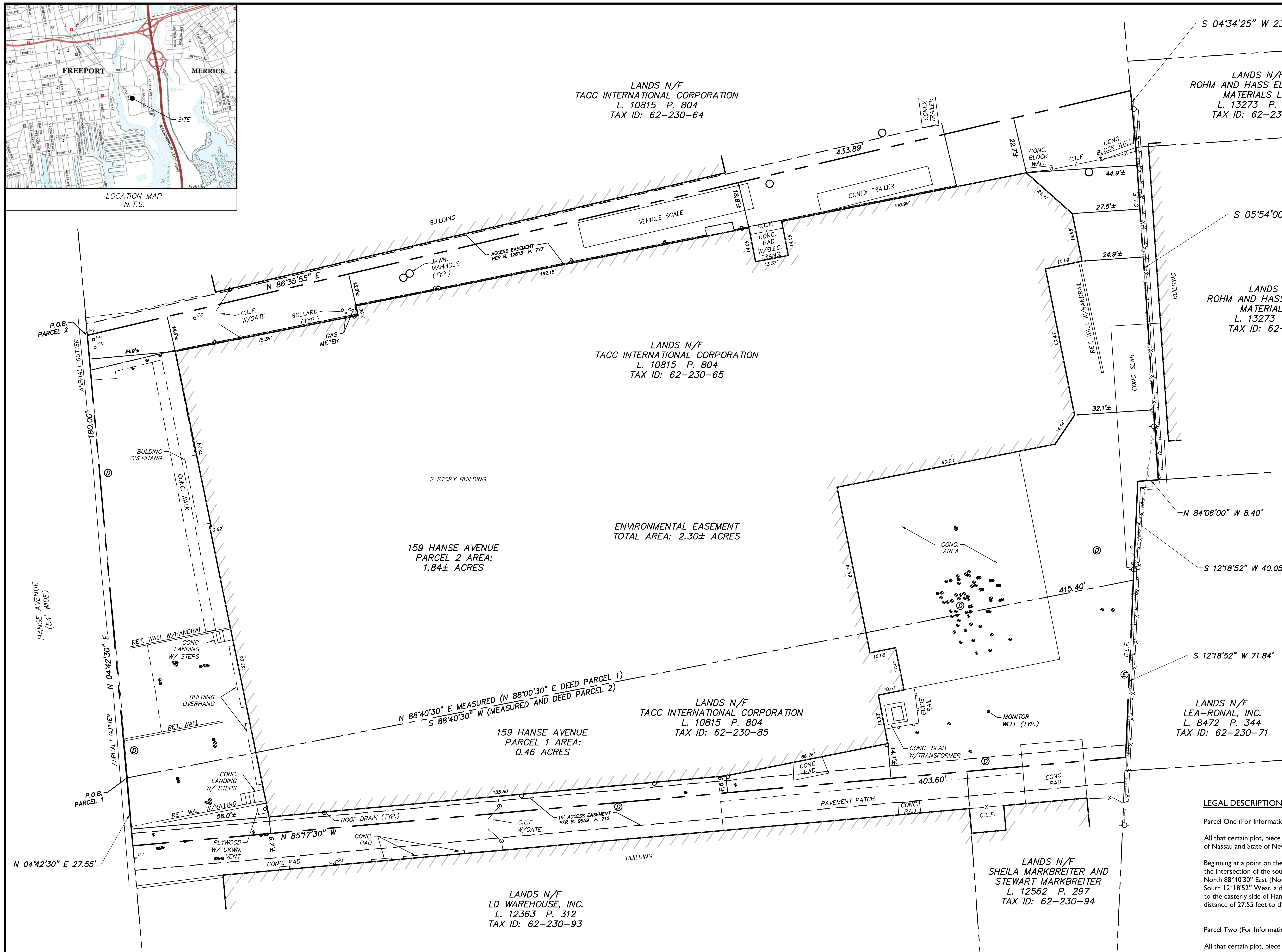
Parcel Two (For Information Only: Tax Lot 65):

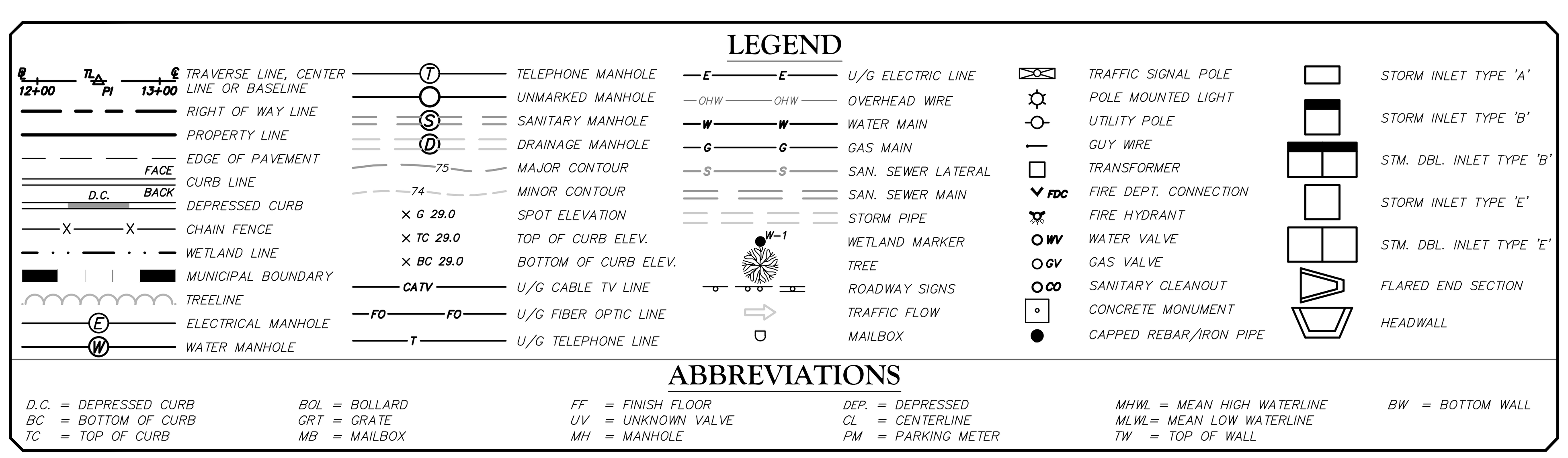
All that certain plot, piece or parcel of land, situate, lying and being in the Incorporated Village of Freeport, County of Nassau and State of New York, known and designated as parts of Lots 3 and 4 in Block 230 as shown on a certain map entitled "Map of Town of Hempstead Industrial Park at Freeport, Situated at Freeport, Nassau County, NY, Surveyed 1967, Baldwin & Cornelius Co.," and filed in the Office of the Clerk of the County of Nassau on August 21, 1967 as Map No. 8087, which said parts of lots when taken together are more particularly bounded and described as follows:

BEGINNING at a point on the easterly side of Hanse Avenue, distant 450.87 feet southerly from the corner formed by the intersection of the easterly line of Hanse Avenue with the southerly line of Rider Place and from said point of beginning; running thence North 86°35'55" East, 433.89 feet; thence South 04°34'25" West, 23.06 feet and South 05°54'00" West, 135.00 feet; thence North 84°06'00" West, 8.40 feet; thence South 12°18'52" West, 40.05 feet; thence South 88°40'30" West, 415.40 feet to the easterly side of Hanse Avenue; thence along the easterly side of Hanse Avenue North 04°42'30" East, 180.00 feet to the point or place of beginning.

As shown on a certain map entitled "Environmental Easement Survey for New York State Department of Environmental Conservation, Section 62, Block 230, Lots 65 and 85, Village of Freeport, Nassau County, State of New York" as prepared by Maser Consulting P.A. dated April 16, 2019.

Being approximately 2.30 acres more or less.





SCALE : 1" = 20 FEET

SCALE : 1" = 6.096 METERS

GENERAL NOTES:

1. UNDERGROUND UTILITIES SHOWN HEREON BASED ON UTILITY EVIDENCE VISIBLE AT GROUND SURFACE AND RECORD DRAWINGS AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
2. THE OFFSETS OR DIMENSIONS SHOWN HEREON, FROM THE PROPERTY LINES TO THE STRUCTURES, ARE FOR A SPECIFIC PURPOSE AND USE; THEREFORE, THEY ARE NOT INTENDED TO MONUMENT THE PROPERTY LINES OR TO GUIDE THE ERECTION OF FENCES, ADDITIONAL STRUCTURES OR ANY OTHER IMPROVEMENTS.
3. EASEMENTS AND/OR SUBSURFACE STRUCTURES RECORDED OR UNRECORDED ARE NOT GUARANTEED UNLESS PHYSICALLY EVIDENT ON THE PREMISES AT THE TIME OF THE SURVEY.
4. SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS AND RESTRICTIONS OF RECORD.
5. BASIS OF BEARING IS BASED ON SUBJECT DEED.
6. FIRST AMERICAN TITLE INSURANCE COMPANY TITLE NO. NCS-943188-CHI2 USED TO PROVIDE RECORD INFORMATION REGARDING TITLE FOR THIS PROPERTY.

MAP REFERENCES:

1. MAP ENTITLED "SURVEY OF PROPERTY SITUATED IN: INC. VILL. OF FREEPORT, COUNTY OF NASSAU, STATE OF NEW YORK" SURVEYED BY FEHRINGER SURVEYING, P.C. AND DATED SEPTEMBER 24, 2003 AND PROVIDED BY CLIENT.

LEGAL DESCRIPTION:

Parcel One (For Information Only: Tax Lot 85):

All that certain plot, piece or parcel of land, situate, lying and being in the Incorporated Village of Freeport, County of Nassau and State of New York, bounded and described as follows:

Beginning at a point on the easterly side of Hanse Avenue, distant 630.87 feet southerly from the corner formed by the intersection of the southerly side of Rider Place and the easterly side of Hanse Avenue; running thence North 88°40'30" East (North 88°00'30" East Deed), a distance of 415.40 feet to a point; thence South 12°18'52" West, a distance of 71.84 feet to a point; thence North 85°17'30" West, a distance of 403.60 feet to the easterly side of Hanse Avenue; thence along the easterly side of Hanse Avenue, North 04°42'30" East, a distance of 27.55 feet to the point of beginning.

Parcel Two (For Information Only: Tax Lot 65):

All that certain plot, piece or parcel of land, situate, lying and being in the Incorporated Village of Freeport, County of Nassau and State of New York, known and designated as parts of Lots 3 and 4 in Block 230 as shown on a certain map entitled "Map of Town of Hempstead Industrial Park at Freeport, Situated at Freeport, Nassau County, NY Surveyed 1967, Baldwin & Cornelius Co.," and filed in the Office of the Clerk of the County of Nassau on August 21, 1967 as Map No. 8087, which said parts of lots when taken together are more particularly bounded and described as follows:

BEGINNING at a point on the easterly side of Hanse Avenue, distant 450.87 feet southerly from the corner formed by the intersection of the easterly line of Hanse Avenue with the southerly line of Rider Place and from said point of beginning; running thence North 86°35'55" East, 433.89 feet; thence South 04°34'25" West, 23.06 feet and South 05°54'00" West, 135.00 feet, thence North 84°06'00" West, 8.40 feet; thence South 12°18'52" West, 40.05 feet; thence South 88°40'30" West, 415.40 feet to the easterly side of Hanse Avenue; thence along the easterly side of Hanse Avenue North 04°42'30" East, 180.00 feet to the point or place of beginning.

THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN MORE DETAIL IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT DERWEB@DEC.NY.GOV".

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Florida: Tampa, Orlando, Miami, Jacksonville
Maryland: Columbia
North Carolina: Charlotte, Raleigh
Virginia: Sterling, Norfolk
New Mexico: Albuquerque
Tennessee: Nashville
Texas: Bryan
State of N.Y. Certificate of Authorization: 0008671 / 0008821

REV	DATE	DRAWN BY	DESCRIPTION
1	3-3-20	LJB	REVISED NORTH ARROW

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

ONLY BOUNDARY SURVEY MAPS WITH THE SURVEYOR'S SEAL ARE GENUINE TRUE AND CORRECT COPIES OF THE SURVEYOR'S ORIGINAL WORK AND OPINION.

STATE OF NEW YORK · LUCAS J. BOYER · 050889-1 · LICENSED LAND SURVEYOR

LUCAS J. BOYER
NEW YORK LICENSED
LAND SURVEYOR - LICENSE NUMBER: 050889

ENVIRONMENTAL EASEMENT SURVEY

FOR

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SECTION 62
BLOCK 230
LOTS 65 AND 85

VILLAGE OF FREEPORT
NASSAU COUNTY
STATE OF NEW YORK

ALBANY OFFICE
18 Computer Drive East
Suite 203
Albany, NY 12205
Phone: 518.459.3252
Fax: 518.459.3284

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	04/16/19	LJB	LJB

PROJECT NUMBER:	DRAWING NAME:
19005180A	V-SURV

SHEET TITLE: EASEMENT PLAT

SHEET NUMBER: 1 of 1

APPENDIX B
AGENCY APPROVALS

From: Desai, Girish V (DEC) <girish.desai@dec.ny.gov>
Sent: Friday, December 27, 2019 3:28 PM
To: Becker, Mark; Servetas, Daniel
Cc: Rahman, Syed (DEC); Tucholski, Daniel P (HEALTH); 'Ken Brown (KBrown@itw.com)'; Parish, Walter (DEC); Servetas, Daniel
Subject: RE: Columbia Cement Site No 130052
Attachments: CC-SSDS Design-FINAL_2019-1227.pdf

Daniel and Mark,
The New York State Departments of Environmental Conservation (Department) and Health (NYSDOH) have reviewed attached Sub-Slab Depressurization System Design received this afternoon and find it acceptable. A copy of the site specific health and safety plan (HASP) should be available at the site. AECOM should implement a site-specific HASP which will be adhered to by all personnel involved. As you are aware, the HASP is a requirement of the federal Occupational Safety and Health Administration (OSHA) and is not subject to the approval of the Department.

If you have any questions, please contact me.

Girish Desai, P.E.
Project Manager
Division of Environmental Remediation
New York State Department of Environmental Conservation
50 Circle Road, SUNY@ Stony Brook
Stony Brook, NY 11790-3409
P: (631) 444-0243 | F: (631) 444-0248 | girish.desai@dec.ny.gov
www.dec.ny.gov |

ISSUED ON: 1/7/2020

VILLAGE OF FREEPORT

MUNICIPAL BUILDING, FREEPORT, N.Y.

DEPARTMENT OF BUILDINGS

BUILDING PERMIT

PERMISSION IS HEREBY GRANTED TO:

Owner: TACC INTERNATIONAL

Contractor: AECOM Technical Sevices, Inc.

Contractor: AECOM Technical Sevices, Inc.

Project: INSTALL SUB-SLAB VENTING SYSTEM

Location: 159 HANSE AVE

Section Block Lot: 62--230-65

Inspector: Jeff Gallo

THIS PERMIT MUST BE MAINTAINED OR POSTED AT JOB SITE

This permit is issued from information contained in the application and plans filed with the Superintendent of Buildings, and subject to all Building and Zoning Code requirements.

Construction must begin within 90 day period of issuance of this Permit and after verbal notification has been given to this Department.

PERMIT NUMBER

20200016

Joseph Madigan
Superintendent of Buildings

APPENDIX C
CAMP DATA

PHOTOIONIZATION DETECTOR DATA

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20/01/21 09:46

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Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-919430
Unit Firmware Ver	V2.14

Running Mode	Hygiene Mode
Datalog Mode	Manual
Diagnostic Mode	No
Stop Reason	Stop by User

Site ID	RAE00000
User ID	USER0000

Begin	1/21/2020 9:46
End	1/21/2020 11:53
Sample Period(s)	60
Number of Records	126

Sensor	PID(ppm)
Sensor SN	S023030181U5
Measure Type	Min; Avg; Max
Span	100
Span 2	1000
Low Alarm	50
High Alarm	100
Over Alarm	2000
STEL Alarm	25
TWA Alarm	10
Measurement Gas	Isobutylene
Calibration Time	1/16/2020 16:46
Peak	N/A
Min	N/A
Average	N/A

****

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
1	1/21/2020 9:47	0	0	0
2	1/21/2020 9:48	0	0	0
3	1/21/2020 9:49	0	0	0
4	1/21/2020 9:50	0	0	0
5	1/21/2020 9:51	0	0	0
6	1/21/2020 9:52	0	0	0
7	1/21/2020 9:53	0	0	0
8	1/21/2020 9:54	0	0	0
9	1/21/2020 9:55	0	0	0

PID DATA
01-21-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
10	1/21/2020 9:56	0	0	0
11	1/21/2020 9:57	0	0	0
12	1/21/2020 9:58	0	0	0
13	1/21/2020 9:59	0	0	0
14	1/21/2020 10:00	0	0	0
15	1/21/2020 10:01	0	0	0
16	1/21/2020 10:02	0	0	0
17	1/21/2020 10:03	0	0	0
18	1/21/2020 10:04	0	0	0
19	1/21/2020 10:05	0	0	0
20	1/21/2020 10:06	0	0	0
21	1/21/2020 10:07	0	0	0
22	1/21/2020 10:08	0	0	0
23	1/21/2020 10:09	0	0	0
24	1/21/2020 10:10	0	0	0
25	1/21/2020 10:11	0	0	0
26	1/21/2020 10:12	0	0	0
27	1/21/2020 10:13	0	0	0
28	1/21/2020 10:14	0	0	0
29	1/21/2020 10:15	0	0	0
30	1/21/2020 10:16	0	0	0
31	1/21/2020 10:17	0	0	0
32	1/21/2020 10:18	0	0	0
33	1/21/2020 10:19	0	0	0
34	1/21/2020 10:20	0	0	0
35	1/21/2020 10:21	0	0	0
36	1/21/2020 10:22	0	0	0
37	1/21/2020 10:23	0	0	0
38	1/21/2020 10:24	0	0	0
39	1/21/2020 10:25	0	0	0
40	1/21/2020 10:26	0	0	0
41	1/21/2020 10:27	0	0	0
42	1/21/2020 10:28	0	0	0
43	1/21/2020 10:29	0	0	0
44	1/21/2020 10:30	0	0	0
45	1/21/2020 10:31	0	0	0
46	1/21/2020 10:32	0	0	0
47	1/21/2020 10:33	0	0	0
48	1/21/2020 10:34	0	0	0
49	1/21/2020 10:35	0	0	0
50	1/21/2020 10:36	0	0	0
51	1/21/2020 10:37	0	0	0
52	1/21/2020 10:38	0	0	0
53	1/21/2020 10:39	0	0	0
54	1/21/2020 10:40	0	0	0
55	1/21/2020 10:41	0	0	0
56	1/21/2020 10:42	0	0	0
57	1/21/2020 10:43	0	0	0
58	1/21/2020 10:44	0	0	0
59	1/21/2020 10:45	0	0	0

PID DATA
01-21-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
60	1/21/2020 10:46	0	0	0
61	1/21/2020 10:47	0	0	0
62	1/21/2020 10:48	0	0	0
63	1/21/2020 10:49	0	0	0
64	1/21/2020 10:50	0	0	0
65	1/21/2020 10:51	0	0	0
66	1/21/2020 10:52	0	0	0
67	1/21/2020 10:53	0	0	0
68	1/21/2020 10:54	0	0	0
69	1/21/2020 10:55	0	0	0
70	1/21/2020 10:56	0	0	0
71	1/21/2020 10:57	0	0	0
72	1/21/2020 10:58	0	0	0
73	1/21/2020 10:59	0	0	0
74	1/21/2020 11:00	0	0	0
75	1/21/2020 11:01	0	0	0
76	1/21/2020 11:02	0	0	0
77	1/21/2020 11:03	0	0	0
78	1/21/2020 11:04	0	0	0
79	1/21/2020 11:05	0	0	0
80	1/21/2020 11:06	0	0	0
81	1/21/2020 11:07	0	0	0
82	1/21/2020 11:08	0	0	0
83	1/21/2020 11:09	0	0	0
84	1/21/2020 11:10	0	0	0
85	1/21/2020 11:11	0	0	0
86	1/21/2020 11:12	0	0	0
87	1/21/2020 11:13	0	0	0
88	1/21/2020 11:14	0	0	0
89	1/21/2020 11:15	0	0	0
90	1/21/2020 11:16	0	0	0
91	1/21/2020 11:17	0	0	0
92	1/21/2020 11:18	0	0	0
93	1/21/2020 11:19	0	0	0
94	1/21/2020 11:20	0	0	0
95	1/21/2020 11:21	0	0	0
96	1/21/2020 11:22	0	0	0
97	1/21/2020 11:23	0	0	0
98	1/21/2020 11:24	0	0	0
99	1/21/2020 11:25	0	0	0
100	1/21/2020 11:26	0	0	0
101	1/21/2020 11:27	0	0	0
102	1/21/2020 11:28	0	0	0
103	1/21/2020 11:29	0	0	0
104	1/21/2020 11:30	0	0	0
105	1/21/2020 11:31	0	0	0
106	1/21/2020 11:32	0	0	0
107	1/21/2020 11:33	0	0	0
108	1/21/2020 11:34	0	0	0
109	1/21/2020 11:35	0	0	0

PID DATA
01-21-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
110	1/21/2020 11:36	0	0	0
111	1/21/2020 11:37	0	0	0
112	1/21/2020 11:38	0	0	0
113	1/21/2020 11:39	0	0	0
114	1/21/2020 11:40	0	0	0
115	1/21/2020 11:41	0	0	0
116	1/21/2020 11:42	0	0	0
117	1/21/2020 11:43	0	0	0
118	1/21/2020 11:44	0	0	0
119	1/21/2020 11:45	0	0	0
120	1/21/2020 11:46	0	0	0
121	1/21/2020 11:47	0	0	0
122	1/21/2020 11:48	0	0	0
123	1/21/2020 11:49	0	0	0
124	1/21/2020 11:50	0	0	0
125	1/21/2020 11:51	0	0	0
126	1/21/2020 11:52	0	0	0
Peak		0	0	0
Min		0	0	0
Average		0	0	0

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20/01/28 09:41

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Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-919430
Unit Firmware Ver	V2.14

Running Mode	Hygiene Mode
Datalog Mode	Manual
Diagnostic Mode	No
Stop Reason	Stop by User

Site ID	RAE00000
User ID	USER0000

Begin	1/28/2020 9:41
End	1/28/2020 14:29
Sample Period(s)	60
Number of Records	287

Sensor	PID(ppm)
Sensor SN	S023030181U5
Measure Type	Min; Avg; Max
Span	100
Span 2	1000
Low Alarm	50
High Alarm	100
Over Alarm	2000
STEL Alarm	25
TWA Alarm	10
Measurement Gas	Isobutylene
Calibration Time	1/28/2020 7:53
Peak	N/A
Min	N/A
Average	N/A

