MAKO PROPERTIES LLC - BUILDING #3 48-50 ENTER LANE ISLANDIA, NEW YORK

CONSTRUCTION COMPLETION REPORT

NYSDEC Site Number: 152-20-30

Prepared for: Mako Properties LLC 931B Conklin Street Farmingdale, NY 11735

Prepared by: CA RICH CONSULTANTS, INC. 17 Dupont Street Plainview, NY 11803-1614 &

Tyll Engineering and Consulting PC 169 Commack Road, Suite H173 Commack, New York 11725

MARCH 2018

CERTIFICATIONS

I, Karen Tyll, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility to review the Interim Remedial Measures (IRM) Work Plan and implementation of the remedial program activities. The Remedial Engineer that prepared and certified the IRM Work Plan, Health and Safety Plan, and Community Air Monitoring Plan was Stephen J. Osmundsen, P.E. To confirm that the remedy was implemented in accordance with the Department-approved IRM Work Plan, DER-10, and associated applicable regulations, I, Karen Tyll P.E, reviewed the IRM Work Plan, the design documents prepared under the supervision of Stephen J. Osmundsen, the construction related documents, and the completed work at the site. I certify that the IRM Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved IRM Work Plan.

079520

NYS Professional Engineer #

4/26/18

Date

Ka

Signature



TABLE OF CONTENTS

| CERTIFICATIONSII |
|---|
| TABLE OF CONTENTSIII |
| CONSTRUCTION COMPLETION REPORT1 |
| 1.0 BACKGROUND AND SITE DESCRIPTION1 |
| 2.0 SUMMARY OF SITE REMEDY1 |
| 2.1 REMEDIAL ACTION OBJECTIVES 1 |
| 2.1.1 Groundwater RAOs |
| 3.0 INTERIM REMEDIAL MEASURES, OPERABLE UNITS AND REMEDIAL |
| CONTRACTS |
| 3.1 INTERIM REMEDIAL MEASURES |
| 4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED |
| 4.1 GOVERNING DOCUMENTS |
| 4.1.1 Site Specific Health & Safety Plan (HASP) |
| 4.2.1 Contractors and Consultants 4 4.2.2 Site Preparation 4 4.2.3 General Site Controls 4 4.2.4 CAMP results 5 4.2.5 Reporting 5 |
| 4.3 CONTAMINATION REMAINING AT THE SITE |
| 4.4 ENGINEERING CONTROLS |
| 5.0 REMEDIATION SYSTEM DESIGN & INSTALLATION |
| 5.1 REMEDIAL SYSTEM DESIGN |
| 5.1.1 Soil Vapor Extraction (SVE) |
| 6.1 PILOT TEST |
| 6.2 SVE WELLS START-UP |
| 6.3 AS POINTS START-UP9 |

| 7.0 REMEDIATION SYSTEM MONITORING AND | |
|---|--|
| EQUIPMENTERMINATION CRITERIA | |
| 7.1 GROUNDWATER MONITORING | |
| 7.2 INDOOR AIR MONITORING | |
| 7.3 AS SYSTEM MONITORING AND TERMINATION CRITERIA | |
| 7.4 SVE UNIT MONITORING AND TERMINATION CRITERIA | |
| 8.0 MAINTENANCE AND MONITORING SCHEDULE | |
| 8.1 INTRODUCTION | |
| 8.2 MAINTENANCE PROCEDURES | |
| 8.3 RECORDS, MONITORING, AND SAMPLING | |
| 9.0 INSTITUTIONAL CONTROLS | |
| 10.0 DEVIATIONS FROM THE IRM WORK PLAN | |
| 11.0 REFERENCES | |

FIGURES

| 1. | Site Location |
|----|--|
| 2. | Site Boundaries |
| 3. | Location of SVE Wells and Sparge Points |
| 4. | Interior SVE Well Profile |
| 5. | SVE and Air Sparge Profile |
| 6. | Equipment Layout |
| 7. | Well Location and Shallow Groundwater Flow Direction |
| 8. | Indoor Air Sampling Locations |
| | |

TABLES

- 1. Summary of Sparge Point & Vapor Well Construction Details
- 2. Groundwater Monitoring Well Details
- **3.** Historical Concentrations of Volatile Organic Compounds in Monitoring Wells
- **4.** Analytical Results for Volatile Organic Compounds in Groundwater (Baseline June 2015)
- **5.** Analytical Results for Volatile Organic Compounds in Groundwater (December 2015)
- **6.** Analytical Results for Volatile Organic Compounds in Groundwater (June 2016)
- 7. Analytical Results for Volatile Organic Compounds in Air Samples (October 22, 2015)
- **8.** Analytical Results for Volatile Organic Compounds in Air Samples (December 22, 2015)
- **9.** Analytical Results for Volatile Organic Compounds in Air Samples (June 29, 2016)

APPENDICES

- A. Survey Map and Metes & Bounds
- B. Electronic Copy of CCR
- C. NYSDEC Approvals of Substantive Technical Requirements
- D. Progress Reports
- E. Digital Photo Log
- F. Laboratory Reports/DUSRS
- G. Equipment Manuals

CONSTRUCTION COMPLETION REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

Mako Properties LLC entered into an Order on Consent, with the New York State Department of Environmental Conservation (NYSDEC) in August 2010, to investigate and remediate a 2.1 acre property located in Islandia, Suffolk County, New York. (See Figure 1). The site is currently undergoing remediation in the form of in-situ groundwater treatment to achieve commercial use standards.

The site is located in the County of Suffolk, New York and is identified as Section 6, Block 01.00 and Lot 18 on the Suffolk County Tax Map. The site is situated on an approximately 2.1-acre area bounded by commercial/industrial buildings to the north, commercial/industrial buildings to the south, Enter Lane to the east, and a parking lot to the west (see Figure 2). The boundaries of the entire site are fully described in Appendix A: Deed with Metes and Bounds description.

An electronic copy of this CCR with all supporting documentation is included as Appendix B.

2.0 SUMMARY OF SITE REMEDY

2.1 REMEDIAL ACTION OBJECTIVES

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) were identified for this Site.

2.1.1 Groundwater RAOs

RAOs for Public Health Protection

- Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer, to the extent practicable, to pre-disposal/prerelease conditions.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

2.2 DESCRIPTION OF SELECTED REMEDY

The site was remediated in accordance with the remedy approved by NYSDEC in the Interim Remedial Measures Work Plan dated October 2013 and NYSDEC's approval letter dated December 31, 2013.

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

- 1. Installation and on-going operation of a mechanical in-situ groundwater treatment system including air sparging and soil vapor extraction;
- 2. Execution and recording of an environmental easement to restrict land use and prevent future exposure to any contamination remaining at the site;
- Development and implementation of a Site Management Plan (SMP) for long term management of remaining contamination as required by the environmental easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance, and (4) reporting;
- 4. Periodic certification of the institutional and engineering controls listed above.

3.0 INTERIM REMEDIAL MEASURES, OPERABLE UNITS AND REMEDIAL CONTRACTS

3.1 INTERIM REMEDIAL MEASURES

The Interim Remedial Measures for this site were approved as the final remedy which is outlined in the following Sections.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the site were conducted in accordance with the NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP) dated October 2013 (ref 1.) and the Pilot Test & Design Report dated July 2014 (ref. 2). The remedial action includes the installation, start-up and continued operation, maintenance and monitoring of a combination air-sparge (AS) and soil vapor extraction (SVE) system (collectively, the AS/SVE System) for Building #3. All deviations from the Reports are noted below.

4.1 GOVERNING DOCUMENTS

4.1.1 Site Specific Health & Safety Plan

A site-specific Health and Safety Plan (HASP) dated October 2013 was developed for the testing and installation of the AS/SVE System at the site. The HASP was included as Appendix B in the NYSDEC-approved IRMWP.

All remedial work performed under this Remedial Action was in full compliance with governmental requirements, including site and worker safety requirements mandated by Federal OSHA. The HASP was complied with for all remedial and invasive work performed at the site.