****

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
1	1/28/2020 9:42	0.2	0.2	0.2
2	1/28/2020 9:43	0.2	0.2	0.2
3	1/28/2020 9:44	0.2	0.2	0.2
4	1/28/2020 9:45	0.2	0.2	0.2
5	1/28/2020 9:46	0.2	0.2	0.2
6	1/28/2020 9:47	0.2	0.2	0.2
7	1/28/2020 9:48	0.2	0.2	0.2
8	1/28/2020 9:49	0.2	0.2	0.2
9	1/28/2020 9:50	0.2	0.2	0.2

PID DATA
01-28-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
10	1/28/2020 9:51	0.2	0.2	0.2
11	1/28/2020 9:52	0.2	0.2	0.2
12	1/28/2020 9:53	0.2	0.2	0.2
13	1/28/2020 9:54	0.2	0.2	0.2
14	1/28/2020 9:55	0.2	0.2	0.2
15	1/28/2020 9:56	0.2	0.2	0.2
16	1/28/2020 9:57	0.2	0.2	0.2
17	1/28/2020 9:58	0.2	0.2	0.2
18	1/28/2020 9:59	0.2	0.2	0.2
19	1/28/2020 10:00	0.2	0.2	0.2
20	1/28/2020 10:01	0.2	0.2	0.3
21	1/28/2020 10:02	0.2	0.2	0.2
22	1/28/2020 10:03	0.2	0.3	0.6
23	1/28/2020 10:04	0.2	0.4	0.5
24	1/28/2020 10:05	0.2	0.3	0.3
25	1/28/2020 10:06	0.2	0.3	0.3
26	1/28/2020 10:07	0.2	0.3	0.3
27	1/28/2020 10:08	0.3	0.3	0.3
28	1/28/2020 10:09	0.2	0.3	0.4
29	1/28/2020 10:10	0.4	0.5	0.7
30	1/28/2020 10:11	0.4	0.6	0.7
31	1/28/2020 10:12	0.6	0.7	0.7
32	1/28/2020 10:13	0.7	0.7	0.9
33	1/28/2020 10:14	0.6	0.7	0.8
34	1/28/2020 10:15	0.6	0.8	0.9
35	1/28/2020 10:16	0.7	0.8	0.8
36	1/28/2020 10:17	0.7	0.7	0.8
37	1/28/2020 10:18	0.7	0.7	0.7
38	1/28/2020 10:19	0.7	0.7	0.8
39	1/28/2020 10:20	0.7	0.8	0.8
40	1/28/2020 10:21	0.6	0.8	1
41	1/28/2020 10:22	0.7	0.7	0.8
42	1/28/2020 10:23	0.6	0.8	0.9
43	1/28/2020 10:24	0.6	0.6	0.7
44	1/28/2020 10:25	0.6	0.6	0.7
45	1/28/2020 10:26	0.6	0.6	0.7
46	1/28/2020 10:27	0.6	0.6	0.6
47	1/28/2020 10:28	0.5	0.6	0.6
48	1/28/2020 10:29	0.5	0.5	0.6
49	1/28/2020 10:30	0.5	0.5	0.6
50	1/28/2020 10:31	0.5	0.6	0.6
51	1/28/2020 10:32	0.6	0.6	0.7
52	1/28/2020 10:33	0.6	0.6	0.7
53	1/28/2020 10:34	0.6	0.6	0.6
54	1/28/2020 10:35	0.6	0.6	0.6
55	1/28/2020 10:36	0.5	0.6	0.6
56	1/28/2020 10:37	0.5	0.5	0.6
57	1/28/2020 10:38	0.5	0.5	0.6
58	1/28/2020 10:39	0.5	0.5	0.5
59	1/28/2020 10:40	0.5	0.5	0.6

PID DATA
01-28-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
60	1/28/2020 10:41	0.5	0.5	0.5
61	1/28/2020 10:42	0.5	0.5	0.5
62	1/28/2020 10:43	0.5	0.5	0.5
63	1/28/2020 10:44	0.5	0.5	0.5
64	1/28/2020 10:45	0.4	0.5	0.5
65	1/28/2020 10:46	0.4	0.5	0.5
66	1/28/2020 10:47	0.5	0.5	0.5
67	1/28/2020 10:48	0.4	0.5	0.5
68	1/28/2020 10:49	0.4	0.5	0.5
69	1/28/2020 10:50	0.4	0.5	0.5
70	1/28/2020 10:51	0.4	0.5	0.5
71	1/28/2020 10:52	0.5	0.5	0.5
72	1/28/2020 10:53	0.4	0.5	0.5
73	1/28/2020 10:54	0.4	0.5	0.5
74	1/28/2020 10:55	0.4	0.4	0.5
75	1/28/2020 10:56	0.4	0.4	0.5
76	1/28/2020 10:57	0.4	0.4	0.5
77	1/28/2020 10:58	0.4	0.4	0.4
78	1/28/2020 10:59	0.4	0.4	0.5
79	1/28/2020 11:00	0.4	0.5	0.5
80	1/28/2020 11:01	0.4	0.4	0.4
81	1/28/2020 11:02	0.4	0.4	0.5
82	1/28/2020 11:03	0.4	0.4	0.4
83	1/28/2020 11:04	0.4	0.4	0.4
84	1/28/2020 11:05	0.4	0.4	0.4
85	1/28/2020 11:06	0.3	0.4	0.4
86	1/28/2020 11:07	0.3	0.4	0.4
87	1/28/2020 11:08	0.3	0.3	0.4
88	1/28/2020 11:09	0.3	0.3	0.4
89	1/28/2020 11:10	0.3	0.3	0.4
90	1/28/2020 11:11	0.3	0.3	0.4
91	1/28/2020 11:12	0.3	0.3	0.3
92	1/28/2020 11:13	0.3	0.3	0.3
93	1/28/2020 11:14	0.3	0.3	0.3
94	1/28/2020 11:15	0.3	0.3	0.3
95	1/28/2020 11:16	0.3	0.3	0.3
96	1/28/2020 11:17	0.3	0.3	0.3
97	1/28/2020 11:18	0.3	0.3	0.4
98	1/28/2020 11:19	0.4	0.4	0.4
99	1/28/2020 11:20	0.3	0.3	0.4
100	1/28/2020 11:21	0.3	0.3	0.3
101	1/28/2020 11:22	0.3	0.3	0.3
102	1/28/2020 11:23	0.3	0.3	0.3
103	1/28/2020 11:24	0.3	0.3	0.3
104	1/28/2020 11:25	0.2	0.3	0.3
105	1/28/2020 11:26	0.3	0.3	0.3
106	1/28/2020 11:27	0.2	0.3	0.3
107	1/28/2020 11:28	0.3	0.3	0.3
108	1/28/2020 11:29	0.3	0.3	0.3
109	1/28/2020 11:30	0.2	0.3	0.3

PID DATA
01-28-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
110	1/28/2020 11:31	0.2	0.3	0.3
111	1/28/2020 11:32	0.2	0.3	0.3
112	1/28/2020 11:33	0.2	0.3	0.3
113	1/28/2020 11:34	0.2	0.3	0.3
114	1/28/2020 11:35	0.2	0.3	0.3
115	1/28/2020 11:36	0.2	0.3	0.3
116	1/28/2020 11:37	0.2	0.2	0.3
117	1/28/2020 11:38	0.2	0.2	0.3
118	1/28/2020 11:39	0.2	0.2	0.3
119	1/28/2020 11:40	0.2	0.3	0.3
120	1/28/2020 11:41	0.2	0.2	0.3
121	1/28/2020 11:42	0.2	0.2	0.3
122	1/28/2020 11:43	0.2	0.2	0.3
123	1/28/2020 11:44	0.2	0.2	0.3
124	1/28/2020 11:45	0.2	0.2	0.3
125	1/28/2020 11:46	0.2	0.2	0.2
126	1/28/2020 11:47	0.2	0.2	0.2
127	1/28/2020 11:48	0.2	0.2	0.2
128	1/28/2020 11:49	0.2	0.2	0.2
129	1/28/2020 11:50	0.2	0.2	0.3
130	1/28/2020 11:51	0.2	0.3	0.3
131	1/28/2020 11:52	0.2	0.3	0.3
132	1/28/2020 11:53	0.2	0.3	0.3
133	1/28/2020 11:54	0.2	0.3	0.3
134	1/28/2020 11:55	0.3	0.3	0.3
135	1/28/2020 11:56	0.3	0.3	0.3
136	1/28/2020 11:57	0.3	0.3	0.3
137	1/28/2020 11:58	0.3	0.3	0.4
138	1/28/2020 11:59	0.3	0.4	0.4
139	1/28/2020 12:00	0.3	0.4	0.4
140	1/28/2020 12:01	0.3	0.3	0.4
141	1/28/2020 12:02	0.3	0.3	0.3
142	1/28/2020 12:03	0.3	0.3	0.3
143	1/28/2020 12:04	0.3	0.3	0.3
144	1/28/2020 12:05	0.3	0.3	0.3
145	1/28/2020 12:06	0.3	0.3	0.3
146	1/28/2020 12:07	0.3	0.3	0.3
147	1/28/2020 12:08	0.3	0.3	0.3
148	1/28/2020 12:09	0.3	0.3	0.3
149	1/28/2020 12:10	0.2	0.3	0.3
150	1/28/2020 12:11	0.2	0.3	0.3
151	1/28/2020 12:12	0.2	0.3	0.3
152	1/28/2020 12:13	0.2	0.3	0.3
153	1/28/2020 12:14	0.2	0.2	0.3
154	1/28/2020 12:15	0.2	0.2	0.3
155	1/28/2020 12:16	0.2	0.2	0.3
156	1/28/2020 12:17	0.2	0.2	0.3
157	1/28/2020 12:18	0.2	0.2	0.2
158	1/28/2020 12:19	0.2	0.2	0.2
159	1/28/2020 12:20	0.2	0.2	0.2

PID DATA
01-28-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
160	1/28/2020 12:21	0.2	0.2	0.2
161	1/28/2020 12:22	0.2	0.2	0.2
162	1/28/2020 12:23	0.2	0.2	0.2
163	1/28/2020 12:24	0.2	0.2	0.2
164	1/28/2020 12:25	0.2	0.2	0.2
165	1/28/2020 12:26	0.2	0.2	0.2
166	1/28/2020 12:27	0.2	0.2	0.2
167	1/28/2020 12:28	0.2	0.2	0.2
168	1/28/2020 12:29	0.2	0.2	0.2
169	1/28/2020 12:30	0.2	0.2	0.2
170	1/28/2020 12:31	0.2	0.2	0.2
171	1/28/2020 12:32	0.2	0.2	0.2
172	1/28/2020 12:33	0.2	0.2	0.2
173	1/28/2020 12:34	0.2	0.2	0.2
174	1/28/2020 12:35	0.2	0.2	0.2
175	1/28/2020 12:36	0.2	0.2	0.2
176	1/28/2020 12:37	0.2	0.2	0.2
177	1/28/2020 12:38	0.2	0.2	0.2
178	1/28/2020 12:39	0.2	0.2	0.2
179	1/28/2020 12:40	0.2	0.2	0.2
180	1/28/2020 12:41	0.2	0.2	0.2
181	1/28/2020 12:42	0.2	0.2	0.2
182	1/28/2020 12:43	0.2	0.2	0.2
183	1/28/2020 12:44	0.2	0.2	0.2
184	1/28/2020 12:45	0.2	0.2	0.2
185	1/28/2020 12:46	0.2	0.2	0.2
186	1/28/2020 12:47	0.2	0.2	0.2
187	1/28/2020 12:48	0.2	0.2	0.2
188	1/28/2020 12:49	0.2	0.2	0.2
189	1/28/2020 12:50	0.2	0.2	0.2
190	1/28/2020 12:51	0.2	0.2	0.2
191	1/28/2020 12:52	0.2	0.2	0.2
192	1/28/2020 12:53	0.2	0.2	0.2
193	1/28/2020 12:54	0.2	0.2	0.2
194	1/28/2020 12:55	0.2	0.2	0.2
195	1/28/2020 12:56	0.2	0.2	0.2
196	1/28/2020 12:57	0.2	0.2	0.2
197	1/28/2020 12:58	0.2	0.2	0.2
198	1/28/2020 12:59	0.2	0.2	0.2
199	1/28/2020 13:00	0.2	0.2	0.2
200	1/28/2020 13:01	0.2	0.2	0.2
201	1/28/2020 13:02	0.2	0.2	0.2
202	1/28/2020 13:03	0.2	0.2	0.2
203	1/28/2020 13:04	0.2	0.2	0.2
204	1/28/2020 13:05	0.2	0.2	0.2
205	1/28/2020 13:06	0.2	0.2	0.2
206	1/28/2020 13:07	0.2	0.2	0.2
207	1/28/2020 13:08	0.2	0.2	0.2
208	1/28/2020 13:09	0.2	0.2	0.2
209	1/28/2020 13:10	0.2	0.2	0.2

PID DATA
01-28-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
210	1/28/2020 13:11	0.2	0.2	0.2
211	1/28/2020 13:12	0.2	0.2	0.2
212	1/28/2020 13:13	0.2	0.2	0.2
213	1/28/2020 13:14	0.2	0.2	0.2
214	1/28/2020 13:15	0.2	0.2	0.2
215	1/28/2020 13:16	0.2	0.2	0.2
216	1/28/2020 13:17	0.2	0.2	0.2
217	1/28/2020 13:18	0.2	0.2	0.2
218	1/28/2020 13:19	0.2	0.2	0.2
219	1/28/2020 13:20	0.2	0.2	0.2
220	1/28/2020 13:21	0.2	0.2	0.2
221	1/28/2020 13:22	0.2	0.2	0.2
222	1/28/2020 13:23	0.2	0.2	0.2
223	1/28/2020 13:24	0.2	0.2	0.2
224	1/28/2020 13:25	0.2	0.2	0.2
225	1/28/2020 13:26	0.2	0.2	0.2
226	1/28/2020 13:27	0.2	0.2	0.2
227	1/28/2020 13:28	0.2	0.2	0.2
228	1/28/2020 13:29	0.2	0.2	0.2
229	1/28/2020 13:30	0.2	0.2	0.2
230	1/28/2020 13:31	0.2	0.2	0.2
231	1/28/2020 13:32	0.2	0.2	0.2
232	1/28/2020 13:33	0.2	0.2	0.2
233	1/28/2020 13:34	0.2	0.2	0.2
234	1/28/2020 13:35	0.2	0.2	0.2
235	1/28/2020 13:36	0.2	0.2	0.2
236	1/28/2020 13:37	0.2	0.2	0.2
237	1/28/2020 13:38	0.2	0.2	0.2
238	1/28/2020 13:39	0.2	0.2	0.2
239	1/28/2020 13:40	0.2	0.2	0.2
240	1/28/2020 13:41	0.2	0.2	0.2
241	1/28/2020 13:42	0.2	0.2	0.2
242	1/28/2020 13:43	0.2	0.2	0.2
243	1/28/2020 13:44	0.2	0.2	0.2
244	1/28/2020 13:45	0.2	0.2	0.2
245	1/28/2020 13:46	0.2	0.2	0.2
246	1/28/2020 13:47	0.2	0.2	0.2
247	1/28/2020 13:48	0.2	0.2	0.2
248	1/28/2020 13:49	0.2	0.2	0.2
249	1/28/2020 13:50	0.2	0.2	0.2
250	1/28/2020 13:51	0.2	0.2	0.2
251	1/28/2020 13:52	0.2	0.2	0.2
252	1/28/2020 13:53	0.2	0.2	0.2
253	1/28/2020 13:54	0.2	0.2	0.2
254	1/28/2020 13:55	0.2	0.2	0.2
255	1/28/2020 13:56	0.2	0.2	0.2
256	1/28/2020 13:57	0.2	0.2	0.2
257	1/28/2020 13:58	0.2	0.2	0.2
258	1/28/2020 13:59	0.2	0.2	0.2
259	1/28/2020 14:00	0.2	0.2	0.2

PID DATA
01-28-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
260	1/28/2020 14:01	0.2	0.2	0.2
261	1/28/2020 14:02	0.2	0.2	0.2
262	1/28/2020 14:03	0.2	0.2	0.2
263	1/28/2020 14:04	0.2	0.2	0.2
264	1/28/2020 14:05	0.2	0.2	0.2
265	1/28/2020 14:06	0.2	0.2	0.2
266	1/28/2020 14:07	0.2	0.2	0.2
267	1/28/2020 14:08	0.2	0.2	0.2
268	1/28/2020 14:09	0.2	0.2	0.2
269	1/28/2020 14:10	0.2	0.2	0.2
270	1/28/2020 14:11	0.2	0.2	0.2
271	1/28/2020 14:12	0.2	0.2	0.2
272	1/28/2020 14:13	0.2	0.2	0.2
273	1/28/2020 14:14	0.2	0.2	0.2
274	1/28/2020 14:15	0.2	0.2	0.2
275	1/28/2020 14:16	0.2	0.2	0.2
276	1/28/2020 14:17	0.2	0.2	0.2
277	1/28/2020 14:18	0.2	0.2	0.2
278	1/28/2020 14:19	0.2	0.2	0.2
279	1/28/2020 14:20	0.2	0.2	0.2
280	1/28/2020 14:21	0.2	0.2	0.2
281	1/28/2020 14:22	0.2	0.2	0.2
282	1/28/2020 14:23	0.2	0.2	0.2
283	1/28/2020 14:24	0.2	0.2	0.2
284	1/28/2020 14:25	0.2	0.2	0.2
285	1/28/2020 14:26	0.2	0.2	0.2
286	1/28/2020 14:27	0.2	0.2	0.2
287	1/28/2020 14:28	0.2	0.2	0.2
Peak		0.7	0.8	1
Min		0.2	0.2	0.2
Average		0.3	0.3	0.3

PID DATA
01-30-2020

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20/01/30 13:59
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Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-919430
Unit Firmware Ver	V2.14

Running Mode	Hygiene Mode
Datalog Mode	Manual
Diagnostic Mode	No
Stop Reason	Stop by User

Site ID	RAE00000
User ID	USER0000

Begin	1/30/2020 13:59
End	1/30/2020 15:56
Sample Period(s)	60
Number of Records	116

Sensor	PID(ppm)
Sensor SN	S023030181U5
Measure Type	Min; Avg; Max
Span	100
Span 2	1000
Low Alarm	50
High Alarm	100
Over Alarm	2000
STEL Alarm	25
TWA Alarm	10
Measurement Gas	Isobutylene
Calibration Time	1/30/2020 9:48
Peak	N/A
Min	N/A
Average	N/A

****
Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
1	1/30/2020 14:00	0.1	0.2	0.3
2	1/30/2020 14:01	0.1	0.2	0.3
3	1/30/2020 14:02	0.1	0.2	0.3
4	1/30/2020 14:03	0.2	0.3	0.4
5	1/30/2020 14:04	0.2	0.2	0.3
6	1/30/2020 14:05	0.2	0.2	0.3
7	1/30/2020 14:06	0.2	0.3	0.4
8	1/30/2020 14:07	0.2	0.2	0.3
9	1/30/2020 14:08	0.2	0.2	0.3

PID DATA
01-30-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
10	1/30/2020 14:09	0.2	0.2	0.3
11	1/30/2020 14:10	0.2	0.2	0.3
12	1/30/2020 14:11	0.2	0.2	0.3
13	1/30/2020 14:12	0.2	0.2	0.3
14	1/30/2020 14:13	0.2	0.2	0.3
15	1/30/2020 14:14	0.2	0.2	0.2
16	1/30/2020 14:15	0.2	0.2	0.3
17	1/30/2020 14:16	0.2	0.2	0.3
18	1/30/2020 14:17	0.2	0.3	0.3
19	1/30/2020 14:18	0.2	0.2	0.3
20	1/30/2020 14:19	0.2	0.2	0.2
21	1/30/2020 14:20	0.2	0.2	0.3
22	1/30/2020 14:21	0.1	0.2	0.3
23	1/30/2020 14:22	0.2	0.2	0.2
24	1/30/2020 14:23	0.2	0.2	0.2
25	1/30/2020 14:24	0.2	0.2	0.2
26	1/30/2020 14:25	0.2	0.2	0.2
27	1/30/2020 14:26	0.1	0.2	0.2
28	1/30/2020 14:27	0.1	0.2	0.2
29	1/30/2020 14:28	0.1	0.2	0.2
30	1/30/2020 14:29	0.1	0.2	0.2
31	1/30/2020 14:30	0.1	0.2	0.2
32	1/30/2020 14:31	0.1	0.1	0.2
33	1/30/2020 14:32	0.1	0.2	0.2
34	1/30/2020 14:33	0.2	0.2	0.2
35	1/30/2020 14:34	0.1	0.2	0.2
36	1/30/2020 14:35	0.1	0.2	0.2
37	1/30/2020 14:36	0.1	0.2	0.2
38	1/30/2020 14:37	0.1	0.2	0.2
39	1/30/2020 14:38	0.1	0.1	0.2
40	1/30/2020 14:39	0.1	0.1	0.2
41	1/30/2020 14:40	0.1	0.2	0.2
42	1/30/2020 14:41	0.1	0.1	0.2
43	1/30/2020 14:42	0.1	0.2	0.2
44	1/30/2020 14:43	0.1	0.1	0.2
45	1/30/2020 14:44	0.1	0.1	0.2
46	1/30/2020 14:45	0.1	0.1	0.1
47	1/30/2020 14:46	0.1	0.1	0.1
48	1/30/2020 14:47	0.1	0.1	0.2
49	1/30/2020 14:48	0.1	0.1	0.1
50	1/30/2020 14:49	0.1	0.1	0.2
51	1/30/2020 14:50	0.1	0.1	0.2
52	1/30/2020 14:51	0.1	0.1	0.1
53	1/30/2020 14:52	0.1	0.1	0.2
54	1/30/2020 14:53	0.1	0.1	0.1
55	1/30/2020 14:54	0.1	0.1	0.1
56	1/30/2020 14:55	0.1	0.1	0.1
57	1/30/2020 14:56	0.1	0.1	0.1
58	1/30/2020 14:57	0.1	0.1	0.1
59	1/30/2020 14:58	0.1	0.1	0.2