4.1.2 Quality Assurance Project Plan

The Quality Assurance Project Plan (QAPP) was included as Appendix A of the IRMWP approved by NYSDEC. The QAPP describes the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities designed to achieve the project data quality objectives.

4.2 REMEDIAL PROGRAM ELEMENTS

4.2.1 Contractors and Consultants

Contractors and Consultants involved with this project are listed below:

| Contractor/Consultant Name | <u>Responsibility</u> |
|------------------------------------|--|
| Stephen Osmundsen, P.E. | Design Engineer |
| Karen Tyll, P.E. | Project Engineer |
| CA RICH Consultants, Inc. | Environmental Consultant, System Construction |
| Delta Well & Pump | Drilling Contractor |
| Aquifer Drilling & Testing, Inc. | Drilling Contractor |
| Aarco Environmental Services Corp. | Drilling (sparge point) contractor |
| William Pappas | System Technical Support |
| Chipco | Trenching Contractor |
| E.L. Electric | Electrician |

4.2.2 Site Preparation

Because the site is developed with buildings, parking lot and a small lawn/grassy area, no physical site preparation was necessary. A pre-construction meeting was held with site contractors and tenants of Building #3 on September 12, 2014. NYSDEC was not present at the meeting. The purpose of the meeting was to familiarize the contractors and the existing building tenants with the logistics of the project and the locations for installation of the below-ground and above-ground components of the AS/SVE System.

Documentation of agency approvals required by the IRM Work Plan is included in Appendix C. Utility markouts were secured prior to initiation of subsurface work.

4.2.3 General Site Controls

The site is a developed property containing occupied commercial buildings and parking areas. The work was performed within Building #3 and within a secured shed at the rear of that building. Exterior portions of the AS/SVE System are contained beneath bolt-down manholes. Daily activities were recorded in a field book. No erosion /sedimentation control or odor/ nuisance control was necessary for the installation of the AS/SVE System.

4.2.4 CAMP results

No formal CAMP monitoring was performed during system installation. However, PID readings within the work space were taken during subsurface activities. No readings above background were observed during drilling or trenching.

4.2.5 Reporting

Periodic progress reports were provided to NYSDEC.

All progress reports are included in electronic format in Appendix D

The digital photo log required by IRMWP is included in electronic format in Appendix E.

4.3 CONTAMINATION REMAINING AT THE SITE

The Site Characterization Investigation (the SCI) performed by CA RICH in 2012 (Ref.3) determined the following:

- A site-specific source of the 1,1,1-trichloroethane (TCA) found in the shallow groundwater and the soil vapor beneath Building #3 was not identified. Groundwater analysis of upgradient monitoring wells located behind Building #3 indicates that there may be an up-gradient off-site source for these chemicals.
- Elevated levels of TCA in groundwater were limited to the immediate vicinity of Building #3, most notably in the shallow water table at MW-2.
- 3. Sub-slab soil vapor and indoor air samples from Building #3 contained levels of TCA that fell within the mitigation range as set forth in the October 2006 New York State Department Of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH Guidance).

Since contaminated groundwater and soil vapor remain beneath Building #3 at the site, Engineering Controls (ECs) and Institutional Controls (ICs) (collectively ECs/ICs) are required to protect human health and the environment. These ECs/ICs are described in the following sections. Long-term management of these EC/ICs and residual contamination will be performed under the Site Management Plan (SMP) approved by NYSDEC.

4.4 ENGINEERING CONTROLS

Since contaminated groundwater and soil vapor exist beneath Building #3 at the site, ECs are required to protect human health and the environment. The Site has the following primary ECs, as described in the following sections.

5.0 REMEDIATION SYSTEM DESIGN & INSTALLATION

5.1 Remedial System Design

A combined AS/SVE System was developed and installed at Building #3 for this project. The details of this system are outlined below and in the As-Built Drawings which are included as Figures 3, 4, 5 and 6 of this report. Table 1 of this document provides a summary of the construction details of the SVE wells and AS points.

5.1.1 Soil Vapor Extraction (SVE)

The SVE system includes SVE wells in 8 locations (four beneath the interior portions of Building #3 and four in exterior locations around Building #3). The location of each of these SVE wells is presented on Figure 3.

The interior SVE wells consist of five feet of four-inch diameter 20-slot schedule 40 PVC screen installed to a depth of seven feet below grade with two feet of riser above, extending to just below the slab of Building #3. The screen and riser are surrounded by pea gravel and grouted in place with cement. The SVE wells are flush-mounted with bolt-down curb boxes. A schematic profile of the interior SVE wells is presented in Figure 4.

The four exterior SVE wells were installed using a hollow stem auger drill rig in one common borehole along with the four associated AS points discussed below. A section of 2-inch diameter, Schedule 40, 0.020-inch slotted (20 slot) PVC well screen was installed from a depth of 52 to 62 feet below grade. This was followed by PVC pipe to the ground surface. Morie number 2 sand was placed around the well screens followed by a bentonite seal. Native sand and gravel from the borehole was used as backfill above the seal and a concrete seal was placed at the surface. A schematic profile of the exterior AS points/SVE wells is presented in Figure 5.

The soil vapor is extracted from the exterior SVE wells using a seven-horsepower regenerative blower capable of producing approximately 250 cfm at 5 inches of water vacuum and is located in a secured equipment shed at the rear of Building #3. The vacuum to the interior SVE wells is supplied by a separate one-horsepower regenerative blower capable of producing approximately 80 cfm at 5 inches of water vacuum and is also located in the equipment shed. The soil vapor collected from each SVE system passes through a moisture knock-out drum, into the blower and flows through a series of vapor-phase carbon units located inside of the shed. The four air pollution carbon barrels are provided by General Carbon. The raw air from the interior SVE passes through two 85-gallon air pollution control barrels (300-pounds each) connected in series. The extracted air from the exterior SVE passes through two 110-gallon air pollution control barrels (400-pounds each) connected in series. A 4-inch PVC discharge stack was attached to the side of the shed with the discharge point above the shed roof. The electrical connection to the system is direct from the blower to a utility panel inside the shed. A schematic of the equipment layout is presented as Figure 6.

5.1.2 Air Sparging (AS)

A total of four AS points were installed on the exterior of Building #3 using a hollow stem auger drill rig at the locations illustrated on Figure 3. Each of the AS points were constructed of 2-inch diameter x 2-foot long 0.020-inch slotted (20 slot) PVC well screens connected to 2-inch diameter PVC pipe. The AS points were placed from approximately 90 to 92 feet below grade. Each AS point was surrounded with a Morie No. 2 sand pack followed by a one-foot-thick bentonite seal. A schematic profile of a typical AS point/SVE well is presented on Figure 5.

Air sparging is achieved using a 7.5-horsepower reciprocating compressor equipped with an after cooler. The air compressor is capable of delivering approximately 24.3 cubic feet per minute (cfm) of air at 175 pounds per square inch (psi) and was placed in the equipment shed. The electrical connection to the system is directly from the air compressor to a utility panel inside the shed. The four AS points are each run for 8 hours per day and automatically cycled on and off for optimum effectiveness in accordance with the following schedule:

| Sparge Points | <u>Time On</u> | <u>Time Off</u> |
|---------------|----------------|-----------------|
| AS-1 & AS-4 | 2:00 AM | 10:00 AM |
| AS-2 & AS-3 | 4:00PM | 12:00AM |

The SVE wells run continuously. In addition, an automatic shutoff circuit was installed on the AS/SVE system which disables the sparge-point compressor in the event either of the SVE blowers shut down. This circuitry prevents the generation of impacted soil vapor from the sparge system without the associated collection of the generated vapor through the SVE wells.

6.0 PILOT/START UP TEST

6.1 Pilot Test

A pilot test for design of the AS/SVE system as constructed was performed in July of 2014. The results of the pilot testing are summarized in CA RICH's report entitled "Pilot Test & Design Report" dated July 23, 2014 (ref. 2).