PID DATA
01-30-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
60	1/30/2020 14:59	0.1	0.1	0.2
61	1/30/2020 15:00	0.1	0.1	0.2
62	1/30/2020 15:01	0.1	0.1	0.1
63	1/30/2020 15:02	0.1	0.1	0.1
64	1/30/2020 15:03	0.1	0.1	0.2
65	1/30/2020 15:04	0.1	0.1	0.1
66	1/30/2020 15:05	0.1	0.1	0.1
67	1/30/2020 15:06	0.1	0.1	0.1
68	1/30/2020 15:07	0.1	0.1	0.1
69	1/30/2020 15:08	0.1	0.1	0.1
70	1/30/2020 15:09	0.1	0.1	0.1
71	1/30/2020 15:10	0.1	0.1	0.1
72	1/30/2020 15:11	0.1	0.1	0.1
73	1/30/2020 15:12	0.1	0.1	0.1
74	1/30/2020 15:13	0.1	0.1	0.1
75	1/30/2020 15:14	0.1	0.1	0.1
76	1/30/2020 15:15	0.1	0.1	0.1
77	1/30/2020 15:16	0.1	0.1	0.1
78	1/30/2020 15:17	0.1	0.1	0.1
79	1/30/2020 15:18	0.1	0.1	0.1
80	1/30/2020 15:19	0.1	0.1	0.1
81	1/30/2020 15:20	0.1	0.1	0.1
82	1/30/2020 15:21	0.1	0.1	0.1
83	1/30/2020 15:22	0.1	0.1	0.1
84	1/30/2020 15:23	0.1	0.1	0.1
85	1/30/2020 15:24	0.1	0.1	0.1
86	1/30/2020 15:25	0.1	0.1	0.1
87	1/30/2020 15:26	0.1	0.1	0.1
88	1/30/2020 15:27	0.1	0.1	0.1
89	1/30/2020 15:28	0.1	0.1	0.1
90	1/30/2020 15:29	0.1	0.1	0.1
91	1/30/2020 15:30	0.1	0.1	0.1
92	1/30/2020 15:31	0.1	0.1	0.1
93	1/30/2020 15:32	0.1	0.1	0.1
94	1/30/2020 15:33	0.1	0.1	0.1
95	1/30/2020 15:34	0.1	0.1	0.1
96	1/30/2020 15:35	0.1	0.1	0.1
97	1/30/2020 15:36	0.1	0.1	0.1
98	1/30/2020 15:37	0.1	0.1	0.1
99	1/30/2020 15:38	0.1	0.1	0.1
100	1/30/2020 15:39	0	0.1	0.1
101	1/30/2020 15:40	0	0.1	0.1
102	1/30/2020 15:41	0	0	0.1
103	1/30/2020 15:42	0	0	0.1
104	1/30/2020 15:43	0	0	0.1
105	1/30/2020 15:44	0	0	0.1
106	1/30/2020 15:45	0	0	0.1
107	1/30/2020 15:46	0	0	0.1
108	1/30/2020 15:47	0	0	0
109	1/30/2020 15:48	0	0	0.1

PID DATA
01-30-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
110	1/30/2020 15:49	0	0	0.1
111	1/30/2020 15:50	0	0	0.1
112	1/30/2020 15:51	0	0	0.1
113	1/30/2020 15:52	0	0.1	0.1
114	1/30/2020 15:53	0.1	0.1	0.1
115	1/30/2020 15:54	0	0.1	0.1
116	1/30/2020 15:55	0	0.1	0.1
Peak		0.2	0.3	0.4
Min		0	0	0
Average		0.1	0.1	0.2

PID DATA
01/31/2020

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20/01/31 09:09

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Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-919430
Unit Firmware Ver	V2.14

Running Mode	Hygiene Mode
Datalog Mode	Manual
Diagnostic Mode	No
Stop Reason	Stop by User

Site ID	RAE00000
User ID	USER0000

Begin	1/31/2020 9:09
End	1/31/2020 10:36
Sample Period(s)	60
Number of Records	87

Sensor	PID(ppm)
Sensor SN	S023030181U5
Measure Type	Min; Avg; Max
Span	100
Span 2	1000
Low Alarm	50
High Alarm	100
Over Alarm	2000
STEL Alarm	25
TWA Alarm	10
Measurement Gas	Isobutylene
Calibration Time	1/30/2020 9:48
Peak	N/A
Min	N/A
Average	N/A

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Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
1	1/31/2020 9:10	0	0	0
2	1/31/2020 9:11	0	0	0
3	1/31/2020 9:12	0	0	0
4	1/31/2020 9:13	0	0	0
5	1/31/2020 9:14	0	0	0
6	1/31/2020 9:15	0	0	0
7	1/31/2020 9:16	0	0	0
8	1/31/2020 9:17	0	0	0
9	1/31/2020 9:18	0	0	0

PID DATA
01/31/2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
10	1/31/2020 9:19	0	0	0
11	1/31/2020 9:20	0	0	0
12	1/31/2020 9:21	0	0	0
13	1/31/2020 9:22	0	0	0
14	1/31/2020 9:23	0	0	0
15	1/31/2020 9:24	0	0	0
16	1/31/2020 9:25	0	0	0
17	1/31/2020 9:26	0	0	0
18	1/31/2020 9:27	0	0	0
19	1/31/2020 9:28	0	0	0
20	1/31/2020 9:29	0	0	0
21	1/31/2020 9:30	0	0	0
22	1/31/2020 9:31	0	0	0
23	1/31/2020 9:32	0	0	0
24	1/31/2020 9:33	0	0	0
25	1/31/2020 9:34	0	0	0
26	1/31/2020 9:35	0	0	0
27	1/31/2020 9:36	0	0	0
28	1/31/2020 9:37	0	0	0
29	1/31/2020 9:38	0	0	0
30	1/31/2020 9:39	0	0	0
31	1/31/2020 9:40	0	0	0
32	1/31/2020 9:41	0	0	0
33	1/31/2020 9:42	0	0	0
34	1/31/2020 9:43	0	0	0
35	1/31/2020 9:44	0	0	0
36	1/31/2020 9:45	0	0	0
37	1/31/2020 9:46	0	0	0
38	1/31/2020 9:47	0	0	0
39	1/31/2020 9:48	0	0	0
40	1/31/2020 9:49	0	0	0
41	1/31/2020 9:50	0	0	0
42	1/31/2020 9:51	0	0	0
43	1/31/2020 9:52	0	0	0
44	1/31/2020 9:53	0	0	0
45	1/31/2020 9:54	0	0	0
46	1/31/2020 9:55	0	0	0
47	1/31/2020 9:56	0	0	0
48	1/31/2020 9:57	0	0	0
49	1/31/2020 9:58	0	0	0
50	1/31/2020 9:59	0	0	0
51	1/31/2020 10:00	0	0	0
52	1/31/2020 10:01	0	0	0
53	1/31/2020 10:02	0	0	0
54	1/31/2020 10:03	0	0	0
55	1/31/2020 10:04	0	0	0
56	1/31/2020 10:05	0	0	0
57	1/31/2020 10:06	0	0	0
58	1/31/2020 10:07	0	0	0
59	1/31/2020 10:08	0	0	0

PID DATA
01/31/2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
60	1/31/2020 10:09	0	0	0
61	1/31/2020 10:10	0	0	0
62	1/31/2020 10:11	0	0	0
63	1/31/2020 10:12	0	0	0
64	1/31/2020 10:13	0	0	0
65	1/31/2020 10:14	0	0	0
66	1/31/2020 10:15	0	0	0
67	1/31/2020 10:16	0	0	0
68	1/31/2020 10:17	0	0	0
69	1/31/2020 10:18	0	0	0
70	1/31/2020 10:19	0	0	0
71	1/31/2020 10:20	0	0	0
72	1/31/2020 10:21	0	0	0
73	1/31/2020 10:22	0	0	0
74	1/31/2020 10:23	0	0	0
75	1/31/2020 10:24	0	0	0
76	1/31/2020 10:25	0	0	0
77	1/31/2020 10:26	0	0	0
78	1/31/2020 10:27	0	0	0
79	1/31/2020 10:28	0	0	0
80	1/31/2020 10:29	0	0	0
81	1/31/2020 10:30	0	0	0
82	1/31/2020 10:31	0	0	0
83	1/31/2020 10:32	0	0	0
84	1/31/2020 10:33	0	0	0
85	1/31/2020 10:34	0	0	0
86	1/31/2020 10:35	0	0	0
87	1/31/2020 10:36	0	0	0
Peak		0	0	0
Min		0	0	0
Average		0	0	0

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20/02/03 07:41

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Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-919430
Unit Firmware Ver	V2.14

Running Mode	Hygiene Mode
Datalog Mode	Manual
Diagnostic Mode	No
Stop Reason	Power Down

Site ID	RAE00000
User ID	USER0000

Begin	2/3/2020 7:41
End	2/3/2020 14:42
Sample Period(s)	60
Number of Records	420

Sensor	PID(ppm)
Sensor SN	S023030181U5
Measure Type	Min; Avg; Max
Span	100
Span 2	1000
Low Alarm	50
High Alarm	100
Over Alarm	2000
STEL Alarm	25
TWA Alarm	10
Measurement Gas	Isobutylene
Calibration Time	1/30/2020 9:48
Peak	N/A
Min	N/A
Average	N/A

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Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
1	2/3/2020 7:42	0	0	0
2	2/3/2020 7:43	0	0	0
3	2/3/2020 7:44	0	0	0
4	2/3/2020 7:45	0	0	0
5	2/3/2020 7:46	0	0	0
6	2/3/2020 7:47	0	0	0
7	2/3/2020 7:48	0	0	0
8	2/3/2020 7:49	0	0	0
		PID(ppm)	PID(ppm)	PID(ppm)

PID DATA
02-03-2020

Index	Date/Time	(Min)	(Avg)	(Max)
9	2/3/2020 7:50	0	0	0
10	2/3/2020 7:51	0	0	0
11	2/3/2020 7:52	0	0	0
12	2/3/2020 7:53	0	0	0
13	2/3/2020 7:54	0	0	0
14	2/3/2020 7:55	0	0	0
15	2/3/2020 7:56	0	0	0
16	2/3/2020 7:57	0	0	0
17	2/3/2020 7:58	0	0	0
18	2/3/2020 7:59	0	0	0
19	2/3/2020 8:00	0	0	0
20	2/3/2020 8:01	0	0	0
21	2/3/2020 8:02	0	0	0
22	2/3/2020 8:03	0	0	0
23	2/3/2020 8:04	0	0	0
24	2/3/2020 8:05	0	0	0
25	2/3/2020 8:06	0	0	0
26	2/3/2020 8:07	0	0	0
27	2/3/2020 8:08	0	0	0
28	2/3/2020 8:09	0	0	0
29	2/3/2020 8:10	0	0	0
30	2/3/2020 8:11	0	0	0
31	2/3/2020 8:12	0	0	0
32	2/3/2020 8:13	0	0	0
33	2/3/2020 8:14	0	0	0
34	2/3/2020 8:15	0	0	0
35	2/3/2020 8:16	0	0	0
36	2/3/2020 8:17	0	0	0
37	2/3/2020 8:18	0	0	0
38	2/3/2020 8:19	0	0	0
39	2/3/2020 8:20	0	0	0
40	2/3/2020 8:21	0	0	0
41	2/3/2020 8:22	0	0	0
42	2/3/2020 8:23	0	0	0
43	2/3/2020 8:24	0	0	0
44	2/3/2020 8:25	0	0	0
45	2/3/2020 8:26	0	0	0
46	2/3/2020 8:27	0	0	0
47	2/3/2020 8:28	0	0	0
48	2/3/2020 8:29	0	0	0
49	2/3/2020 8:30	0	0	0
50	2/3/2020 8:31	0	0	0
51	2/3/2020 8:32	0	0	0
52	2/3/2020 8:33	0	0	0
53	2/3/2020 8:34	0	0	0
54	2/3/2020 8:35	0	0	0
55	2/3/2020 8:36	0	0	0
56	2/3/2020 8:37	0	0	0
57	2/3/2020 8:38	0	0	0
58	2/3/2020 8:39	0	0	0

PID DATA
02-03-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
59	2/3/2020 8:40	0	0	0
60	2/3/2020 8:41	0	0	0
61	2/3/2020 8:42	0	0	0
62	2/3/2020 8:43	0	0	0
63	2/3/2020 8:44	0	0	0
64	2/3/2020 8:45	0	0	0
65	2/3/2020 8:46	0	0	0
66	2/3/2020 8:47	0	0	0
67	2/3/2020 8:48	0	0	0
68	2/3/2020 8:49	0	0	0
69	2/3/2020 8:50	0	0	0
70	2/3/2020 8:51	0	0	0
71	2/3/2020 8:52	0	0	0
72	2/3/2020 8:53	0	0	0
73	2/3/2020 8:54	0	0	0
74	2/3/2020 8:55	0	0	0
75	2/3/2020 8:56	0	0	0
76	2/3/2020 8:57	0	0	0
77	2/3/2020 8:58	0	0	0
78	2/3/2020 8:59	0	0	0
79	2/3/2020 9:00	0	0	0
80	2/3/2020 9:01	0	0	0
81	2/3/2020 9:02	0	0	0
82	2/3/2020 9:03	0	0	0
83	2/3/2020 9:04	0	0	0
84	2/3/2020 9:05	0	0	0
85	2/3/2020 9:06	0	0	0
86	2/3/2020 9:07	0	0	0
87	2/3/2020 9:08	0	0	0
88	2/3/2020 9:09	0	0	0
89	2/3/2020 9:10	0	0	0
90	2/3/2020 9:11	0	0	0
91	2/3/2020 9:12	0	0	0
92	2/3/2020 9:13	0	0	0
93	2/3/2020 9:14	0	0	0
94	2/3/2020 9:15	0	0	0
95	2/3/2020 9:16	0	0	0
96	2/3/2020 9:17	0	0	0
97	2/3/2020 9:18	0	0	0
98	2/3/2020 9:19	0	0	0
99	2/3/2020 9:20	0	0	0
100	2/3/2020 9:21	0	0	0
101	2/3/2020 9:22	0	0	0
102	2/3/2020 9:23	0	0	0
103	2/3/2020 9:24	0	0	0
104	2/3/2020 9:25	0	0	0
105	2/3/2020 9:26	0	0	0
106	2/3/2020 9:27	0	0	0
107	2/3/2020 9:28	0	0	0
108	2/3/2020 9:29	0	0	0

PID DATA
02-03-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
109	2/3/2020 9:30	0	0	0
110	2/3/2020 9:31	0	0	0
111	2/3/2020 9:32	0	0	0
112	2/3/2020 9:33	0	0	0
113	2/3/2020 9:34	0	0	0
114	2/3/2020 9:35	0	0	0
115	2/3/2020 9:36	0	0	0
116	2/3/2020 9:37	0	0	0
117	2/3/2020 9:38	0	0	0
118	2/3/2020 9:39	0	0	0
119	2/3/2020 9:40	0	0	0
120	2/3/2020 9:41	0	0	0
121	2/3/2020 9:42	0	0	0
122	2/3/2020 9:43	0	0	0
123	2/3/2020 9:44	0	0	0
124	2/3/2020 9:45	0	0	0
125	2/3/2020 9:46	0	0	0.1
126	2/3/2020 9:47	0	0	0
127	2/3/2020 9:48	0	0	0
128	2/3/2020 9:49	0	0	0
129	2/3/2020 9:50	0	0	0.1
130	2/3/2020 9:51	0	0	0
131	2/3/2020 9:52	0	0	0
132	2/3/2020 9:53	0	0	0
133	2/3/2020 9:54	0	0	0
134	2/3/2020 9:55	0	0	0
135	2/3/2020 9:56	0	0	0.1
136	2/3/2020 9:57	0	0	0
137	2/3/2020 9:58	0	0	0
138	2/3/2020 9:59	0	0	0
139	2/3/2020 10:00	0	0	0
140	2/3/2020 10:01	0	0	0
141	2/3/2020 10:02	0	0	0
142	2/3/2020 10:03	0	0	0
143	2/3/2020 10:04	0	0	0
144	2/3/2020 10:05	0	0	0
145	2/3/2020 10:06	0	0	0
146	2/3/2020 10:07	0	0	0
147	2/3/2020 10:08	0	0	0
148	2/3/2020 10:09	0	0	0
149	2/3/2020 10:10	0	0	0
150	2/3/2020 10:11	0	0	0
151	2/3/2020 10:12	0	0	0
152	2/3/2020 10:13	0	0	0
153	2/3/2020 10:14	0	0	0
154	2/3/2020 10:15	0	0	0
155	2/3/2020 10:16	0	0	0
156	2/3/2020 10:17	0	0	0
157	2/3/2020 10:18	0	0	0
158	2/3/2020 10:19	0	0	0

PID DATA
02-03-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
159	2/3/2020 10:20	0	0	0
160	2/3/2020 10:21	0	0	0
161	2/3/2020 10:22	0	0	0
162	2/3/2020 10:23	0	0	0
163	2/3/2020 10:24	0	0	0
164	2/3/2020 10:25	0	0	0
165	2/3/2020 10:26	0	0	0
166	2/3/2020 10:27	0	0	0
167	2/3/2020 10:28	0	0	0
168	2/3/2020 10:29	0	0	0
169	2/3/2020 10:30	0	0	0
170	2/3/2020 10:31	0	0	0
171	2/3/2020 10:32	0	0	0
172	2/3/2020 10:33	0	0	0
173	2/3/2020 10:34	0	0	0
174	2/3/2020 10:35	0	0	0
175	2/3/2020 10:36	0	0	0
176	2/3/2020 10:37	0	0	0
177	2/3/2020 10:38	0	0	0
178	2/3/2020 10:39	0	0	0
179	2/3/2020 10:40	0	0	0
180	2/3/2020 10:41	0	0	0
181	2/3/2020 10:42	0	0	0
182	2/3/2020 10:43	0	0	0
183	2/3/2020 10:44	0	0	0
184	2/3/2020 10:45	0	0	0
185	2/3/2020 10:46	0	0	0
186	2/3/2020 10:47	0	0	0
187	2/3/2020 10:48	0	0	0
188	2/3/2020 10:49	0	0	0
189	2/3/2020 10:50	0	0	0
190	2/3/2020 10:51	0	0	0
191	2/3/2020 10:52	0	0	0
192	2/3/2020 10:53	0	0	0
193	2/3/2020 10:54	0	0	0
194	2/3/2020 10:55	0	0	0
195	2/3/2020 10:56	0	0	0
196	2/3/2020 10:57	0	0	0
197	2/3/2020 10:58	0	0	0
198	2/3/2020 10:59	0	0	0
199	2/3/2020 11:00	0	0	0
200	2/3/2020 11:01	0	0	0
201	2/3/2020 11:02	0	0	0
202	2/3/2020 11:03	0	0	0
203	2/3/2020 11:04	0	0	0
204	2/3/2020 11:05	0	0	0
205	2/3/2020 11:06	0	0	0
206	2/3/2020 11:07	0	0	0
207	2/3/2020 11:08	0	0	0
208	2/3/2020 11:09	0	0	0

PID DATA
02-03-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
209	2/3/2020 11:10	0	0	0
210	2/3/2020 11:11	0	0	0
211	2/3/2020 11:12	0	0	0
212	2/3/2020 11:13	0	0	0
213	2/3/2020 11:14	0	0	0
214	2/3/2020 11:15	0	0	0
215	2/3/2020 11:16	0	0	0
216	2/3/2020 11:17	0	0	0
217	2/3/2020 11:18	0	0	0
218	2/3/2020 11:19	0	0	0
219	2/3/2020 11:20	0	0	0
220	2/3/2020 11:21	0	0	0
221	2/3/2020 11:22	0	0	0
222	2/3/2020 11:23	0	0	0
223	2/3/2020 11:24	0	0	0
224	2/3/2020 11:25	0	0	0
225	2/3/2020 11:26	0	0	0
226	2/3/2020 11:27	0	0	0
227	2/3/2020 11:28	0	0	0
228	2/3/2020 11:29	0	0	0
229	2/3/2020 11:30	0	0	0
230	2/3/2020 11:31	0	0	0
231	2/3/2020 11:32	0	0	0
232	2/3/2020 11:33	0	0	0
233	2/3/2020 11:34	0	0	0
234	2/3/2020 11:35	0	0	0
235	2/3/2020 11:36	0	0	0
236	2/3/2020 11:37	0	0	0
237	2/3/2020 11:38	0	0	0
238	2/3/2020 11:39	0	0	0
239	2/3/2020 11:40	0	0	0
240	2/3/2020 11:41	0	0	0
241	2/3/2020 11:42	0	0	0
242	2/3/2020 11:43	0	0	0
243	2/3/2020 11:44	0	0	0
244	2/3/2020 11:45	0	0	0
245	2/3/2020 11:46	0	0	0
246	2/3/2020 11:47	0	0	0
247	2/3/2020 11:48	0	0	0
248	2/3/2020 11:49	0	0	0
249	2/3/2020 11:50	0	0	0
250	2/3/2020 11:51	0	0	0
251	2/3/2020 11:52	0	0	0
252	2/3/2020 11:53	0	0	0
253	2/3/2020 11:54	0	0	0
254	2/3/2020 11:55	0	0	0
255	2/3/2020 11:56	0	0	0
256	2/3/2020 11:57	0	0	0
257	2/3/2020 11:58	0	0	0
258	2/3/2020 11:59	0	0	0

PID DATA
02-03-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
259	2/3/2020 12:00	0	0	0
260	2/3/2020 12:01	0	0	0
261	2/3/2020 12:02	0	0	0
262	2/3/2020 12:03	0	0	0
263	2/3/2020 12:04	0	0	0
264	2/3/2020 12:05	0	0	0
265	2/3/2020 12:06	0	0	0
266	2/3/2020 12:07	0	0	0
267	2/3/2020 12:08	0	0	0
268	2/3/2020 12:09	0	0	0
269	2/3/2020 12:10	0	0	0
270	2/3/2020 12:11	0	0	0
271	2/3/2020 12:12	0	0	0
272	2/3/2020 12:13	0	0	0
273	2/3/2020 12:14	0	0	0
274	2/3/2020 12:15	0	0	0
275	2/3/2020 12:16	0	0	0
276	2/3/2020 12:17	0	0	0
277	2/3/2020 12:18	0	0	0
278	2/3/2020 12:19	0	0	0
279	2/3/2020 12:20	0	0	0
280	2/3/2020 12:21	0	0	0
281	2/3/2020 12:22	0	0	0
282	2/3/2020 12:23	0	0	0
283	2/3/2020 12:24	0	0	0
284	2/3/2020 12:25	0	0	0
285	2/3/2020 12:26	0	0	0
286	2/3/2020 12:27	0	0	0
287	2/3/2020 12:28	0	0	0
288	2/3/2020 12:29	0	0	0
289	2/3/2020 12:30	0	0	0
290	2/3/2020 12:31	0	0	0
291	2/3/2020 12:32	0	0	0
292	2/3/2020 12:33	0	0	0
293	2/3/2020 12:34	0	0	0
294	2/3/2020 12:35	0	0	0
295	2/3/2020 12:36	0	0	0
296	2/3/2020 12:37	0	0	0
297	2/3/2020 12:38	0	0	0
298	2/3/2020 12:39	0	0	0
299	2/3/2020 12:40	0	0	0
300	2/3/2020 12:41	0	0	0
301	2/3/2020 12:42	0	0	0
302	2/3/2020 12:43	0	0	0
303	2/3/2020 12:44	0	0	0
304	2/3/2020 12:45	0	0	0
305	2/3/2020 12:46	0	0	0
306	2/3/2020 12:47	0	0	0
307	2/3/2020 12:48	0	0	0
308	2/3/2020 12:49	0	0	0