6.2 SVE Wells Start-Up

A start-up test of the SVE system was conducted on July 28, 2015. Prior to the initial system start-up, a round of static water level measurements was recorded at monitoring wells MW-2, 8, & 9. The initial start-up was limited to the 7-hp blower providing vacuum to the four exterior SVE wells (SVE 1, 2, 3 & 4). Once the blower was turned on, a round of vacuum readings were measured at the four exterior SVE wells and the three monitoring wells using a hand held field magnehelic. The blower remained on with a vacuum reading of approximately 45 inches of water. The flow supplied by the 7-hp blower averages out to approximately 40-50 cfm per well. The radius of influence measured during the test was in general agreement with the results of the pilot test. Upon start-up, a baseline reading of total volatile organic compounds (VOCs) in the raw system effluent (prior to carbon treatment) from each SVE blower was taken with a PID (Minirae 11.7). A PID reading of 0.3 ppm was recorded. In addition, an effluent air sample was collected in a SUMMA canister for laboratory analysis.

Following start-up and stabilization of the 7-hp blower, the 1-hp blower supplying vacuum to the four interior SVE wells (SVE-5, 6, 7 & 8) was activated and a vacuum

reading of 11 inches of water was recorded. The flow supplied by the 1-hp blower averages out to approximately 15 CFM per SVE well. Upon start-up, a baseline reading of total VOCs in the raw system effluent (prior to carbon treatment) was taken with a PID (Minirae 11.7). A PID reading of 0.1 ppm was recorded. In addition, an effluent air sample was collected in a SUMMA canister for laboratory analysis.

Analysis of the raw effluent sample from the 7-hp blower (drawing from the deeper exterior SVE wells) resulted in detections of TCA at a concentration 20,500 ug/m³ and tetrachloroethylene (PCE) at a concentration of 2,330 ug/m³. Analysis of the raw effluent sample from the 1-hp blower (drawing from the shallow interior SVE wells) resulted in detections of TCA at a concentration 18,900 ug/m³ and PCE at a concentration of 4,240 ug/m³.

6.3 AS Points Start-Up

A start-up test of the AS system was also conducted on July 28, 2015. Air supplied by the compressor was applied to all four sparge points and after 1 hour, the depth to water was measured in on-site monitoring wells MW-2, MW-8 & MW-9. As expected, air applied to the AS points caused the water level to rise slightly (approx. 0.1 ft.) in the on-site wells. The flow rates in standard cubic feet per hour (scfh) and pressures in pounds per square inch (psi) applied to the AS points during the start-up test are presented below. The radius of influence equaled or exceeded the pilot test results.

| AS Point | Pressure (psi) | Flow (scfh) |
|----------|----------------|-------------|
| AS-1 | 15 | 200 |
| AS-2 | 14 | 220 |
| AS-3 | 12 | 200 |
| AS-4 | 8 | 200 |

The duration of the start-up test was 3 hours. Following collection of all data and sampling, the system was shut down so that final adjustments to the components could be made prior to full-time operation.

Following final equipment and piping adjustments, and modifications to the system, the AS/SVE System was activated on September 9, 2015 and has generally been fully operational since that date.

7.0 REMEDIATION SYSTEM MONITORING AND EQUIPMENT TERMINATION CRITERIA

The following monitoring schedule has been developed for the operation of the AS/SVE System. Evaluation of historical plots of the data generated during the operation of this equipment will be used to determine when it is appropriate to shut off the remediation equipment.

7.1 Groundwater Monitoring

System performance monitoring includes semi-annual groundwater sampling and analysis utilizing a network of 14 on-site and off-site monitoring wells. The monitoring well network includes shallow, intermediate and deep wells ranging in depth from 80 feet to 195 feet below land surface. Monitoring well details are included on Table 2. A map detailing the locations of the wells and the direction of shallow groundwater flow is presented on Figure 7. As shown on Figure 7, the groundwater flow direction beneath the site is to the southeast.

Historical sampling and analysis of groundwater from the on-site well network performed by CA RICH, resulted in detections of TCA in well MW-2 at a concentration as high as 55,000 micrograms per liter (ug/L). The annual trend in TCA concentration for well MW-2 is detailed on Table 3. More recently, three rounds of sampling and analysis have been performed on the complete well network (i.e. all 14 wells). The sampling was conducted in June 2015, December 2015 and June 2016. The results of the three sampling rounds are detailed on Tables 4, 5 & 6, and laboratory results are included in Appendix F.

Comparison of the analytical results from the "baseline" sampling in June 2015 with the subsequent sampling rounds indicates a decrease in concentration of all VOCs within the on-site monitoring wells to below NYSDEC TOGS water quality standards, with the exception of an isolated June 2016 detection of methylene chloride, (a common laboratory contaminant) in off-site monitoring well MW-4. In addition, levels of VOCs in off-site, downgradient well MW-11s continue to decrease.

7.2 Indoor Air Monitoring

Indoor air monitoring has been performed within the ground-floor units at 48, 50, 52 and 54 Enter Lane. Indoor air samples were collected from these locations in October

2015, December 2015, and June 2016. In addition, during each sampling event, an exterior ambient air sample was collected. The results of the indoor air monitoring are included on Tables 7, 8, & 9. In general, air quality inside the buildings has remained below NYSDOH action levels. With respect to Building #2 (52 and 54 Enter Lane), the results of this round of indoor air sampling, coupled with the prior results from indoor and sub-slab testing, shows that the levels associated with this building are in the no further action range of the NYSDOH Guidance. Figure 8 illustrates the indoor air sampling locations.

7.3 AS System Monitoring and Termination Criteria

Prior to the start-up of the AS system, and as detailed in Section 7.1 "baseline" groundwater samples were collected on June 16-18, 2015, from all of the on-site and off-site wells.

MW-1 is considered the on-site "upgradient" monitoring point with regards to groundwater flow direction, and impacted wells MW-2, MW-8, and MW-9 are considered the on-site "compliance point" wells. The "contaminants of concern" (COCs) for monitoring purposes as identified during previous sampling include TCA, PCE, and 1,1-dichloroethene (DCE).

All of the site wells will be sampled on a semi-annual basis and analyzed for halogenated volatile organics using EPA method 8260 or a similar approved method.

The AS system will be kept in operation until the concentration of the contaminants of concern or related degradation by-products meet the criteria established below:

- The AS system will operate until the on-site groundwater meets the New York State GA groundwater standards; or the NYSDEC and NYSDOH concludes that the treatment systems have eliminated potential exposures from on-site sources of contamination prior to shut-down.
- Specifically, the AS system will remain in operation: 1) until the groundwater samples from the compliance wells indicate that they meet the TOGS standards for the contaminants of concern; or 2) the on-site and down-gradient groundwater contamination is at or less than the up-gradient groundwater contamination at the time of re-evaluation and site conditions are protective for its contemplative use, or it is jointly determined that an asymptotic condition is achieved with respect to any residual contaminant concentrations in the compliance point wells.

7.4 SVE Unit Monitoring and Termination Criteria

As discussed in Section 6.2, an initial "base line" soil vapor sample was collected of the untreated (raw) vapor stream (effluent) between the exhaust side of each blower and the inlet side of the carbon canisters using summa canisters on July 28, 2015, during the system start-up. In addition, samples were collected in December 2015 and again in June 2016. Selected results of the three rounds of raw effluent testing for the 7 HP (exterior) blower and the 1 HP (interior) blower are presented below and laboratory results are included in Appendix F:

1 HP (interior) Blower Raw Effluent

| Compound (ug/m ³) | <u>June 2015</u> | Dec. 2015 | <u>June 2016</u> |
|-------------------------------|------------------|-----------|------------------|
| TCA | 18,900 | 47 | 89.5 |
| PCE | 4,240 | 247 | 136 |

7 HP (exterior) Blower Raw Effluent

| Compound (ug/m ³) | <u>June 2015</u> | Dec. 2015 | <u>June 2016</u> |
|-------------------------------|------------------|-----------|------------------|
| TCA | 20,500 | 715 | 140 |
| PCE | 2,330 | 22 | 19 |

As detailed above, the concentration of key compounds in the raw effluent has decreased by one to two orders of magnitude since system start-up. As the operation of the SVE unit progresses, PID testing of the raw air and the air between the carbon units will be performed during each system inspection. Summa canister vapor samples of the raw air entering the system will be collected semi-annually and the resulting data will be plotted graphically versus time of operation. The following termination criteria will be employed.