PID DATA
02-03-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
309	2/3/2020 12:50	0	0	0
310	2/3/2020 12:51	0	0	0
311	2/3/2020 12:52	0	0	0
312	2/3/2020 12:53	0	0	0
313	2/3/2020 12:54	0	0	0
314	2/3/2020 12:55	0	0	0
315	2/3/2020 12:56	0	0	0
316	2/3/2020 12:57	0	0	0
317	2/3/2020 12:58	0	0	0
318	2/3/2020 12:59	0	0	0
319	2/3/2020 13:00	0	0	0
320	2/3/2020 13:01	0	0	0
321	2/3/2020 13:02	0	0	0
322	2/3/2020 13:03	0	0	0
323	2/3/2020 13:04	0	0	0
324	2/3/2020 13:05	0	0	0
325	2/3/2020 13:06	0	0	0
326	2/3/2020 13:07	0	0	0
327	2/3/2020 13:08	0	0	0
328	2/3/2020 13:09	0	0	0
329	2/3/2020 13:10	0	0	0
330	2/3/2020 13:11	0	0	0
331	2/3/2020 13:12	0	0	0
332	2/3/2020 13:13	0	0	0
333	2/3/2020 13:14	0	0	0
334	2/3/2020 13:15	0	0	0
335	2/3/2020 13:16	0	0	0
336	2/3/2020 13:17	0	0	0
337	2/3/2020 13:18	0	0	0
338	2/3/2020 13:19	0	0	0
339	2/3/2020 13:20	0	0	0
340	2/3/2020 13:21	0	0	0
341	2/3/2020 13:22	0	0	0
342	2/3/2020 13:23	0	0	0
343	2/3/2020 13:24	0	0	0
344	2/3/2020 13:25	0	0	0
345	2/3/2020 13:26	0	0	0
346	2/3/2020 13:27	0	0	0
347	2/3/2020 13:28	0	0	0
348	2/3/2020 13:29	0	0	0
349	2/3/2020 13:30	0	0	0
350	2/3/2020 13:31	0	0	0
351	2/3/2020 13:32	0	0	0
352	2/3/2020 13:33	0	0	0
353	2/3/2020 13:34	0	0	0
354	2/3/2020 13:35	0	0	0
355	2/3/2020 13:36	0	0	0
356	2/3/2020 13:37	0	0	0
357	2/3/2020 13:38	0	0	0
358	2/3/2020 13:39	0	0	0

PID DATA
02-03-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
359	2/3/2020 13:40	0	0	0
360	2/3/2020 13:41	0	0	0
361	2/3/2020 13:42	0	0	0
362	2/3/2020 13:43	0	0	0
363	2/3/2020 13:44	0	0	0
364	2/3/2020 13:45	0	0	0
365	2/3/2020 13:46	0	0	0
366	2/3/2020 13:47	0	0	0
367	2/3/2020 13:48	0	0	0
368	2/3/2020 13:49	0	0	0
369	2/3/2020 13:50	0	0	0
370	2/3/2020 13:51	0	0	0
371	2/3/2020 13:52	0	0	0
372	2/3/2020 13:53	0	0	0
373	2/3/2020 13:54	0	0	0
374	2/3/2020 13:55	0	0	0
375	2/3/2020 13:56	0	0	0
376	2/3/2020 13:57	0	0	0
377	2/3/2020 13:58	0	0	0
378	2/3/2020 13:59	0	0	0
379	2/3/2020 14:00	0	0	0
380	2/3/2020 14:01	0	0	0
381	2/3/2020 14:02	0	0	0
382	2/3/2020 14:03	0	0	0
383	2/3/2020 14:04	0	0	0
384	2/3/2020 14:05	0	0	0
385	2/3/2020 14:06	0	0	0
386	2/3/2020 14:07	0	0	0
387	2/3/2020 14:08	0	0	0
388	2/3/2020 14:09	0	0	0
389	2/3/2020 14:10	0	0	0
390	2/3/2020 14:11	0	0	0
391	2/3/2020 14:12	0	0	0
392	2/3/2020 14:13	0	0	0
393	2/3/2020 14:14	0	0	0
394	2/3/2020 14:15	0	0	0
395	2/3/2020 14:16	0	0	0
396	2/3/2020 14:17	0	0	0
397	2/3/2020 14:18	0	0	0
398	2/3/2020 14:19	0	0	0
399	2/3/2020 14:20	0	0	0
400	2/3/2020 14:21	0	0	0
401	2/3/2020 14:22	0	0	0
402	2/3/2020 14:23	0	0	0
403	2/3/2020 14:24	0	0	0
404	2/3/2020 14:25	0	0	0
405	2/3/2020 14:26	0	0	0
406	2/3/2020 14:27	0	0	0
407	2/3/2020 14:28	0	0	0
408	2/3/2020 14:29	0	0	0

PID DATA
02-03-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
409	2/3/2020 14:30	0	0	0
410	2/3/2020 14:31	0	0	0
411	2/3/2020 14:32	0	0	0
412	2/3/2020 14:33	0	0	0
413	2/3/2020 14:34	0	0	0
414	2/3/2020 14:35	0	0	0
415	2/3/2020 14:36	0	0	0
416	2/3/2020 14:37	0	0	0
417	2/3/2020 14:38	0	0	0
418	2/3/2020 14:39	0	0	0
419	2/3/2020 14:40	0	0	0
420	2/3/2020 14:41	0	0	0
Peak		0	0	0.1
Min		0	0	0
Average		0	0	0

PID DATA
02-04-2020

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20/02/04 08:17

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Summary

Unit Name	MiniRAE 3000(PGM-7320)
Unit SN	592-919430
Unit Firmware Ver	V2.14

Running Mode	Hygiene Mode
Datalog Mode	Manual
Diagnostic Mode	No
Stop Reason	Power Down

Site ID	RAE00000
User ID	USER0000

Begin	2/4/2020 8:17
End	2/4/2020 10:41
Sample Period(s)	60
Number of Records	144

Sensor	PID(ppm)
Sensor SN	S023030181U5
Measure Type	Min; Avg; Max
Span	100
Span 2	1000
Low Alarm	50
High Alarm	100
Over Alarm	2000
STEL Alarm	25
TWA Alarm	10
Measurement Gas	Isobutylene
Calibration Time	1/30/2020 9:48
Peak	N/A
Min	N/A
Average	N/A

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Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
1	2/4/2020 8:18	0	0	0
2	2/4/2020 8:19	0	0	0
3	2/4/2020 8:20	0	0	0
4	2/4/2020 8:21	0	0	0
5	2/4/2020 8:22	0	0	0
6	2/4/2020 8:23	0	0	0
7	2/4/2020 8:24	0	0	0
8	2/4/2020 8:25	0	0	0
9	2/4/2020 8:26	0	0	0

PID DATA
02-04-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
10	2/4/2020 8:27	0	0	0
11	2/4/2020 8:28	0	0	0
12	2/4/2020 8:29	0	0	0
13	2/4/2020 8:30	0	0	0
14	2/4/2020 8:31	0	0	0
15	2/4/2020 8:32	0	0	0
16	2/4/2020 8:33	0	0	0
17	2/4/2020 8:34	0	0	0
18	2/4/2020 8:35	0	0	0
19	2/4/2020 8:36	0	0	0
20	2/4/2020 8:37	0	0	0
21	2/4/2020 8:38	0	0	0
22	2/4/2020 8:39	0	0	0
23	2/4/2020 8:40	0	0	0
24	2/4/2020 8:41	0	0	0
25	2/4/2020 8:42	0	0	0
26	2/4/2020 8:43	0	0	0
27	2/4/2020 8:44	0	0	0
28	2/4/2020 8:45	0	0	0
29	2/4/2020 8:46	0	0	0
30	2/4/2020 8:47	0	0	0
31	2/4/2020 8:48	0	0	0
32	2/4/2020 8:49	0	0	0
33	2/4/2020 8:50	0	0	0
34	2/4/2020 8:51	0	0	0
35	2/4/2020 8:52	0	0	0
36	2/4/2020 8:53	0	0	0
37	2/4/2020 8:54	0	0	0
38	2/4/2020 8:55	0	0	0
39	2/4/2020 8:56	0	0	0
40	2/4/2020 8:57	0	0	0
41	2/4/2020 8:58	0	0	0
42	2/4/2020 8:59	0	0	0
43	2/4/2020 9:00	0	0	0
44	2/4/2020 9:01	0	0	0
45	2/4/2020 9:02	0	0	0
46	2/4/2020 9:03	0	0	0
47	2/4/2020 9:04	0	0	0
48	2/4/2020 9:05	0	0	0
49	2/4/2020 9:06	0	0	0
50	2/4/2020 9:07	0	0	0
51	2/4/2020 9:08	0	0	0
52	2/4/2020 9:09	0	0	0
53	2/4/2020 9:10	0	0	0
54	2/4/2020 9:11	0	0	0
55	2/4/2020 9:12	0	0	0
56	2/4/2020 9:13	0	0	0
57	2/4/2020 9:14	0	0	0
58	2/4/2020 9:15	0	0	0
59	2/4/2020 9:16	0	0	0

PID DATA
02-04-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
60	2/4/2020 9:17	0	0	0
61	2/4/2020 9:18	0	0	0
62	2/4/2020 9:19	0	0	0
63	2/4/2020 9:20	0	0	0
64	2/4/2020 9:21	0	0	0
65	2/4/2020 9:22	0	0	0
66	2/4/2020 9:23	0	0	0
67	2/4/2020 9:24	0	0	0
68	2/4/2020 9:25	0	0	0
69	2/4/2020 9:26	0	0	0
70	2/4/2020 9:27	0	0	0
71	2/4/2020 9:28	0	0	0
72	2/4/2020 9:29	0	0	0
73	2/4/2020 9:30	0	0	0
74	2/4/2020 9:31	0	0	0
75	2/4/2020 9:32	0	0	0
76	2/4/2020 9:33	0	0	0
77	2/4/2020 9:34	0	0	0
78	2/4/2020 9:35	0	0	0
79	2/4/2020 9:36	0	0	0
80	2/4/2020 9:37	0	0	0
81	2/4/2020 9:38	0	0	0
82	2/4/2020 9:39	0	0	0
83	2/4/2020 9:40	0	0	0
84	2/4/2020 9:41	0	0	0
85	2/4/2020 9:42	0	0	0
86	2/4/2020 9:43	0	0	0
87	2/4/2020 9:44	0	0	0
88	2/4/2020 9:45	0	0	0
89	2/4/2020 9:46	0	0	0
90	2/4/2020 9:47	0	0	0
91	2/4/2020 9:48	0	0	0
92	2/4/2020 9:49	0	0	0.1
93	2/4/2020 9:50	0	0.1	0.1
94	2/4/2020 9:51	0	0	0.1
95	2/4/2020 9:52	0	0	0.1
96	2/4/2020 9:53	0.1	0.1	0.1
97	2/4/2020 9:54	0	0.1	0.2
98	2/4/2020 9:55	0	0.1	0.2
99	2/4/2020 9:56	0	0	0.1
100	2/4/2020 9:57	0.1	0.1	0.1
101	2/4/2020 9:58	0	0.1	0.1
102	2/4/2020 9:59	0	0.1	0.1
103	2/4/2020 10:00	0	0	0.1
104	2/4/2020 10:01	0	0.1	0.1
105	2/4/2020 10:02	0.1	0.1	0.1
106	2/4/2020 10:03	0.1	0.1	0.1
107	2/4/2020 10:04	0	0.1	0.1
108	2/4/2020 10:05	0	0.1	0.1
109	2/4/2020 10:06	0.1	0.1	0.1

PID DATA
02-04-2020

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)
110	2/4/2020 10:07	0.1	0.1	0.1
111	2/4/2020 10:08	0	0	0.1
112	2/4/2020 10:09	0	0.1	0.1
113	2/4/2020 10:10	0	0.1	0.1
114	2/4/2020 10:11	0.1	0.1	0.1
115	2/4/2020 10:12	0	0	0.1
116	2/4/2020 10:13	0	0.1	0.1
117	2/4/2020 10:14	0	0	0.1
118	2/4/2020 10:15	0	0	0
119	2/4/2020 10:16	0	0	0.1
120	2/4/2020 10:17	0	0.1	0.1
121	2/4/2020 10:18	0	0.1	0.1
122	2/4/2020 10:19	0	0	0.1
123	2/4/2020 10:20	0	0	0.1
124	2/4/2020 10:21	0	0	0.1
125	2/4/2020 10:22	0	0	0.1
126	2/4/2020 10:23	0	0	0
127	2/4/2020 10:24	0	0	0
128	2/4/2020 10:25	0	0.1	0.1
129	2/4/2020 10:26	0	0.1	0.1
130	2/4/2020 10:27	0	0.1	0.1
131	2/4/2020 10:28	0	0	0.1
132	2/4/2020 10:29	0	0.1	0.1
133	2/4/2020 10:30	0.1	0.1	0.1
134	2/4/2020 10:31	0	0.1	0.1
135	2/4/2020 10:32	0	0	0.1
136	2/4/2020 10:33	0	0.1	0.1
137	2/4/2020 10:34	0	0.1	0.1
138	2/4/2020 10:35	0	0.1	0.1
139	2/4/2020 10:36	0	0.1	0.1
140	2/4/2020 10:37	0	0.1	0.1
141	2/4/2020 10:38	0	0.1	0.1
142	2/4/2020 10:39	0	0.1	0.1
143	2/4/2020 10:40	0	0.1	0.1
144	2/4/2020 10:41	0	0.1	0.1
Peak		0.1	0.1	0.2
Min		0	0	0
Average		0	0	0

PARTICULATE DATA

PARTICULATE DATA
01-21-20 File 1

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530152806
Firmware Version	3.7
Calibration Date	8/13/2018
Test Name	MANUAL_001
Test Start Time	9:28:12 AM
Test Start Date	1/21/2020
Test Length [D:H:M]	0:00:12
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.022
Mass Minimum [mg/m3]	0.013
Mass Maximum [mg/m3]	0.047
Mass TWA [mg/m3]	0
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	12

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.03		
120	0.02		
180	0.019		
240	0.018		
300	0.016		
360	0.016		
420	0.015		
480	0.013		
540	0.016		
600	0.016		
660	0.04		
720	0.047		

PARTICULATE DATA
01-21-2020 File 2

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530152806
Firmware Version	3.7
Calibration Date	8/13/2018
Test Name	MANUAL_002
Test Start Time	9:41:33 AM
Test Start Date	1/21/2020
Test Length [D:H:M]	0:02:07
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.018
Mass Minimum [mg/m3]	0.007
Mass Maximum [mg/m3]	0.077
Mass TWA [mg/m3]	0.005
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	127

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.077		
120	0.077		
180	0.052		
240	0.036		
300	0.037		
360	0.031		
420	0.043		
480	0.053		
540	0.047		
600	0.027		
660	0.02		
720	0.021		
780	0.023		
840	0.021		
900	0.017		
960	0.017		
1020	0.015		
1080	0.014		
1140	0.014		
1200	0.014		
1260	0.013		
1320	0.011		
1380	0.012		
1440	0.01		
1500	0.011		
1560	0.011		
1620	0.01		

PARTICULATE DATA
01-21-2020 File 2

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
1680	0.01		
1740	0.011		
1800	0.01		
1860	0.01		
1920	0.013		
1980	0.013		
2040	0.012		
2100	0.015		
2160	0.019		
2220	0.018		
2280	0.016		
2340	0.013		
2400	0.011		
2460	0.012		
2520	0.011		
2580	0.012		
2640	0.011		
2700	0.011		
2760	0.012		
2820	0.012		
2880	0.012		
2940	0.012		
3000	0.012		
3060	0.011		
3120	0.011		
3180	0.01		
3240	0.011		
3300	0.009		
3360	0.008		
3420	0.009		
3480	0.009		
3540	0.012		
3600	0.017		
3660	0.021		
3720	0.018		
3780	0.013		
3840	0.013		
3900	0.022		
3960	0.017		
4020	0.014		
4080	0.015		
4140	0.017		
4200	0.014		
4260	0.012		
4320	0.016		
4380	0.028		

PARTICULATE DATA
01-21-2020 File 2

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
4440	0.019		
4500	0.025		
4560	0.021		
4620	0.016		
4680	0.016		
4740	0.015		
4800	0.016		
4860	0.014		
4920	0.016		
4980	0.013		
5040	0.013		
5100	0.011		
5160	0.01		
5220	0.011		
5280	0.012		
5340	0.01		
5400	0.009		
5460	0.009		
5520	0.008		
5580	0.008		
5640	0.007		
5700	0.009		
5760	0.009		
5820	0.008		
5880	0.008		
5940	0.008		
6000	0.008		
6060	0.008		
6120	0.007		
6180	0.008		
6240	0.007		
6300	0.008		
6360	0.009		
6420	0.009		
6480	0.008		
6540	0.009		
6600	0.008		
6660	0.008		
6720	0.008		
6780	0.007		
6840	0.007		
6900	0.008		
6960	0.031		
7020	0.022		
7080	0.041		
7140	0.059		

PARTICULATE DATA
01-21-2020 File 2

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
7200	0.051		
7260	0.033		
7320	0.04		
7380	0.045		
7440	0.045		
7500	0.039		
7560	0.05		
7620	0.056		

PARTICULATE DATA
01-28-2020

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530152806
Firmware Version	3.7
Calibration Date	8/13/2018
Test Name	MANUAL_003
Test Start Time	9:34:01 AM
Test Start Date	1/28/2020
Test Length [D:H:M]	0:04:48
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.013
Mass Minimum [mg/m3]	0.005
Mass Maximum [mg/m3]	0.062
Mass TWA [mg/m3]	0.008
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	288

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.028		
120	0.041		
180	0.04		
240	0.03		
300	0.024		
360	0.027		
420	0.024		
480	0.018		
540	0.015		
600	0.021		
660	0.019		
720	0.016		
780	0.014		
840	0.018		
900	0.015		
960	0.016		
1020	0.015		
1080	0.015		
1140	0.014		
1200	0.018		
1260	0.017		
1320	0.038		
1380	0.04		
1440	0.035		
1500	0.031		
1560	0.026		
1620	0.018		

PARTICULATE DATA
01-28-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
1680	0.022		
1740	0.021		
1800	0.029		
1860	0.03		
1920	0.024		
1980	0.02		
2040	0.02		
2100	0.022		
2160	0.024		
2220	0.021		
2280	0.02		
2340	0.019		
2400	0.019		
2460	0.017		
2520	0.016		
2580	0.018		
2640	0.017		
2700	0.017		
2760	0.018		
2820	0.016		
2880	0.014		
2940	0.014		
3000	0.014		
3060	0.012		
3120	0.013		
3180	0.012		
3240	0.012		
3300	0.013		
3360	0.011		
3420	0.01		
3480	0.009		
3540	0.009		
3600	0.01		
3660	0.009		
3720	0.009		
3780	0.009		
3840	0.009		
3900	0.009		
3960	0.009		
4020	0.011		
4080	0.009		
4140	0.011		
4200	0.01		
4260	0.011		
4320	0.012		
4380	0.062		

PARTICULATE DATA
01-28-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
4440	0.058		
4500	0.012		
4560	0.016		
4620	0.016		
4680	0.014		
4740	0.018		
4800	0.013		
4860	0.013		
4920	0.013		
4980	0.012		
5040	0.014		
5100	0.02		
5160	0.019		
5220	0.015		
5280	0.018		
5340	0.017		
5400	0.017		
5460	0.015		
5520	0.014		
5580	0.016		
5640	0.016		
5700	0.015		
5760	0.015		
5820	0.019		
5880	0.016		
5940	0.016		
6000	0.02		
6060	0.018		
6120	0.017		
6180	0.019		
6240	0.019		
6300	0.018		
6360	0.019		
6420	0.018		
6480	0.019		
6540	0.019		
6600	0.017		
6660	0.024		
6720	0.02		
6780	0.016		
6840	0.016		
6900	0.015		
6960	0.016		
7020	0.015		
7080	0.016		
7140	0.015		

PARTICULATE DATA
01-28-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
7200	0.018		
7260	0.016		
7320	0.015		
7380	0.018		
7440	0.02		
7500	0.017		
7560	0.016		
7620	0.014		
7680	0.015		
7740	0.015		
7800	0.02		
7860	0.017		
7920	0.016		
7980	0.019		
8040	0.019		
8100	0.018		
8160	0.018		
8220	0.017		
8280	0.017		
8340	0.016		
8400	0.016		
8460	0.014		
8520	0.013		
8580	0.015		
8640	0.012		
8700	0.012		
8760	0.013		
8820	0.013		
8880	0.012		
8940	0.012		
9000	0.013		
9060	0.012		
9120	0.011		
9180	0.011		
9240	0.011		
9300	0.011		
9360	0.01		
9420	0.01		
9480	0.01		
9540	0.01		
9600	0.01		
9660	0.009		
9720	0.01		
9780	0.009		
9840	0.008		
9900	0.008		

PARTICULATE DATA
01-28-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
9960	0.008		
10020	0.008		
10080	0.008		
10140	0.008		
10200	0.007		
10260	0.007		
10320	0.007		
10380	0.007		
10440	0.006		
10500	0.007		
10560	0.007		
10620	0.007		
10680	0.007		
10740	0.007		
10800	0.006		
10860	0.006		
10920	0.007		
10980	0.007		
11040	0.006		
11100	0.005		
11160	0.006		
11220	0.005		
11280	0.005		
11340	0.005		
11400	0.005		
11460	0.005		
11520	0.005		
11580	0.006		
11640	0.008		
11700	0.007		
11760	0.006		
11820	0.006		
11880	0.006		
11940	0.007		
12000	0.009		
12060	0.008		
12120	0.011		
12180	0.015		
12240	0.013		
12300	0.014		
12360	0.018		
12420	0.009		
12480	0.006		
12540	0.006		
12600	0.006		
12660	0.01		

PARTICULATE DATA
01-28-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
12720	0.012		
12780	0.015		
12840	0.011		
12900	0.009		
12960	0.007		
13020	0.007		
13080	0.015		
13140	0.009		
13200	0.008		
13260	0.008		
13320	0.008		
13380	0.008		
13440	0.01		
13500	0.012		
13560	0.016		
13620	0.015		
13680	0.01		
13740	0.01		
13800	0.008		
13860	0.01		
13920	0.013		
13980	0.013		
14040	0.015		
14100	0.01		
14160	0.008		
14220	0.009		
14280	0.008		
14340	0.007		
14400	0.007		
14460	0.006		
14520	0.006		
14580	0.006		
14640	0.006		
14700	0.006		
14760	0.005		
14820	0.009		
14880	0.006		
14940	0.005		
15000	0.006		
15060	0.005		
15120	0.005		
15180	0.005		
15240	0.009		
15300	0.006		
15360	0.006		
15420	0.006		

PARTICULATE DATA
01-28-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
15480	0.006		
15540	0.006		
15600	0.006		
15660	0.006		
15720	0.006		
15780	0.007		
15840	0.009		
15900	0.01		
15960	0.007		
16020	0.007		
16080	0.007		
16140	0.007		
16200	0.006		
16260	0.007		
16320	0.006		
16380	0.006		
16440	0.006		
16500	0.006		
16560	0.006		
16620	0.007		
16680	0.006		
16740	0.007		
16800	0.007		
16860	0.006		
16920	0.005		
16980	0.005		
17040	0.005		
17100	0.006		
17160	0.005		
17220	0.005		
17280	0.007		

PARTICULATE DATA
01-30-2020

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530152806
Firmware Version	3.7
Calibration Date	8/13/2018
Test Name	MANUAL_004
Test Start Time	1:52:30 PM
Test Start Date	1/30/2020
Test Length [D:H:M]	0:01:56
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.028
Mass Minimum [mg/m3]	0.012
Mass Maximum [mg/m3]	0.118
Mass TWA [mg/m3]	0.008
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	116

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.024		
120	0.034		
180	0.04		
240	0.027		
300	0.032		
360	0.029		
420	0.025		
480	0.027		
540	0.022		
600	0.021		
660	0.024		
720	0.023		
780	0.023		
840	0.022		
900	0.022		
960	0.021		
1020	0.023		
1080	0.023		
1140	0.024		
1200	0.023		
1260	0.021		
1320	0.021		
1380	0.023		
1440	0.022		
1500	0.023		
1560	0.022		
1620	0.021		

PARTICULATE DATA
01-30-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
1680	0.025		
1740	0.023		
1800	0.023		
1860	0.024		
1920	0.023		
1980	0.025		
2040	0.024		
2100	0.03		
2160	0.027		
2220	0.053		
2280	0.035		
2340	0.021		
2400	0.018		
2460	0.017		
2520	0.014		
2580	0.016		
2640	0.016		
2700	0.015		
2760	0.016		
2820	0.012		
2880	0.015		
2940	0.027		
3000	0.031		
3060	0.024		
3120	0.012		
3180	0.013		
3240	0.013		
3300	0.03		
3360	0.035		
3420	0.037		
3480	0.03		
3540	0.073		
3600	0.082		
3660	0.057		
3720	0.078		
3780	0.109		
3840	0.118		
3900	0.1		
3960	0.071		
4020	0.053		
4080	0.047		
4140	0.047		
4200	0.033		
4260	0.035		
4320	0.034		
4380	0.032		

PARTICULATE DATA
01-30-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
4440	0.031		
4500	0.025		
4560	0.022		
4620	0.023		
4680	0.026		
4740	0.028		
4800	0.028		
4860	0.031		
4920	0.023		
4980	0.023		
5040	0.021		
5100	0.019		
5160	0.017		
5220	0.021		
5280	0.021		
5340	0.021		
5400	0.023		
5460	0.025		
5520	0.024		
5580	0.025		
5640	0.024		
5700	0.026		
5760	0.023		
5820	0.025		
5880	0.023		
5940	0.022		
6000	0.022		
6060	0.017		
6120	0.018		
6180	0.017		
6240	0.018		
6300	0.019		
6360	0.018		
6420	0.018		
6480	0.014		
6540	0.015		
6600	0.015		
6660	0.015		
6720	0.015		
6780	0.016		
6840	0.017		
6900	0.019		
6960	0.023		

PARTICULATE DATA
01-31-2020

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530152806
Firmware Version	3.7
Calibration Date	8/13/2018
Test Name	MANUAL_005
Test Start Time	9:01:13 AM
Test Start Date	1/31/2020
Test Length [D:H:M]	0:01:28
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.073
Mass Minimum [mg/m3]	0.029
Mass Maximum [mg/m3]	0.148
Mass TWA [mg/m3]	0.023
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	88

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.058		
120	0.074		
180	0.135		
240	0.11		
300	0.1		
360	0.087		
420	0.079		
480	0.08		
540	0.045		
600	0.039		
660	0.047		
720	0.066		
780	0.06		
840	0.044		
900	0.036		
960	0.029		
1020	0.03		
1080	0.082		
1140	0.095		
1200	0.053		
1260	0.038		
1320	0.032		
1380	0.043		
1440	0.05		
1500	0.059		
1560	0.052		
1620	0.062		

PARTICULATE DATA
01-31-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
1680	0.054		
1740	0.044		
1800	0.042		
1860	0.044		
1920	0.043		
1980	0.036		
2040	0.035		
2100	0.037		
2160	0.031		
2220	0.033		
2280	0.06		
2340	0.144		
2400	0.136		
2460	0.133		
2520	0.105		
2580	0.134		
2640	0.104		
2700	0.074		
2760	0.142		
2820	0.093		
2880	0.111		
2940	0.128		
3000	0.148		
3060	0.129		
3120	0.095		
3180	0.097		
3240	0.093		
3300	0.098		
3360	0.087		
3420	0.074		
3480	0.093		
3540	0.059		
3600	0.045		
3660	0.046		
3720	0.065		
3780	0.068		
3840	0.064		
3900	0.051		
3960	0.051		
4020	0.042		
4080	0.04		
4140	0.041		
4200	0.071		
4260	0.083		
4320	0.104		
4380	0.098		

PARTICULATE DATA
01-31-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
4440	0.108		
4500	0.09		
4560	0.075		
4620	0.073		
4680	0.066		
4740	0.066		
4800	0.061		
4860	0.055		
4920	0.054		
4980	0.06		
5040	0.068		
5100	0.061		
5160	0.1		
5220	0.073		
5280	0.096		

PARTICULATE DATA
02-03-2020

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530152806
Firmware Version	3.7
Calibration Date	8/13/2018
Test Name	MANUAL_006
Test Start Time	7:32:40 AM
Test Start Date	2/3/2020
Test Length [D:H:M]	0:07:04
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.030
Mass Minimum [mg/m3]	0.011
Mass Maximum [mg/m3]	0.115
Mass TWA [mg/m3]	0.027
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	424

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.115		
120	0.093		
180	0.084		
240	0.078		
300	0.076		
360	0.066		
420	0.061		
480	0.061		
540	0.061		
600	0.057		
660	0.053		
720	0.05		
780	0.107		
840	0.105		
900	0.069		
960	0.066		
1020	0.061		
1080	0.058		
1140	0.061		
1200	0.067		
1260	0.064		
1320	0.066		
1380	0.059		
1440	0.051		
1500	0.038		
1560	0.025		
1620	0.103		

PARTICULATE DATA
02-03-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
1680	0.017		
1740	0.018		
1800	0.036		
1860	0.046		
1920	0.058		
1980	0.072		
2040	0.067		
2100	0.063		
2160	0.058		
2220	0.061		
2280	0.058		
2340	0.056		
2400	0.049		
2460	0.048		
2520	0.04		
2580	0.043		
2640	0.043		
2700	0.04		
2760	0.038		
2820	0.038		
2880	0.037		
2940	0.037		
3000	0.038		
3060	0.039		
3120	0.036		
3180	0.038		
3240	0.037		
3300	0.037		
3360	0.034		
3420	0.035		
3480	0.036		
3540	0.035		
3600	0.034		
3660	0.034		
3720	0.032		
3780	0.033		
3840	0.034		
3900	0.032		
3960	0.031		
4020	0.031		
4080	0.03		
4140	0.03		
4200	0.03		
4260	0.03		
4320	0.033		
4380	0.031		

PARTICULATE DATA
02-03-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
4440	0.029		
4500	0.029		
4560	0.027		
4620	0.029		
4680	0.029		
4740	0.026		
4800	0.028		
4860	0.031		
4920	0.033		
4980	0.031		
5040	0.03		
5100	0.028		
5160	0.029		
5220	0.03		
5280	0.029		
5340	0.029		
5400	0.033		
5460	0.033		
5520	0.031		
5580	0.031		
5640	0.031		
5700	0.028		
5760	0.036		
5820	0.047		
5880	0.031		
5940	0.028		
6000	0.031		
6060	0.029		
6120	0.029		
6180	0.03		
6240	0.03		
6300	0.03		
6360	0.039		
6420	0.041		
6480	0.038		
6540	0.033		
6600	0.034		
6660	0.035		
6720	0.033		
6780	0.029		
6840	0.03		
6900	0.03		
6960	0.029		
7020	0.028		
7080	0.029		
7140	0.028		

PARTICULATE DATA
02-03-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
7200	0.029		
7260	0.028		
7320	0.028		
7380	0.028		
7440	0.038		
7500	0.044		
7560	0.048		
7620	0.032		
7680	0.031		
7740	0.035		
7800	0.038		
7860	0.034		
7920	0.038		
7980	0.037		
8040	0.039		
8100	0.041		
8160	0.04		
8220	0.04		
8280	0.04		
8340	0.042		
8400	0.036		
8460	0.04		
8520	0.04		
8580	0.038		
8640	0.037		
8700	0.035		
8760	0.035		
8820	0.035		
8880	0.037		
8940	0.035		
9000	0.036		
9060	0.035		
9120	0.033		
9180	0.032		
9240	0.036		
9300	0.035		
9360	0.032		
9420	0.03		
9480	0.032		
9540	0.035		
9600	0.035		
9660	0.033		
9720	0.033		
9780	0.033		
9840	0.031		
9900	0.03		

PARTICULATE DATA
02-03-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
9960	0.03		
10020	0.035		
10080	0.035		
10140	0.029		
10200	0.028		
10260	0.046		
10320	0.043		
10380	0.045		
10440	0.048		
10500	0.048		
10560	0.057		
10620	0.049		
10680	0.034		
10740	0.031		
10800	0.027		
10860	0.027		
10920	0.027		
10980	0.026		
11040	0.033		
11100	0.091		
11160	0.053		
11220	0.056		
11280	0.06		
11340	0.054		
11400	0.046		
11460	0.046		
11520	0.042		
11580	0.032		
11640	0.032		
11700	0.03		
11760	0.029		
11820	0.038		
11880	0.044		
11940	0.043		
12000	0.079		
12060	0.048		
12120	0.034		
12180	0.032		
12240	0.032		
12300	0.035		
12360	0.033		
12420	0.033		
12480	0.031		
12540	0.032		
12600	0.035		
12660	0.033		

PARTICULATE DATA
02-03-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
12720	0.031		
12780	0.03		
12840	0.032		
12900	0.03		
12960	0.031		
13020	0.032		
13080	0.034		
13140	0.032		
13200	0.031		
13260	0.032		
13320	0.031		
13380	0.031		
13440	0.027		
13500	0.028		
13560	0.03		
13620	0.032		
13680	0.033		
13740	0.026		
13800	0.024		
13860	0.023		
13920	0.024		
13980	0.024		
14040	0.023		
14100	0.024		
14160	0.027		
14220	0.03		
14280	0.025		
14340	0.024		
14400	0.023		
14460	0.023		
14520	0.025		
14580	0.023		
14640	0.024		
14700	0.021		
14760	0.02		
14820	0.02		
14880	0.02		
14940	0.018		
15000	0.019		
15060	0.019		
15120	0.019		
15180	0.019		
15240	0.019		
15300	0.02		
15360	0.022		
15420	0.022		

PARTICULATE DATA
02-03-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
15480	0.023		
15540	0.025		
15600	0.026		
15660	0.027		
15720	0.028		
15780	0.025		
15840	0.022		
15900	0.02		
15960	0.019		
16020	0.021		
16080	0.019		
16140	0.021		
16200	0.023		
16260	0.026		
16320	0.029		
16380	0.035		
16440	0.028		
16500	0.024		
16560	0.023		
16620	0.023		
16680	0.02		
16740	0.022		
16800	0.02		
16860	0.019		
16920	0.02		
16980	0.019		
17040	0.018		
17100	0.018		
17160	0.018		
17220	0.019		
17280	0.018		
17340	0.019		
17400	0.019		
17460	0.019		
17520	0.019		
17580	0.019		
17640	0.019		
17700	0.018		
17760	0.017		
17820	0.017		
17880	0.016		
17940	0.016		
18000	0.016		
18060	0.016		
18120	0.017		
18180	0.017		

PARTICULATE DATA
02-03-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
18240	0.018		
18300	0.017		
18360	0.018		
18420	0.02		
18480	0.019		
18540	0.018		
18600	0.02		
18660	0.019		
18720	0.019		
18780	0.018		
18840	0.019		
18900	0.017		
18960	0.018		
19020	0.02		
19080	0.017		
19140	0.018		
19200	0.017		
19260	0.017		
19320	0.017		
19380	0.018		
19440	0.016		
19500	0.023		
19560	0.022		
19620	0.02		
19680	0.019		
19740	0.022		
19800	0.017		
19860	0.017		
19920	0.018		
19980	0.016		
20040	0.015		
20100	0.015		
20160	0.015		
20220	0.014		
20280	0.015		
20340	0.015		
20400	0.015		
20460	0.015		
20520	0.015		
20580	0.015		
20640	0.014		
20700	0.014		
20760	0.015		
20820	0.015		
20880	0.014		
20940	0.015		

PARTICULATE DATA
02-03-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
21000	0.015		
21060	0.014		
21120	0.014		
21180	0.013		
21240	0.013		
21300	0.018		
21360	0.019		
21420	0.017		
21480	0.015		
21540	0.013		
21600	0.012		
21660	0.013		
21720	0.012		
21780	0.013		
21840	0.013		
21900	0.012		
21960	0.012		
22020	0.012		
22080	0.012		
22140	0.012		
22200	0.012		
22260	0.012		
22320	0.012		
22380	0.012		
22440	0.011		
22500	0.012		
22560	0.012		
22620	0.012		
22680	0.012		
22740	0.012		
22800	0.012		
22860	0.012		
22920	0.011		
22980	0.011		
23040	0.011		
23100	0.012		
23160	0.011		
23220	0.012		
23280	0.016		
23340	0.016		
23400	0.013		
23460	0.014		
23520	0.016		
23580	0.017		
23640	0.023		
23700	0.027		

PARTICULATE DATA
02-03-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
23760	0.024		
23820	0.024		
23880	0.028		
23940	0.024		
24000	0.03		
24060	0.051		
24120	0.026		
24180	0.023		
24240	0.026		
24300	0.025		
24360	0.027		
24420	0.023		
24480	0.021		
24540	0.02		
24600	0.018		
24660	0.017		
24720	0.015		
24780	0.015		
24840	0.014		
24900	0.014		
24960	0.014		
25020	0.013		
25080	0.014		
25140	0.013		
25200	0.014		
25260	0.018		
25320	0.019		
25380	0.016		
25440	0.016		

PARTICULATE DATA
02-04-2020

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530152806
Firmware Version	3.7
Calibration Date	8/13/2018
Test Name	MANUAL_007
Test Start Time	8:08:43 AM
Test Start Date	2/4/2020
Test Length [D:H:M]	0:02:24
Test Interval [M:S]	1:00
Mass Average [mg/m3]	0.044
Mass Minimum [mg/m3]	0.02
Mass Maximum [mg/m3]	0.119
Mass TWA [mg/m3]	0.014
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	144

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
60	0.12		
120	0.087		
180	0.106		
240	0.131		
300	0.086		
360	0.122		
420	0.129		
480	0.119		
540	0.114		
600	0.117		
660	0.142		
720	0.124		
780	0.12		
840	0.087		
900	0.094		
960	0.091		
1020	0.085		
1080	0.079		
1140	0.076		
1200	0.074		
1260	0.06		
1320	0.063		
1380	0.042		
1440	0.031		
1500	0.02		
1560	0.021		
1620	0.05		

PARTICULATE DATA
02-04-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
1680	0.032		
1740	0.032		
1800	0.035		
1860	0.032		
1920	0.033		
1980	0.032		
2040	0.027		
2100	0.039		
2160	0.034		
2220	0.035		
2280	0.031		
2340	0.028		
2400	0.031		
2460	0.031		
2520	0.037		
2580	0.034		
2640	0.033		
2700	0.03		
2760	0.025		
2820	0.031		
2880	0.027		
2940	0.029		
3000	0.032		
3060	0.028		
3120	0.032		
3180	0.029		
3240	0.027		
3300	0.027		
3360	0.027		
3420	0.026		
3480	0.029		
3540	0.028		
3600	0.028		
3660	0.028		
3720	0.027		
3780	0.026		
3840	0.026		
3900	0.028		
3960	0.036		
4020	0.055		
4080	0.047		
4140	0.054		
4200	0.038		
4260	0.057		
4320	0.105		
4380	0.129		

PARTICULATE DATA

02-04-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
4440	0.086		
4500	0.057		
4560	0.042		
4620	0.036		
4680	0.037		
4740	0.032		
4800	0.031		
4860	0.032		
4920	0.031		
4980	0.027		
5040	0.026		
5100	0.025		
5160	0.022		
5220	0.025		
5280	0.034		
5340	0.03		
5400	0.037		
5460	0.031		
5520	0.031		
5580	0.039		
5640	0.034		
5700	0.031		
5760	0.024		
5820	0.028		
5880	0.035		
5940	0.041		
6000	0.033		
6060	0.048		
6120	0.032		
6180	0.039		
6240	0.036		
6300	0.031		
6360	0.032		
6420	0.032		
6480	0.038		
6540	0.025		
6600	0.033		
6660	0.054		
6720	0.037		
6780	0.031		
6840	0.031		
6900	0.041		
6960	0.03		
7020	0.035		
7080	0.034		
7140	0.036		

PARTICULATE DATA

02-04-2020

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
7200	0.032		
7260	0.028		
7320	0.04		
7380	0.027		
7440	0.026		
7500	0.027		
7560	0.026		
7620	0.027		
7680	0.024		
7740	0.024		
7800	0.025		
7860	0.035		
7920	0.029		
7980	0.023		
8040	0.026		
8100	0.027		
8160	0.033		
8220	0.03		
8280	0.029		
8340	0.027		
8400	0.038		
8460	0.036		
8520	0.035		
8580	0.031		
8640	0.031		

LANDFILL GAS DATA

LANDFILL GAS DATA
02-03-2020

Device ID
GEM™2NAV; Version 3_13L
LSGAM:6_0_20160627
{1355875309900}

	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/3/2020 8:38	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 8:39	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:40	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:41	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:42	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:43	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:44	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:46	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:47	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:48	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:49	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:50	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:51	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:52	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:53	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:54	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:55	0	0	20.8	79.2	0
AUTO-LOG	2/3/2020 8:56	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 8:57	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 8:58	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 8:59	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 9:00	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 9:01	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 9:02	0	0.1	20.9	79	0
AUTO-LOG	2/3/2020 9:03	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 9:04	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 9:05	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 9:06	0	0	20.9	79.1	0
AUTO-LOG	2/3/2020 9:07	0	0	21	79	0
AUTO-LOG	2/3/2020 9:08	0	0	21	79	0
AUTO-LOG	2/3/2020 9:09	0	0	21	79	0
AUTO-LOG	2/3/2020 9:10	0	0	21	79	0
AUTO-LOG	2/3/2020 9:11	0	0	21	79	0
AUTO-LOG	2/3/2020 9:12	0	0	21	79	0
AUTO-LOG	2/3/2020 9:13	0	0	21	79	0
AUTO-LOG	2/3/2020 9:14	0	0	21	79	0
AUTO-LOG	2/3/2020 9:15	0	0	21	79	0
AUTO-LOG	2/3/2020 9:16	0	0	21	79	0
AUTO-LOG	2/3/2020 9:17	0	0	21	79	0
AUTO-LOG	2/3/2020 9:18	0	0	21	79	0
AUTO-LOG	2/3/2020 9:19	0	0	21	79	0
AUTO-LOG	2/3/2020 9:20	0	0	21	79	0
AUTO-LOG	2/3/2020 9:21	0	0	21	79	0
AUTO-LOG	2/3/2020 9:22	0	0	21	79	0
AUTO-LOG	2/3/2020 9:23	0	0	21	79	0
AUTO-LOG	2/3/2020 9:24	0	0	21	79	0
AUTO-LOG	2/3/2020 9:25	0	0	21	79	0
AUTO-LOG	2/3/2020 9:26	0	0	21.1	78.9	0

LANDFILL GAS DATA
02-03-2020

	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/3/2020 9:27	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:28	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:29	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:30	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:31	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:32	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:33	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:34	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:35	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:36	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:37	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:38	0	0	21.1	78.9	0
AUTO-LOG	2/3/2020 9:39	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:40	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:41	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:42	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:43	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:44	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:45	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:46	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:47	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:48	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:49	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:50	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:51	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:52	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:53	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:54	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:55	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:56	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:57	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:58	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 9:59	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:00	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:01	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:02	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:03	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:04	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:05	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:06	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:07	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:08	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:09	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:10	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:11	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:12	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:13	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:14	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:15	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:16	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:17	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:18	0	0	21.2	78.8	0

LANDFILL GAS DATA
02-03-2020

	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/3/2020 10:19	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:20	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:21	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:22	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:23	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:24	0	0	21.2	78.8	0
AUTO-LOG	2/3/2020 10:25	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:26	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:27	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:28	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:29	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:30	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:31	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:32	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:33	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:34	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:35	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:36	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:37	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:38	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:39	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:40	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:41	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:42	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:43	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:44	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:45	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:46	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:47	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:48	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:49	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:50	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:51	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:52	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:53	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:54	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:55	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:56	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:57	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 10:58	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:00	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:01	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:02	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:03	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:04	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:05	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:06	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:07	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:08	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:09	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:10	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:11	0	0	21.3	78.7	0

LANDFILL GAS DATA
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	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/3/2020 11:12	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:13	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:14	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:15	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:16	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:17	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:18	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:19	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:20	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:21	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:22	0	0	21.3	78.7	0
AUTO-LOG	2/3/2020 11:23	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:24	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:25	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:26	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:27	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:28	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:29	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:30	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:31	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:32	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:33	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:34	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:35	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:36	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:37	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:38	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:39	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:40	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:41	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:42	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:43	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:44	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:45	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:46	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:47	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:48	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:49	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:50	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:51	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:52	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:53	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:54	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:55	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:56	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:57	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:58	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 11:59	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:00	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:01	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:02	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:03	0	0	21.4	78.6	0

LANDFILL GAS DATA
02-03-2020

	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/3/2020 12:04	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:05	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:06	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:07	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:08	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:09	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:10	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:11	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:12	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:13	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:14	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:15	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:16	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:17	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:18	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:19	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:20	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:21	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:22	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:23	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:24	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:25	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:26	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:27	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:28	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:29	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:30	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:31	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:32	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:33	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:34	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:35	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:36	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:37	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:38	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:39	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:40	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:41	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:42	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:43	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:44	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:45	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:46	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:47	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:48	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:49	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:50	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:51	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:52	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:53	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:54	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:55	0	0	21.4	78.6	0

LANDFILL GAS DATA
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	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/3/2020 12:56	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:57	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:58	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 12:59	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:00	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:01	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:02	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:03	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:04	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:05	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:06	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:07	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:09	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:10	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:11	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:12	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:13	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:14	0	0	21.4	78.6	0
AUTO-LOG	2/3/2020 13:15	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:16	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:17	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:18	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:19	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:20	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:21	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:22	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:23	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:24	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:25	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:26	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:27	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:28	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:29	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:30	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:31	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:32	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:33	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:34	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:35	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:36	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:37	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:38	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:39	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:40	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:41	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:42	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:43	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:44	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:45	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:46	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:47	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:48	0	0	21.5	78.5	0