- Once the levels of total VOCs in the SVE wells decreases to a near constant or asymptotic concentration (as approved by NYSDEC) and it is demonstrated that shutdown of the system will not result in the migration of unacceptable concentrations of residual vapors to the on-site and off-site structures (as approved by NYSDOH), operation of the system will be suspended.
- The soil vapor measurements must remain protective of the contemplative use of the on-site and off-site structures.

• The SVE system also serves to capture off-gassing contaminants from the AS system. Therefore, aside from the criteria described above, the SVE system will remain in operation as long as the AS system is in operation.

In addition, the SVE system will run as long as the potential for sub-slab vapor intrusion exists. Once groundwater remediation has been accomplished, the equipment used in the SVE system will be reevaluated and resized, if needed, to meet the goal of preventing vapor intrusion. The SVE system will not be shut down without permission from NYSDEC.

8.0 MAINTENANCE AND MONITORING SCHEDULE

8.1 Introduction

This Section addresses, component by component, the standard maintenance needed to operate the system as provided by the manufacturers. Copies of the owner's manuals for key equipment purchased for this project are included as Appendix G.

8.2 Maintenance Procedures

General

Monthly

A brief check should be performed once a month for possible air leaks, vacuum leaks, excessive temperatures, or other equipment related issues.

Air Compressor

The air compressor should be inspected on the following basis:

Weekly

- Observe oil level- Maintain level at center of sight glass.
- Inspect air inlet filter element.
- Check belt tension.
- Check heat exchangers for cleanliness.
- Check for loose fittings and fasteners.
- Check auto-drain & condensate level.
- Drain condensate from collection bucket.
- Drain condensate valves on the compressor line.

Initial 100 Hours or 30 days

• Change oil filter element.

1000 Hours or 6 Months

- Change oil filter element.
- Inspect air filter element.
- Perform weekly maintenance.
- Take oil sample if applicable.
- Test high temperature shut down switch. Remove fan starter fuses. Start until switch trips at 230°F +/-5°F, reinstall fan fuses, reset control panel. Ready for normal operation.

2000 Hours or 1 Year

- Clean blow down valve orifice.
- Observe unit for proper load/unload cycle.
- Perform weekly maintenance.
- Check electrical connection.
- Observe overall condition of unit-clean if necessary.
- Change oil filter element.
- Change air filter element.

4000 Hours or 1 Year

- Change oil/air separator element.
- Check v-belt alignment.
- Perform weekly maintenance.

8000 Hours or 1 Year

• Change oil.

Pressure Regulators

• There are no periodic maintenance procedures recommended by the manufacturer.

Flow Meters

• The only maintenance required is the occasional cleaning to assure reliable operation and good float visibility.

SVE Blower

<u>Weekly</u>

• Check vacuum gauge at inlet and record value.

Monthly

• Clean the inside and outside of the cooling fan.

Moisture Knock-Out Drum

• The moisture knock-out drum contains an air filter to prevent sediment from entering the blower. The filter should be checked every six months or after a significant increase in the measured vacuum at the blower inlet. The filter element should be either cleaned or replaced depending on the condition of the element. The drum should be checked for water weekly/monthly and drained as needed.

Carbon Units

• The sampling ports on the discharge side of the blower should be monitored during weekly/monthly inspections using a PID and the values recorded. Once the meter indicates breakthrough of the carbon, CA RICH should be contacted to arrange for replacement of the unit(s). There are no periodic maintenance procedures recommended by the manufacturer.

Intermatic Timer

• There is no periodic maintenance required for the timer as specified by the manufacturer. If there is a power outage, verify that the clock is operating properly and set to the correct time.