LANDFILL GAS DATA
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	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/3/2020 13:49	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:50	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:51	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:52	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:53	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:54	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:55	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:56	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:57	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:58	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 13:59	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:00	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:01	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:02	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:03	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:04	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:05	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:06	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:07	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:08	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:09	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:10	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:11	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:12	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:13	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:14	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:15	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:16	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:17	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:18	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:19	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:20	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:21	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:22	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:23	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:24	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:25	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:26	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:27	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:28	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:29	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:30	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:31	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:32	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:33	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:34	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:35	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:36	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:37	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:38	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:39	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:40	0	0	21.5	78.5	0

LANDFILL GAS DATA
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	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/3/2020 14:41	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:42	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:43	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:44	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:45	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:46	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:47	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:48	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:49	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:50	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:51	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:52	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:53	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:54	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:55	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:56	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:57	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:58	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 14:59	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:00	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:01	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:02	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:03	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:04	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:05	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:06	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:08	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:09	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:10	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:11	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:12	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:13	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:14	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:15	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:16	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:17	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:18	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:19	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:20	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:21	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:22	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:23	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:24	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:25	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:26	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:27	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:28	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:29	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:30	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:31	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:32	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:33	0	0	21.5	78.5	0

LANDFILL GAS DATA
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	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/3/2020 15:34	0	0	21.6	78.4	0
AUTO-LOG	2/3/2020 15:35	0	0	21.6	78.4	0
AUTO-LOG	2/3/2020 15:36	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:37	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:38	0	0	21.5	78.5	0
AUTO-LOG	2/3/2020 15:39	0	0	21.6	78.4	0
AUTO-LOG	2/3/2020 15:40	0	0	21.6	78.4	0

LANDFILL GAS DATA
02-04-2020

Device ID
GEM™2NAV; Version 3_13L
LSGAM:6_0_20160627
{1355875309900}

	Date/Time	CH4 %	CO2 %	O2 %	Balance %	%LEL %
AUTO-LOG	2/4/2020 9:20	0	0	20.7	79.3	0
AUTO-LOG	2/4/2020 9:21	0	0	20.6	79.4	0
AUTO-LOG	2/4/2020 9:22	0	0	20.6	79.4	0
AUTO-LOG	2/4/2020 9:23	0	0	20.6	79.4	0
AUTO-LOG	2/4/2020 9:24	0	0	20.6	79.4	0
AUTO-LOG	2/4/2020 9:25	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:26	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:27	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:28	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:29	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:30	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:31	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:32	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:33	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:34	0	0	20.5	79.5	0
AUTO-LOG	2/4/2020 9:35	0	0	20.6	79.4	0
AUTO-LOG	2/4/2020 9:36	0	0	20.6	79.4	0
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AUTO-LOG	2/4/2020 9:38	0	0	20.6	79.4	0
AUTO-LOG	2/4/2020 9:39	0	0	20.6	79.4	0
AUTO-LOG	2/4/2020 9:40	0	0	20.6	79.4	0
AUTO-LOG	2/4/2020 9:41	0	0	20.6	79.4	0
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AUTO-LOG	2/4/2020 9:48	0	0	20.7	79.3	0
AUTO-LOG	2/4/2020 9:49	0	0	20.7	79.3	0
AUTO-LOG	2/4/2020 9:50	0	0	20.7	79.3	0
AUTO-LOG	2/4/2020 9:51	0	0	20.7	79.3	0
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AUTO-LOG	2/4/2020 10:02	0	0	20.9	79.1	0
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AUTO-LOG	2/4/2020 10:04	0	0	20.9	79.1	0
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AUTO-LOG	2/4/2020 10:09	0	0	20.9	79.1	0
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AUTO-LOG	2/4/2020 10:35	0	0	21.1	78.9	0
AUTO-LOG	2/4/2020 10:36	0	0	21.1	78.9	0
AUTO-LOG	2/4/2020 10:37	0	0	21.1	78.9	0
AUTO-LOG	2/4/2020 10:38	0	0	21.1	78.9	0
AUTO-LOG	2/4/2020 10:39	0	0	21.1	78.9	0
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AUTO-LOG	2/4/2020 10:43	0	0	21.1	78.9	0
AUTO-LOG	2/4/2020 10:44	0	0	21.1	78.9	0
AUTO-LOG	2/4/2020 10:45	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 10:46	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 10:47	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 10:48	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 10:49	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 10:50	0	0	21.2	78.8	0
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AUTO-LOG	2/4/2020 10:56	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 10:57	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 10:58	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 10:59	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 11:00	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 11:01	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 11:02	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 11:03	0	0	21.2	78.8	0

AUTO-LOG	2/4/2020 11:04	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 11:05	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 11:06	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 11:07	0	0	21.2	78.8	0
AUTO-LOG	2/4/2020 11:08	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:09	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:10	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:11	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:12	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:13	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:14	0	0	21.3	78.7	0
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AUTO-LOG	2/4/2020 11:20	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:21	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:22	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:24	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:25	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:26	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:27	0	0	21.3	78.7	0
AUTO-LOG	2/4/2020 11:28	0	0	21.4	78.6	0
AUTO-LOG	2/4/2020 11:29	0	0	21.4	78.6	0
AUTO-LOG	2/4/2020 11:30	0	0	21.4	78.6	0
AUTO-LOG	2/4/2020 11:31	0	0	21.4	78.6	0
AUTO-LOG	2/6/2020 9:45	0	0	20.1	79.9	0
AUTO-LOG	2/6/2020 9:46	0	0	20.2	79.8	0
AUTO-LOG	2/6/2020 9:46	0	0	20.2	79.8	0
AUTO-LOG	2/6/2020 9:47	0	0	20.2	79.8	0
AUTO-LOG	2/6/2020 9:48	0	0	20.2	79.8	0
AUTO-LOG	2/6/2020 9:49	0	0	20.2	79.8	0

APPENDIX D
PHOTOGRAPHIC LOG

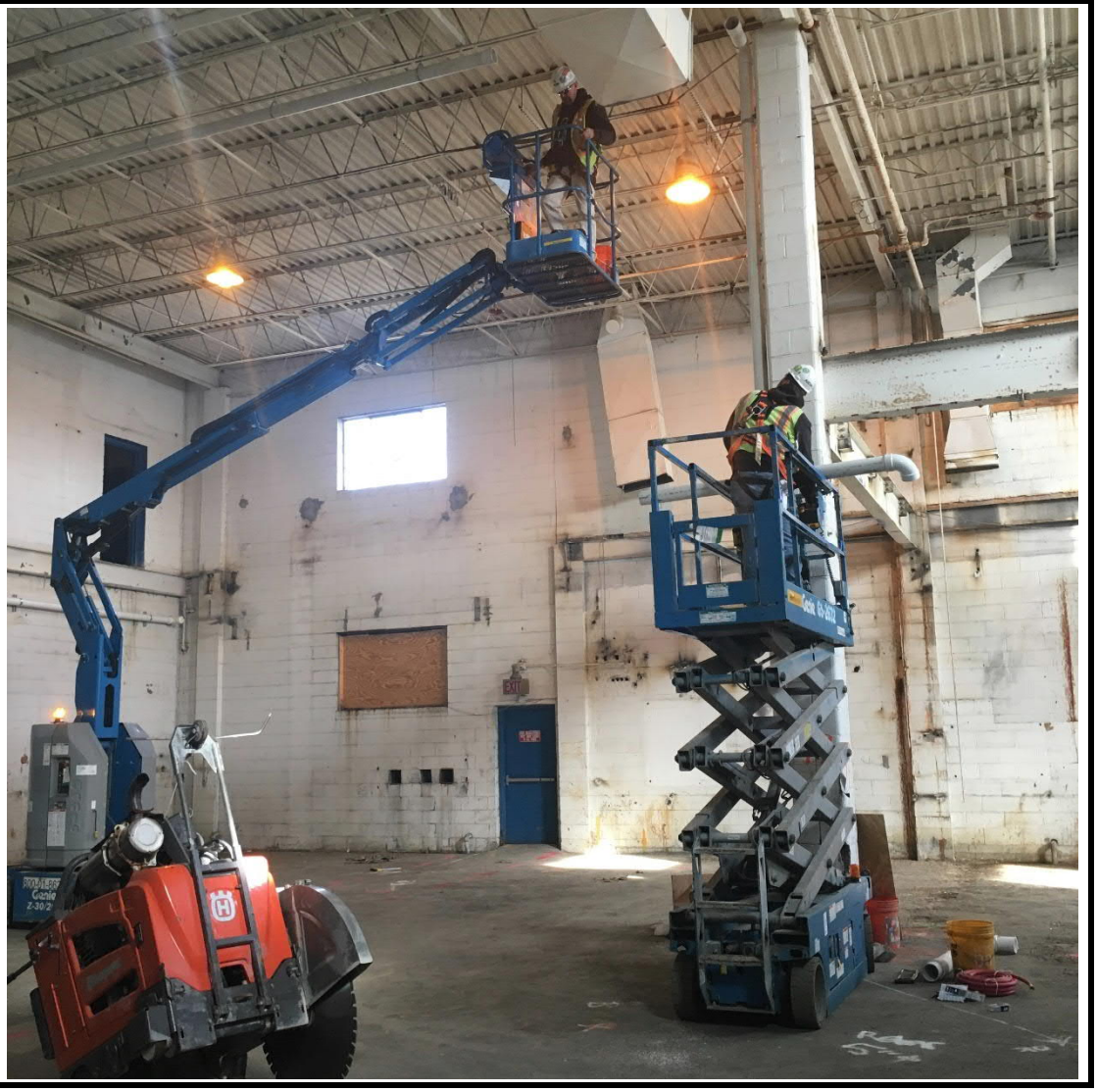
AECOM
1255 Broad Street
Suite 201
Clifton, NJ 07013-3309

PHOTOGRAPHIC DOCUMENTATION

CLIENT NAME: BP	PROJECT NAME: IPO: Columbia Cement	AECOM PROJECT: 60481767

Photo No. 1	Date: 1/30/20

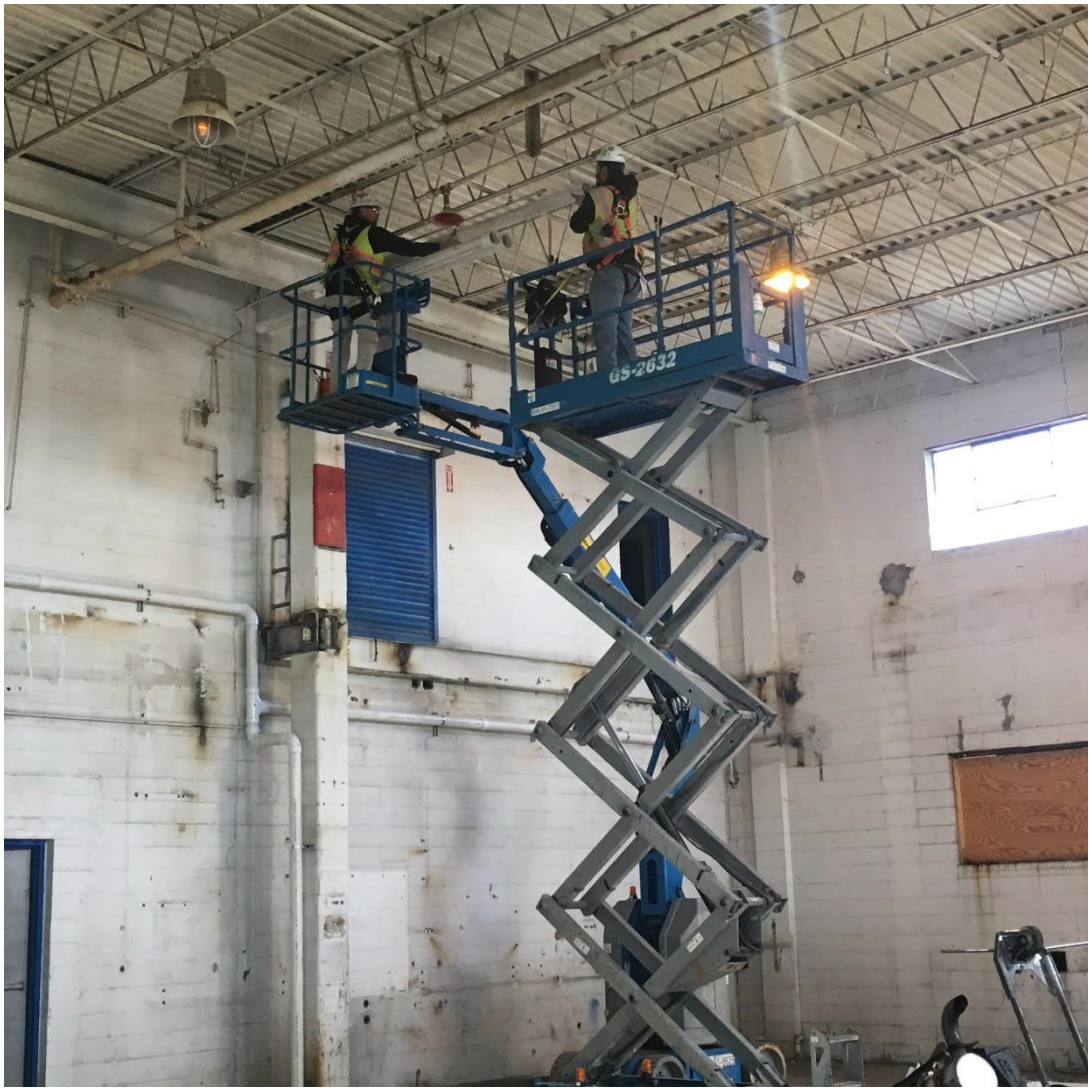
Description:
Installing overhead piping in Room 2.



AECOM 1255 Broad Street Suite 201 Clifton, NJ 07013-3309	**PHOTOGRAPHIC DOCUMENTATION**	
CLIENT NAME: BP	**PROJECT NAME:** IPO: Columbia Cement	**AECOM PROJECT:** 60481767

Photo No. 2	**Date:** 1/30/20

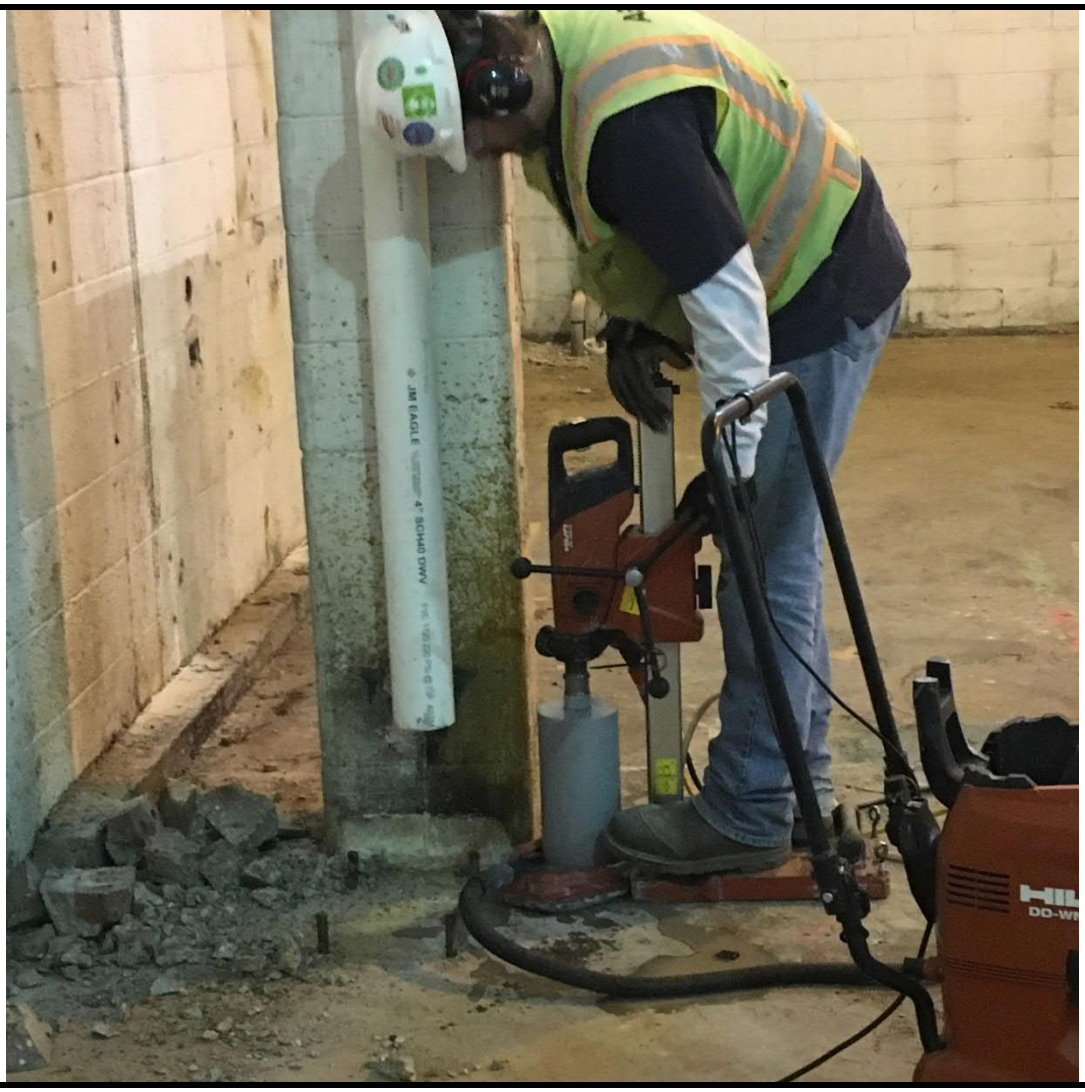
Description:
Installing overhead piping in Room 2.



AECOM 1255 Broad Street Suite 201 Clifton, NJ 07013-3309	PHOTOGRAPHIC DOCUMENTATION	
CLIENT NAME: BP	**PROJECT NAME:** IPO: Columbia Cement	**AECOM PROJECT:** 60481767

Photo No. 3	**Date:** 2/4/20

Description:
Coring through the slab at EP-09.



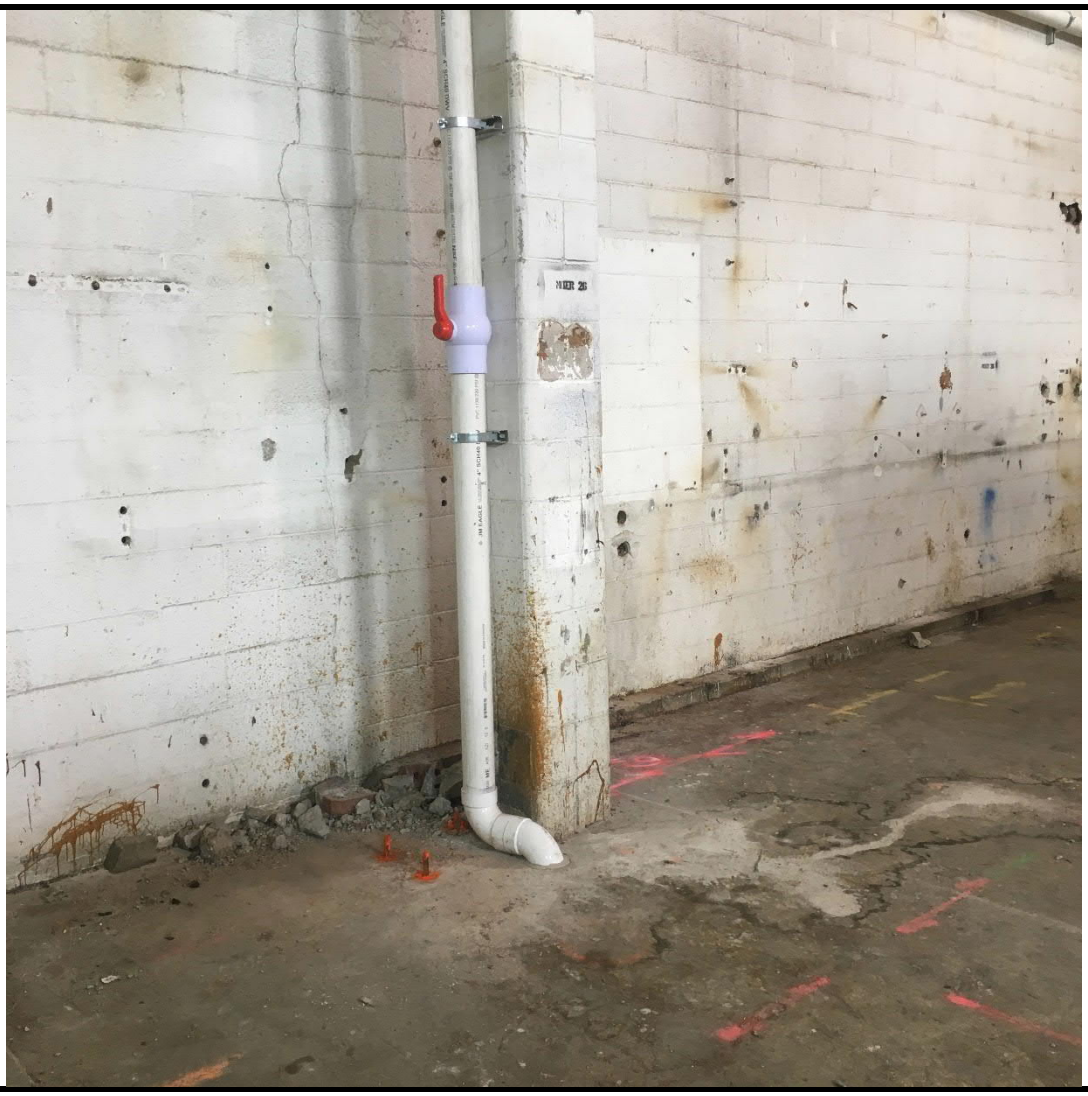
AECOM
1255 Broad Street
Suite 201
Clifton, NJ 07013-3309

PHOTOGRAPHIC DOCUMENTATION

CLIENT NAME: BP	PROJECT NAME: IPO: Columbia Cement	AECOM PROJECT: 60481767

Photo No. 4	Date: 2/7/20

Description:
Extraction point EP-09.



AECOM 1255 Broad Street Suite 201 Clifton, NJ 07013-3309	PHOTOGRAPHIC DOCUMENTATION	
CLIENT NAME: BP	**PROJECT NAME:** IPO: Columbia Cement	**AECOM PROJECT:** 60481767

Photo No. 5	**Date:** 3/4/20

Description:
Extraction point EP-09 with pipe protector.

AECOM	1255 Broad Street Suite 201 Clifton, NJ 07013-3309	**PHOTOGRAPHIC DOCUMENTATION**	
CLIENT NAME: BP		**PROJECT NAME:** IPO: Columbia Cement	**AECOM PROJECT:** 60481767

Photo No. 6	**Date:** 2/7/20
Description: Extraction point EP-04.	