8.3 Records, Monitoring, and Sampling

Records and Monitoring

A copy of the AS/SVE System log sheets are kept in the equipment shed on a clipboard. The following information should be recorded.

| Information | Frequency |
|--|----------------|
| Vacuum of blower | Weekly/Monthly |
| Sparging pressures | Weekly/Monthly |
| Drain knock-out drum and condensate valves | Weekly/Monthly |
| PID readings of vapor discharge | Weekly/Monthly |
| Any repairs, maintenance or adjustments | As needed |

Sampling

Indoor Air

CA RICH will collect indoor air samples from the ground-floor units at 48 and 50 Enter Lane semi-annually and at least once per year during the heating season. The samples will be collected using Summa canisters and analyzed for halogenated VOCs using EPA method TO-15.

Groundwater

• CA RICH will collect groundwater samples from all of the site wells on a semiannual basis. The samples will be analyzed for halogenated VOCs using EPA method 8260.

SVE System Sampling

• CA RICH will collect semi-annual vapor samples from the untreated vapor stream between the exhaust side of the blowers and the inlet side of the carbon canisters using Summa canisters. The samples will be analyzed for halogenated VOCs using method TO-15.

Procedures for monitoring, operating and maintaining the AS/SVE System will also be provided in the Operation and Maintenance Plan in Section 4 of the SMP which is currently being developed. The Monitoring Plan also addresses inspection procedures that must occur after any severe weather condition has taken place that may affect on-site ECs.

9.0 INSTITUTIONAL CONTROLS

The site remedy requires that an environmental easement be placed on the property 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 uses only.

The environmental easement for the site is currently being prepared.

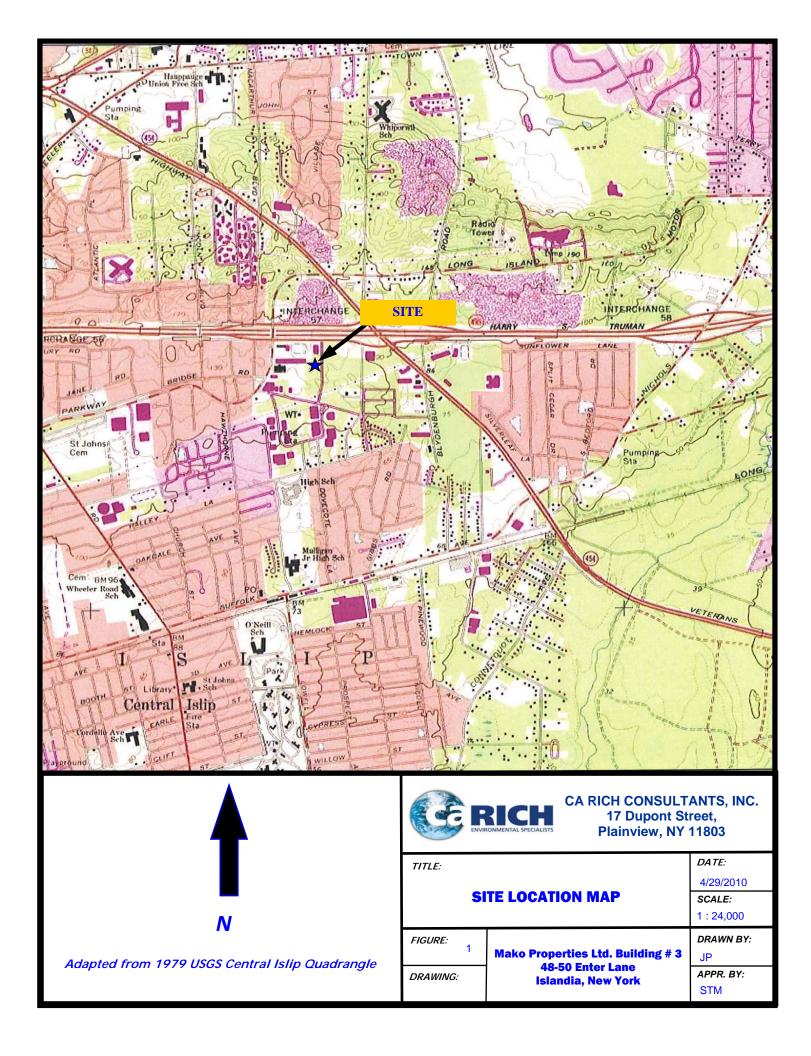
10.0 DEVIATIONS FROM THE IRM WORK PLAN