AECOM 1255 Broad Street Suite 201 Clifton, NJ 07013-3309	PHOTOGRAPHIC DOCUMENTATION	
CLIENT NAME: BP	**PROJECT NAME:** IPO: Columbia Cement	**AECOM PROJECT:** 60481767

Photo No. 7	**Date:** 3/4/20

Description:
Extraction point EP-04 with pipe protector.

AECOM
1255 Broad Street
Suite 201
Clifton, NJ 07013-3309

PHOTOGRAPHIC DOCUMENTATION

CLIENT NAME: BP	PROJECT NAME: IPO: Columbia Cement	AECOM PROJECT: 60481767

Photo No. 8	Date: 3/3/20

Description:
Vacuum monitoring point with protective cover.

AECOM
1255 Broad Street
Suite 201
Clifton, NJ 07013-3309

PHOTOGRAPHIC DOCUMENTATION

CLIENT NAME: BP	PROJECT NAME: IPO: Columbia Cement	AECOM PROJECT: 60481767

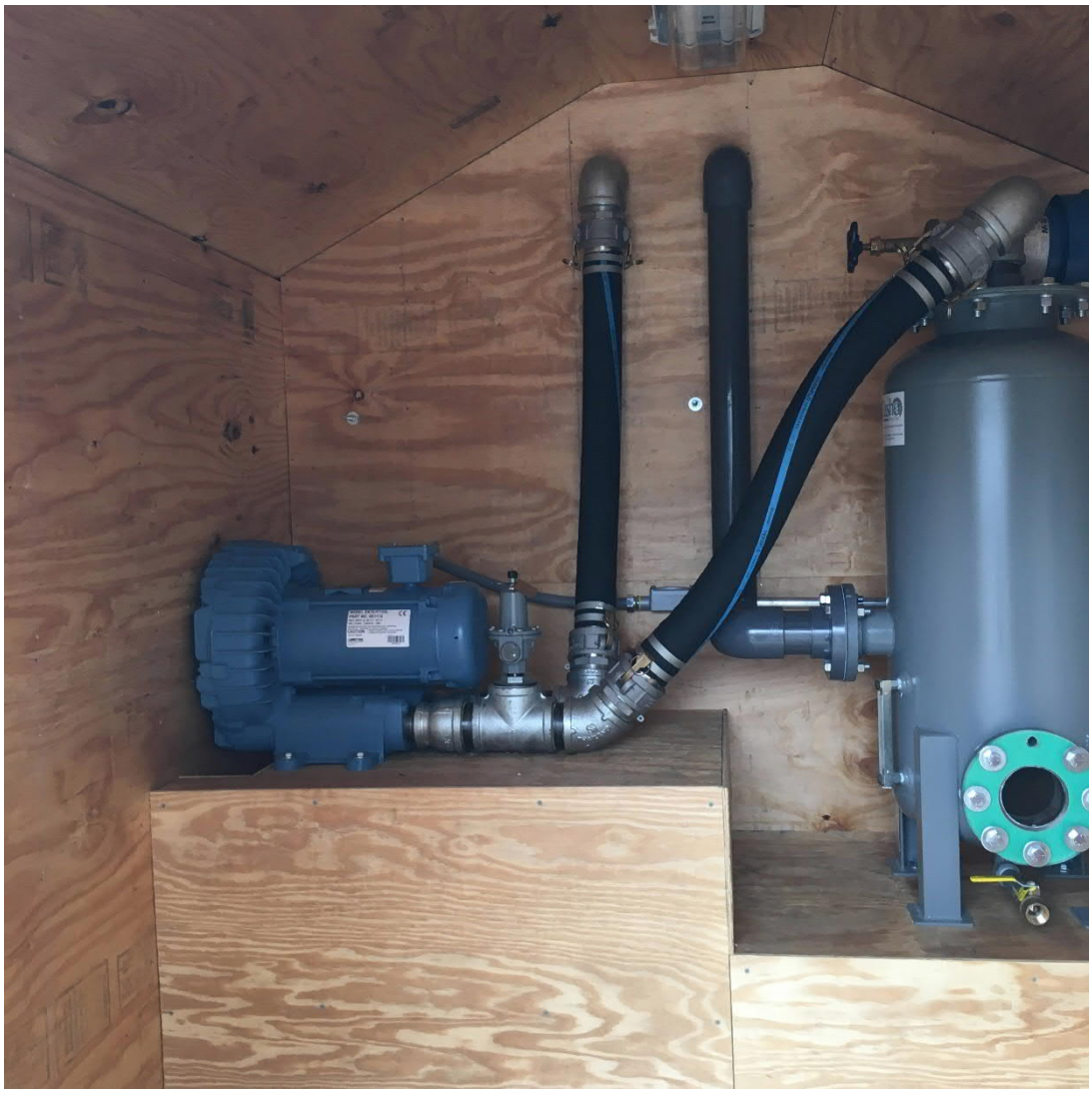
Photo No. 9	Date: 2/18/20

Description:
SSDS equipment shed.

AECOM 1255 Broad Street Suite 201 Clifton, NJ 07013-3309	PHOTOGRAPHIC DOCUMENTATION	
CLIENT NAME: BP	**PROJECT NAME:** IPO: Columbia Cement	**AECOM PROJECT:** 60481767

Photo No. 10	**Date:** 2/18/20

Description:
SSDS blower (left) and knockout tank inside equipment shed.



AECOM
1255 Broad Street
Suite 201
Clifton, NJ 07013-3309

PHOTOGRAPHIC DOCUMENTATION

CLIENT NAME: BP	PROJECT NAME: IPO: Columbia Cement	AECOM PROJECT: 60481767

Photo No.	Date:
11	2/7/20

Description:
Contingency extraction point EP-10 installed in Room 1.

AECOM
1255 Broad Street
Suite 201
Clifton, NJ 07013-3309

PHOTOGRAPHIC DOCUMENTATION

CLIENT NAME: BP	PROJECT NAME: IPO: Columbia Cement	AECOM PROJECT: 60481767

Photo No. 12	Date: 3/18/20

Description:
Crack in Room 2 floor before sealing.

AECOM
1255 Broad Street
Suite 201
Clifton, NJ 07013-3309

PHOTOGRAPHIC DOCUMENTATION

CLIENT NAME: BP	PROJECT NAME: IPO: Columbia Cement	AECOM PROJECT: 60481767

Photo No. 13	Date: 3/18/20

Description:
Crack in Room 2 floor after sealing.

AECOM
1255 Broad Street
Suite 201
Clifton, NJ 07013-3309

PHOTOGRAPHIC DOCUMENTATION

CLIENT NAME: BP	PROJECT NAME: IPO: Columbia Cement	AECOM PROJECT: 60481767

Photo No. 14	Date: 3/18/20

Description:
Vent pipe before sealing annular space.

AECOM
1255 Broad Street
Suite 201
Clifton, NJ 07013-3309

PHOTOGRAPHIC DOCUMENTATION

CLIENT NAME: BP	PROJECT NAME: IPO: Columbia Cement	AECOM PROJECT: 60481767

Photo No. 15	Date: 3/18/20

Description:
Vent pipe after sealing annular space.

APPENDIX E
OPERATION MAINTENANCE & MONITORING PLAN

OPERATION MAINTENANCE AND MONITORING PLAN
SUB-SLAB DEPRESSURIZATION SYSTEM

COLUMBIA CEMENT COMPANY SITE
159 HANSE AVENUE
FREEPORT, NEW YORK
SITE NO. 130052

Prepared for

Burmah Castrol Holding Company
201 Helios Way
Helios Plaza 6.370A
Houston, TX 77079

September 24, 2020

Prepared by

1255 Broad Street
Suite 201
Clifton, New Jersey 07013

Project No: 60481767

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

HVAC	heating, ventilation and air conditioning
in. Hg	inches of mercury
in. WC	inches of water column
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM&M	Operation, Maintenance and Monitoring
SSDS	sub-slab depressurization system
USEPA	U. S. Environmental Protection Agency
VOC	volatile organic compound

AECOM has prepared this Operation, Maintenance and Monitoring (OM&M) Plan on behalf of the Burmah Castrol Holdings, Inc., to serve as a guide for the operation and maintenance of the sub-slab depressurization system (SSDS) installed at the former Columbia Cement Company facility located at 159 Hanse Avenue in Freeport, New York ("Site" or "subject facility"). The SSDS was installed to address volatile organic compounds (VOCs) present in vapor beneath the building slab. These VOCs include 1,1,1-trichloroethane, tetrachloroethene, trichloroethene, 1,1-dichloroethene and cis-1,2-dichloroethene. A Site location map is presented as Figure 1. Specifically, this document addresses those activities necessary to ensure adequate performance of the SSDS following start up and necessary post-start up testing and diagnostics. This document also presents the monitoring requirements necessary to assure the SSDS is operating as designed and that sub-slab vapors are not adversely impacting indoor air at the Site.

As described in the SSDS Design (AECOM 2019), the system consists of nine vapor extraction points installed in Rooms 2, 4 and 8 of the Site building (Figure 2). Extraction point construction details are shown on Figure 3. The extraction points are connected to a blower in a shed outside the building. A schematic diagram of the SSDS is presented in Figure 4. The primary components of the system are described below.

- Extraction points:
  Description – 4-inch diameter schedule 40 PVC pipe penetrating the concrete slab.

  Purpose – The point at which air is removed from the sub-slab environment creating a negative pressure differential beneath the slab.

- Flow control valves:
  Description – 4-inch diameter schedule 40 PVC ball valves installed approximately five feet above each extraction point.

  Purpose – Allow for balancing air flow between the extraction points.

- Schedule 40 PVC Pipe and Fittings:
  Description – 4-inch diameter schedule 40 PVC Schedule 40 PVC pipe and fittings solvent welded to eliminate leaks. The piping was secured to walls, columns and ceiling joists with appropriate hardware.

  Purpose – To convey sub-slab vapors to the blower in the SSDS equipment shed.

- Equipment Shed:
  Description – A 10-feet by 8 feet shed outside the Site building.

  Purpose – Housing the mechanical components of the SSDS.

- Knockout Tank:
  Description – An 8-gallon tank with a drain.

  Purpose – To collect condensation prior to entering the blower.

- Blower:
  Description – A ROTRON® Model EN757F72XL regenerative blower with an explosion-proof motor.

  Purpose – To create a negative pressure differential beneath the slab and convey vapors the SSDS exhaust.

- Manometer and Flow Meter:
  Description – Gauges installed near the blower.

  Purpose – Measure vacuum and air flow generated by the blower.

- Effluent:
  Description – 4-inch PVC pipe and fittings with screened cap above the Site roof.

  Purpose – To convey vapors from the blower to a point above the building roof.

- Vapor Points:
  Description – Nine stainless steel Vapor Pin ™ sub-slab vapor monitoring ports.

  Purpose – Ports to measure sub-slab differential pressure or collect sub-slab vapor samples.

- Contingency Extraction Points:
  Description – Six extraction points installed in Room 1 that were not connected to a blower.

  Purpose – Extraction points that can be connected to a blower later in the event sampling data demonstrates a need for vapor mitigation in Room 1.

- Auto-Dialer:
  Description – Device in the control panel that sends automatic notifications to team members if certain alarm conditions are met.

  Purpose – Sends text messages to the AECOM project manager and OM&M technician in the event of power failure, a high level in the knockout tank or other condition that requires maintenance.

A core drill was used to core through the concrete slab for the installation of the extraction points, which were constructed of PVC pipe flush with the bottom of the slab and sealed with urethane caulk within the annulus and at the surface. Each extraction point was constructed with a ball valve which can be used to balance the system. The base of each extraction point is protected by a 40-inch tall steel pipe protector. The SSDS piping was run overhead and passed through the exterior wall and into an equipment shed before connecting to a knockout tank and a regenerative blower. An explosion-proof blower was selected as a precaution because of the potential presence of methane in the sub-slab vapors. The equipment shed is also equipped with an explosion-proof fan and light fixture. The exhaust from the SSDS is discharged to the atmosphere through a stack which has the following minimum characteristics

in accordance with New York State Department of Health (NYSDOH) guidance (NYSDOH 2006):

- 12-inches above the roof of the building;
- 10- feet above the ground surface;
- 10-feet away from any window or opening that is less than 2-feet below the exhaust point; and,
- 10-feet from any other building, window, or building intake.

Effluent piping is equipped with a ½-inch by ½-inch screen to prevent objects/animals from entering the piping system.

All readily accessible cracks were sealed with a non-shrink caulk to eliminate the vapor pathway between the indoor air and sub-slab vapor. The electrical circuit used to control the SSDS equipment is labeled as "Sub-Slab Depressurization System". The SSDS control panel is equipped with an auto-dialer programmed to notify operators in the event of system malfunctions.

A total of nine soil vapor monitoring points were installed in the Rooms 2, 4 and 8. These locations were distributed throughout the treated portion of the building, allowing monitoring of vacuum distribution beneath the slab and collection of sub-slab vapor samples. Permanent sampling points were installed at each of the locations utilizing the VaporPin™ system. This system includes a stainless-steel barbed fitting with a silicone sleeve which is permanently installed in the slab and capped when not in use. A stainless-steel secured cover is installed over the barb fitting flush with the finished floor.

During the subsequent discussions please refer to Figures 3 and 4, which illustrate the general location of the system components and airflow directions for the SSDS since its initial activation in March 2020.

In order to activate the SSDS the following steps are required:

1.) Turn on the circuit breaker within the distribution panel at the main power supply.

2.) Activate the power switch on the control panel on the SSDS equipment shed.

5.) Confirm that all isolation valves on all suction points are open.

6.) Verify vacuum at each vapor monitoring point and compare it to its initial reading.

The SSDS blower will activate and remove air from the sub-slab environment. Vacuum readings and/or air flow measurements should be confirmed throughout the comprehensive system through installed monitoring points. This data should be compared to data collected during the initial performance verification event that took place post start up. If there is a discrepancy, additional inspection and performance monitoring should be conducted.

Continuous operation of the SSDS is required in order to maintain negative pressure beneath the slab to prevent possible vapor intrusion. In general, maintenance to the individual system components is not necessary given their inherent design and intent. The SSDS does not include vapor treatment equipment, so management of treatment media is not required. Routine inspection of the individual extraction points, overall systems and building conditions are an essential part of maintaining the system. Inspections should be conducted on a quarterly basis to help ensure the SSDS operates continuously and reliably throughout its lifecycle. To streamline the inspection process and ensure consistency between inspection events, a site-specific inspection form has been prepared to document the findings. This form includes spaces to document any abnormalities identified and concerns that tenants, property owners and/or other stakeholders may have. The results of the system inspections should be incorporated into operations and maintenance reports. The list provided below in Table 1 includes general elements of the system inspections.

TABLE 1 – GENERAL ROUTINE SYSTEM INSPECTIONS

DESCRIPTION	VERIFY	ACTION
Isolation Valves	Each valve is open or set to position as determined through post start up performance verification.	Actuate valves to ensure they function and verify valve position.
Vacuum Monitoring Points	Use a manometer to confirm that a differential pressure of -0.004 in. WC is maintained at each point.	If necessary, actuate valves on extraction points to balance the vacuum to required levels.
Conveyance Pipe and Fittings	Visually inspect all pipe and fittings to ensure they are tight, intact and are pitched correctly to drain condensate to extraction points	Broken or separated pipe and fittings will require repair or replacement. Sagging pipes will require additional or new support.
Blower	Ensure blower is fully functional	Confirm the blower has power and all circuits and switches are activated. If blower does not function return it to the manufacturer for diagnoses and possible warranty coverage or consider replacement.
Cracks and Gaps	Visually inspect sealed cracks, gaps and seals at suction points.	Note the size and location of visible cracks and gaps that have not been sealed or where seal integrity may be compromised. Apply sealant or re-seal as necessary.
Labels	Ensure all SSDS labels are intact and up to date	Replace damaged, worn or missing labels
Exhaust Stack	Visually inspect fan exhaust stack to ensure there are no obstructions	Document ice buildup and/or rodent or bird problems. Remove and consider long term mitigation needs if either problem persists.

When the SSDS system is started, the routine maintenance activities presented in Table 1 shall be performed weekly for four weeks, then monthly for two months. After the first three months of operation are completed, the inspections will be conducted on a quarterly basis. A routine system inspection form is presented in Appendix A.

Non-routine inspection and maintenance may also be required given the following situations:

- The owner or occupants report that the system is either not functioning properly or are indicating a loss or increase in vacuum;
- The SSDS becomes damaged; or
- The building undergoes renovations that may reduce effectiveness of the system. This may include the following:
    - changes in the community (surrounding land use);
    - changes in building use/occupants;
    - changes in building structure (additions, etc.) and,
    - changes in heating, ventilation and air conditioning (HVAC) system/operations or installation of a new combustion or vented appliance of equipment.

Periodic indoor air monitoring will be required to ensure that the SSDS is operating in a manner that is protective of the health of building occupants. The monitoring program will include indoor air and SSDS effluent sampling. The components of the monitoring program are described below.

6.1 INDOOR AIR MONITORING

The indoor air sampling will be done in accordance with the *Guidance for Evaluating Vapor Intrusion in the State of New York, with updates* (*SVI Guidance*) (NYSDOH 2006). All doors and windows will be closed prior to sampling. It should be noted that, as of the time of this OM&M plan preparation, that based on roof leaks, boarded-up windows and rusted doors, the building is not currently air-tight.

Indoor air samples will be collected by placing a 6-liter, individually certified Summa canister at breathing level (3 to 5 feet above the floor). The Summa canisters will be equipped with flow controllers set to collect the samples over an 8-hour period. The 8-hour sampling period assumes that when the facility is in operation, it operates with a single 8-hour shift. In accordance with the *SVI Guidance*, if the facility operates with multiple shifts, the sampling period will be adjusted accordingly. To start sample collection, the indoor air sample valve will be opened. At the locations where paired indoor air sample and sub-slab vapor samples are collected, the samples will be initiated at approximately the same time, so they are collected over the same time period. During the 8-hour sampling period, the vacuum reading will be monitored periodically, and the ambient temperature and pressure will be recorded on the sampling data sheet. The sampling will be completed when the vacuum in the Summa canister measures between 5 and 10 inches of mercury (in Hg). At this point the valve on the canister will be closed.

To evaluate contributions of VOCs from outdoor air, during each indoor air sampling event, one outdoor ambient air sample will be collected concurrently with the indoor air samples. A 6-liter Summa canister with a flow controller set to collect the samples over an 8-hour period will be place in a secure outdoor location at breathing height (3 to 5 feet above the ground). The valve will be opened to begin sample collection. During the 8-hour sampling period, the vacuum reading will be monitored periodically. The sampling will be completed when the vacuum in the Summa canister measures between 5 and 10 inches of mercury (in Hg). At this point the valve on the canister will be closed.

One duplicate sample will be collected during each sampling event. After the completion of sampling, the Summa canisters will be submitted under chain of custody documentation to a NYSDOH ELAP-certified laboratory and will be analyzed for volatile organic compounds (VOCs) using United States Environmental Protection Agency (USEPA) Method TO-15 with ASP Category B deliverables. Samples will be analyzed at an expedited turnaround time. The

laboratory will be capable of reporting *SVI Guidance* Matrix A and C compounds to 0.20 µg/m^3, and all other compounds to 1.0 µg/m^3.

6.1.1 Post-Startup Indoor Air Sampling

After the SSDS has been in operation for 30 days continuously, indoor air samples will be collected in the treated portion of the Site building to evaluate whether the SSDS is effectively mitigating vapor intrusion. Three indoor air samples will be collected; one each in Rooms 2, 4 and 8. Sampling locations are shown on Figure 5. If sample results indicate VOCs are present in indoor air above applicable NYSDOH Matrix values, the source of the VOCs will be investigated.

6.1.2 Annual Indoor Air Sampling

Indoor air samples will be collected annually during heating season to evaluate whether vapor intrusion is impacting the untreated portions of the building. Samples will be collected in Room 1, Room 3, Room 5 and Room 11. Sample locations are shown on Figure 5. During 2019 VI sampling, VOCs were detected in sub-slab vapor in Room 1, which is immediately north of the spill area. Room 3 is a large central room. Room 5 is adjacent to Room 2 and immediately west of the spill area. Room is an office in the northwest corner of the building. With the exception of Room 11, most room are connected by doorways large enough to support forklift traffic. There is ample air flow between these rooms, so these sample locations should be sufficient to characterize indoor air in the building. Therefore, samples collected in Rooms 1, 3, 5 and 11 would be representative of the untreated portion of the building. Additional samples in Rooms 6, 7, 9 and 10 are not necessary.

6.2 EFFLUENT SAMPLING

The SSDS effluent stream will be sampled to confirm vapor treatment is not needed prior to discharging to the atmosphere. An effluent sample will be collected within 24 hours of system startup. The effluent sample will be analyzed for VOCs by USEPA Method TO-15 and for methane by USEPA Method 18 with a 24-hour turnaround time. Sample results will be compared to Division of Air Resources, Annual Guidance Concentrations and Short-Term Guidance Concentrations. If sample results exceed applicable guidance concentrations, the system will be stopped, and effluent treatment will be added to the effluent line.

After the initial system startup effluent sample, an effluent sample will be collected annually with the annual indoor air samples. These effluent samples will be analyzed for VOCs by USEPA Method TO-15 and for methane by USEPA Method 18 with standard turnaround time.

The sampling program is summarized in Table 2.

TABLE 2 - SUMMARY OF SAMPLING PROGRAM

SAMPLE MATRIX	LOCATION	TIMING / FREQUENCY	ANALYTICAL PARAMETERS
Indoor Air	Rooms 2, 4 and 8 and ambient air	30 days after system startup	VOCs by USEPA Method TO-15/TO-15 SIM, Methane by USEPA Method 18
Indoor Air	Rooms 1, 3, 5 and 11 and ambient air	Annually during heating season	VOCs by USEPA Method TO-15/TO-15 SIM, Methane by USEPA Method 18
SSDS Effluent	SSDS Effluent Port	Within 24 hours of system startup	VOCs by USEPA Method TO-15, Methane by USEPA Method 18 (24-hour turnaround time)
SSDS Effluent	SSDS Effluent Port	Annual	VOCs by USEPA Method TO-15, Methane by USEPA Method 18 (standard turnaround time)

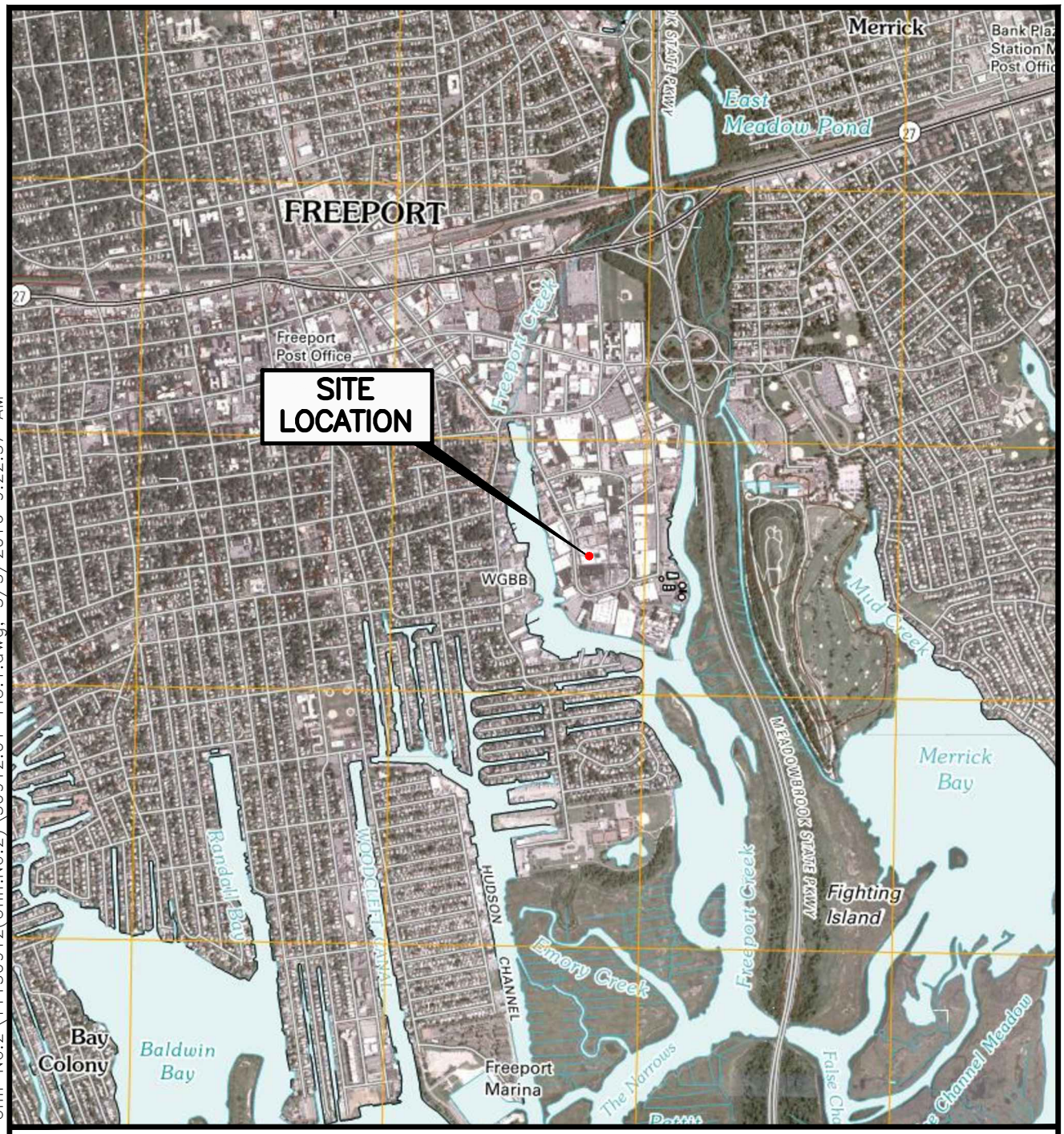
6.3 REPORTING

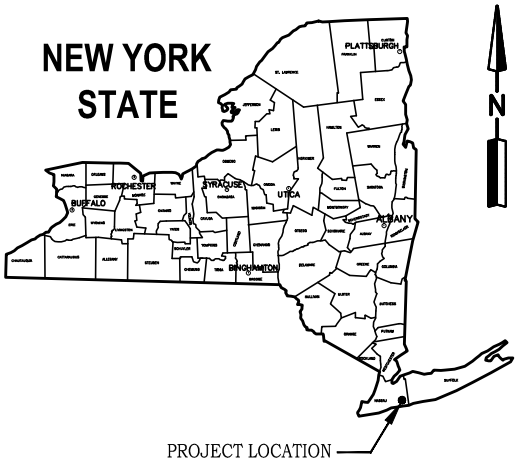
The quarterly system operation and sub-slab vacuum measurements will be reported to the New York Department of Environmental Conservation (NYSDEC) and NYSDOH on a quarterly basis within two weeks of the inspection and measurements. The post-startup indoor air sampling results and the annual indoor air and effluent sampling results will be reported to NYSDEC, NYSDOH and the property owner within two weeks of receipt of validated laboratory data. The post-startup effluent sample results will be conveyed to NYSDEC and NYSDOH upon receipt of preliminary sampling results and confirmed upon receipt of validated laboratory data.

AECOM, 2019. Sub-Slab Depressurization System Design, Former Columbia Cement Company Facility, Site No. 130052. December 2019.

NYSDOH, 2006. New York State Department of Health Guidance for Evaluating Soil Vapor intrusion in the State of New York. October 2006 (and updates).

FIGURES





N

0 2000 4000

SCALE IN FEET

REFERENCE:
U.S.G.S. 7.5 MINUTE QUADRANGLE:
FREEPORT, NY (2010)

SITE LOCATION MAP
FORMER COLUMBIA CEMENT COMPANY, INC.
SITE NO. 130052
159 HANSE AVENUE
FREEPORT, NEW YORK

AECOM
1255 Broad Street
Clifton, New Jersey 07013
PHONE: (973) 883-8500
FAX: (973) 883-8501

DATE: 01/23/15

JOB: 11130912

FIGURE 1

K:\Cadd\Columbia Cement\Columbia Cement-Unit No.2\11130912(Unit.No.2)\30912.01-FIG.1.dwg, 5/5/2016 9:22:57 AM

WARNING
IT IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON OTHER THAN WHOSE SEAL APPEARS ON THIS DRAWING, TO ALTER IN ANY WAY AN ITEM ON THIS DRAWING. IF AN ITEM IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

NO.	MADE BY	APPROVED BY	DATE	DESCRIPTION

REVISIONS

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DRAWN BY: DS
CHECKED BY: MB
PROJ. ENGR. DS

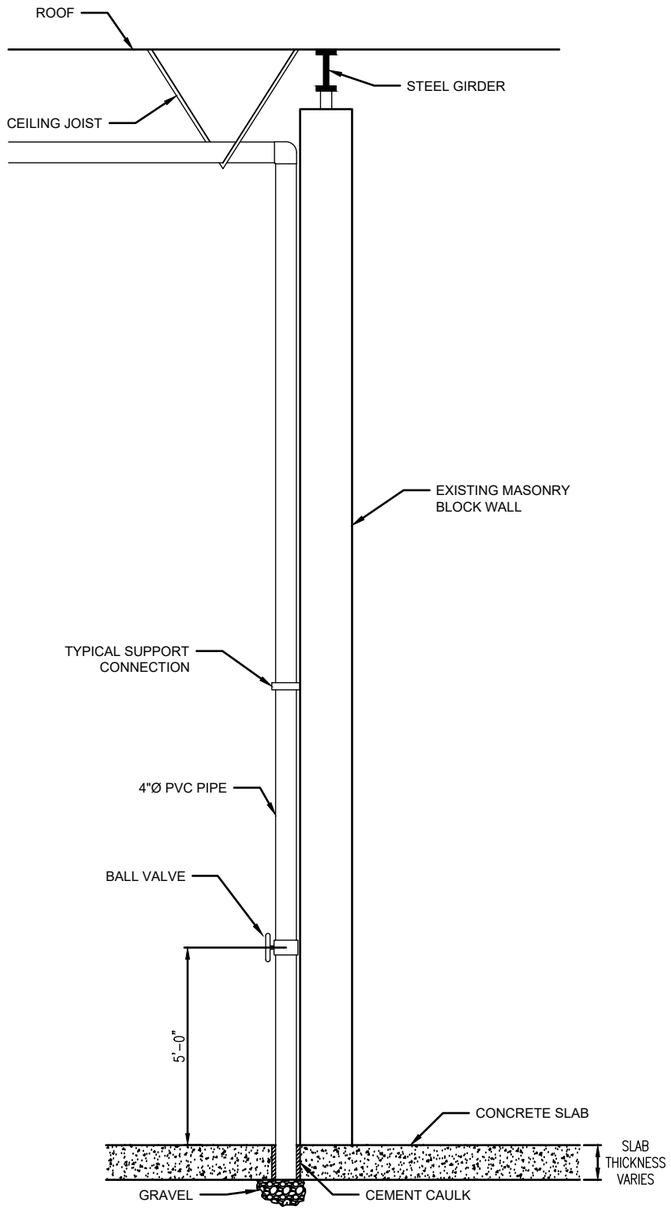
AECOM
New York
40 BRITISH AMERICAN BLVD.
LATHAM, New York 12210
(518) 951 - 2200

JOB NO. 60481767

COLUMBIA CEMENT
SUB-SLAB DEPRESSURIZATION
SYSTEMS AS-BUILT
NYSDEC SITE 130052

SUB-SLAB DEPRESSURIZATION
SYSTEM LAYOUT

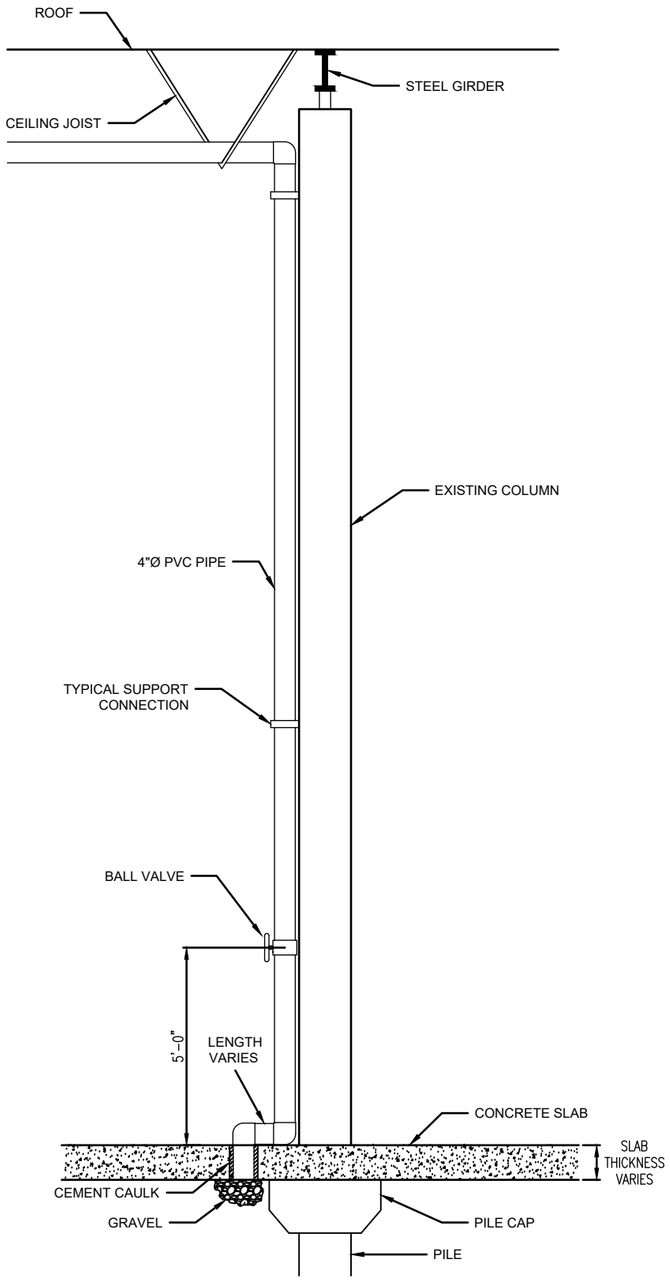
SCALE : 1" = 20' | DATE: JUN. 2020 | FIG. NO. 2



TYPICAL EXTRACTION POINT INSTALLATION DETAIL (TYPE 1)

1
3 | 8

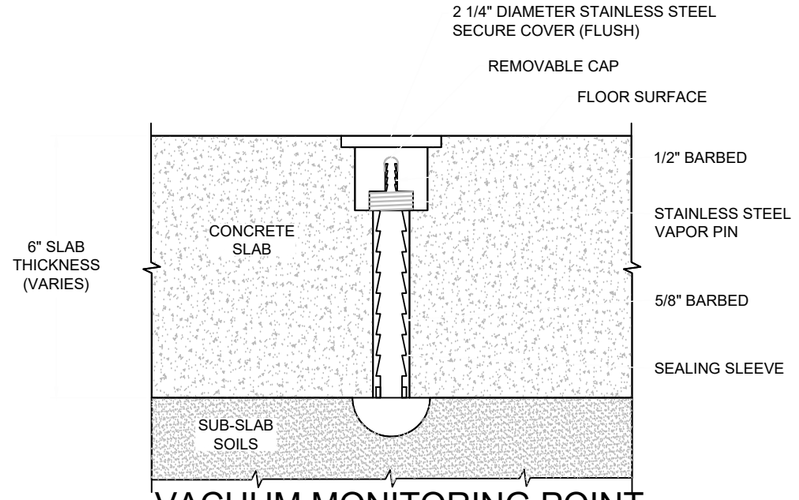
NOT TO SCALE



TYPICAL EXTRACTION POINT INSTALLATION DETAIL (TYPE 2)

2
3 | 8

NOT TO SCALE



VACUUM MONITORING POINT DETAIL

NOTES:

1. ALL 4" ϕ PVC PIPE SHALL BE SUPPORTED EVERY 4' HORIZONTALLY AND EVERY 10' VERTICALLY.
2. ALL PIPES SHALL BE INSTALLED ABOVE EXISTING SPRINKLERS
3. BUTTERFLY VALVES AND SAMPLE PORTS SHALL BE LOCATED APPROXIMATELY 5 FEET ABOVE THE FLOOR.

NO.	MADE BY	APPROVED BY	DATE	DESCRIPTION

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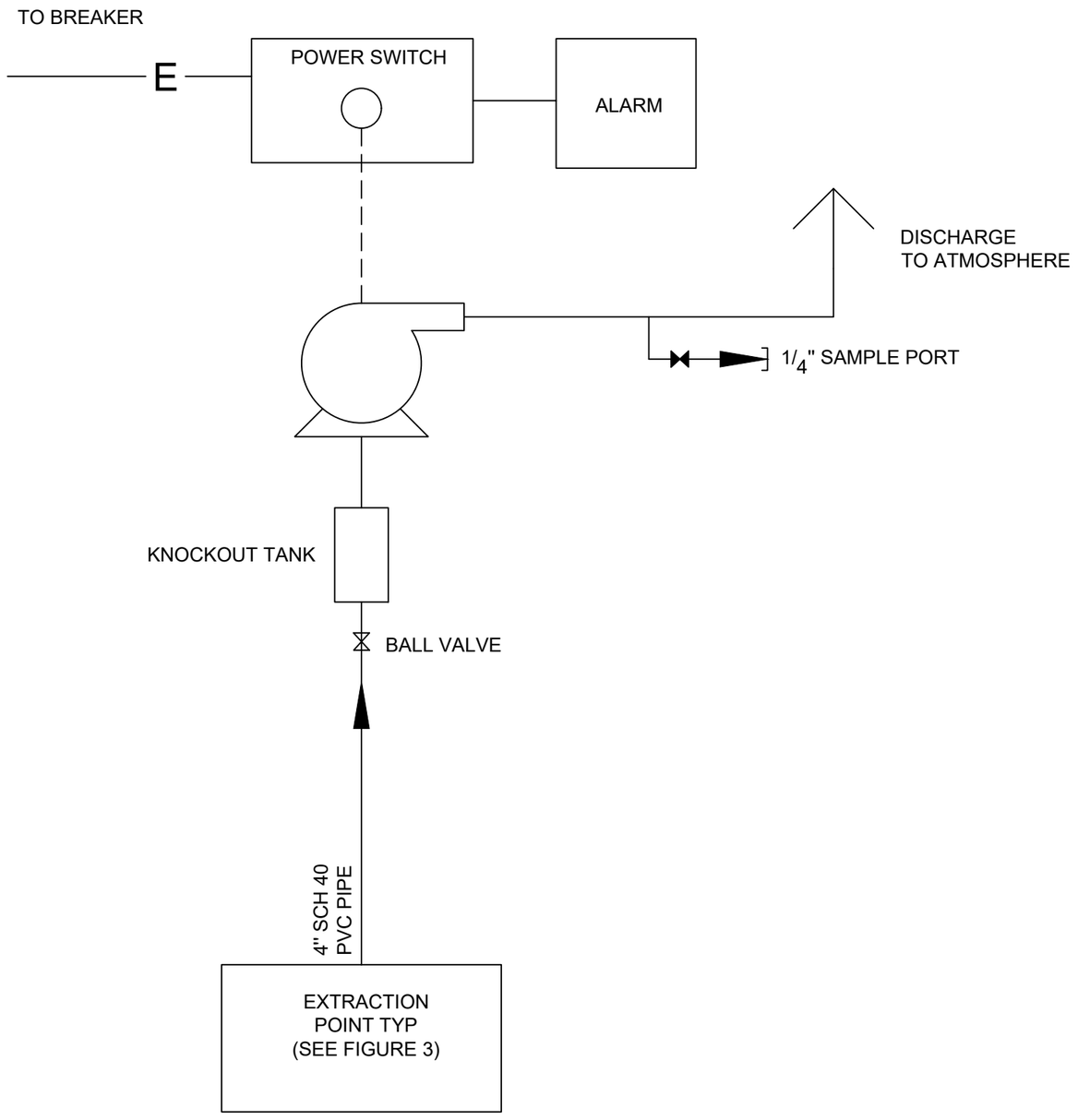
COLUMBIA CEMENT
SUB-SLAB DEPRESSURIZATION
SYSTEMS SCHEMATIC
NYSDEC SITE 130052

TYPICAL EXTRACTION POINT INSTALLATION DETAILS

DATE: SEP. 2020

FIGURE 3



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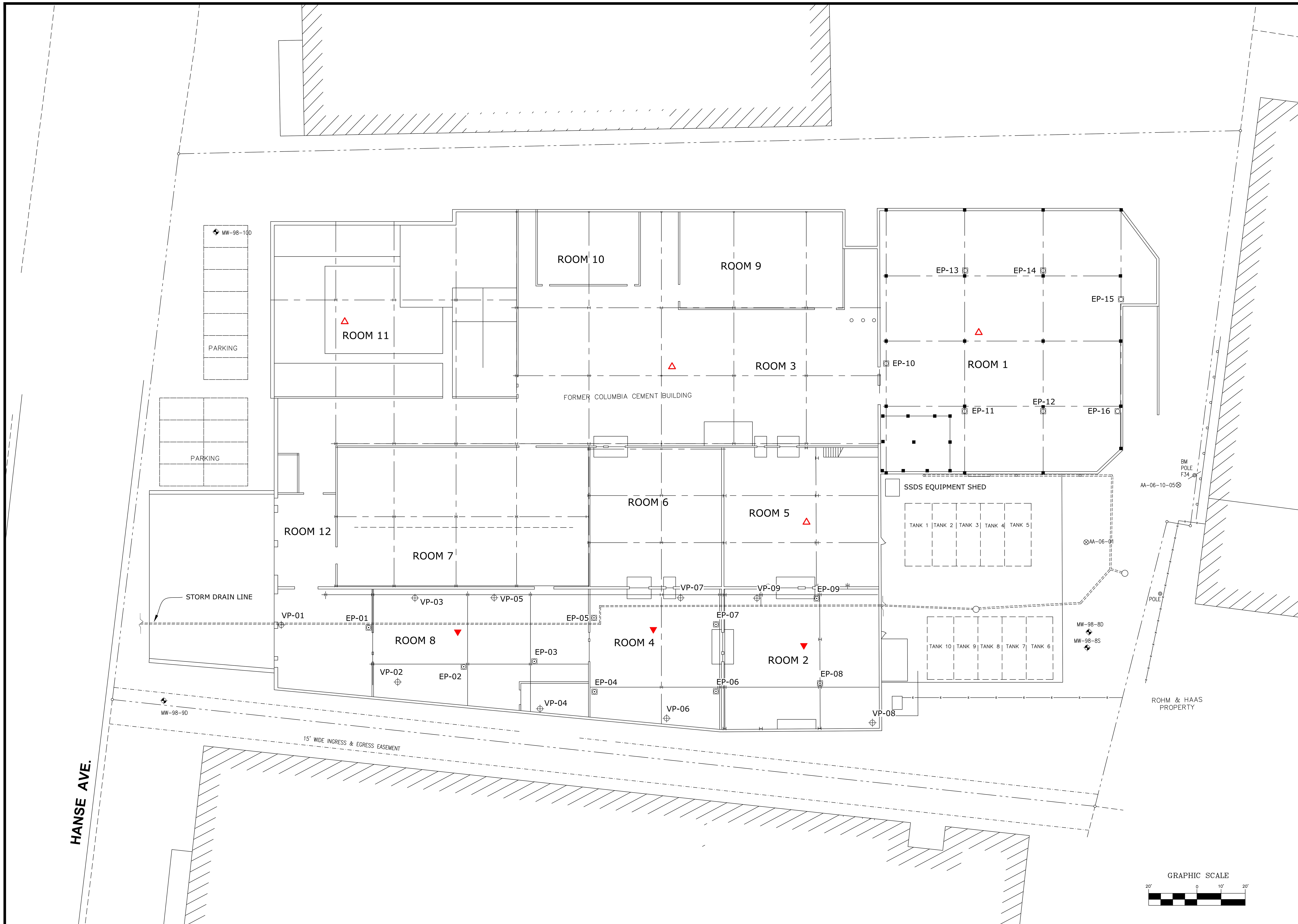
NYSDEC SITE 130052

PROCESS
DETAILS

DATE: SEP. 2020

FIGURE 4



LEGEND

— — —	STORM DRAIN LINE
MW-98-9D	MONITORING WELL LOCATION
VP-01	VACUUM MONITORING POINT
EP-01	ACTIVE SUB-SLAB VAPOR EXTRACTION POINT (CONNECTED TO SYSTEM)
EP-10	CONTINGENCY SUB-SLAB VAPOR EXTRACTION POINT (NOT CONNECTED TO SYSTEM)
▼	POST-STARTUP INDOOR AIR SAMPLING LOCATION
△	ANNUAL INDOOR AIR SAMPLING LOCATION

NO.	MADE BY	APPROVED BY	DATE	DESCRIPTION

REVISIONS

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COLUMBIA CEMENT
SUB-SLAB DEPRESSURIZATION SYSTEM
NYSDEC SITE 130052

INDOOR AIR SAMPLING LOCATIONS

SCALE : 1" = 20' | DATE: JUL. 2020 | FIG. NO. 5

APPENDIX A
SSDS INSPECTION FORM

Columbia Cement SSDS OM&M Form

Date:		Personnel:		System Operating? Y / N

System Readings:						
System Vacuum	System Flow		PPM	Time	Hour Meter	Inches of water in K/O Tank
inwc	inwc	cfm	Effluent PID			

VP-09		VP-08		VP-07		VP-06		VP-05		VP-04		VP-03		VP-02		VP-01	
Vac	PID	Vac	PID	Vac	PID	Vac	PID	Vac	PID	Vac	PID	Vac	PID	Vac	PID	Vac	PID

Vac readings are in (inwc) PID readings are in (ppm)

Notes: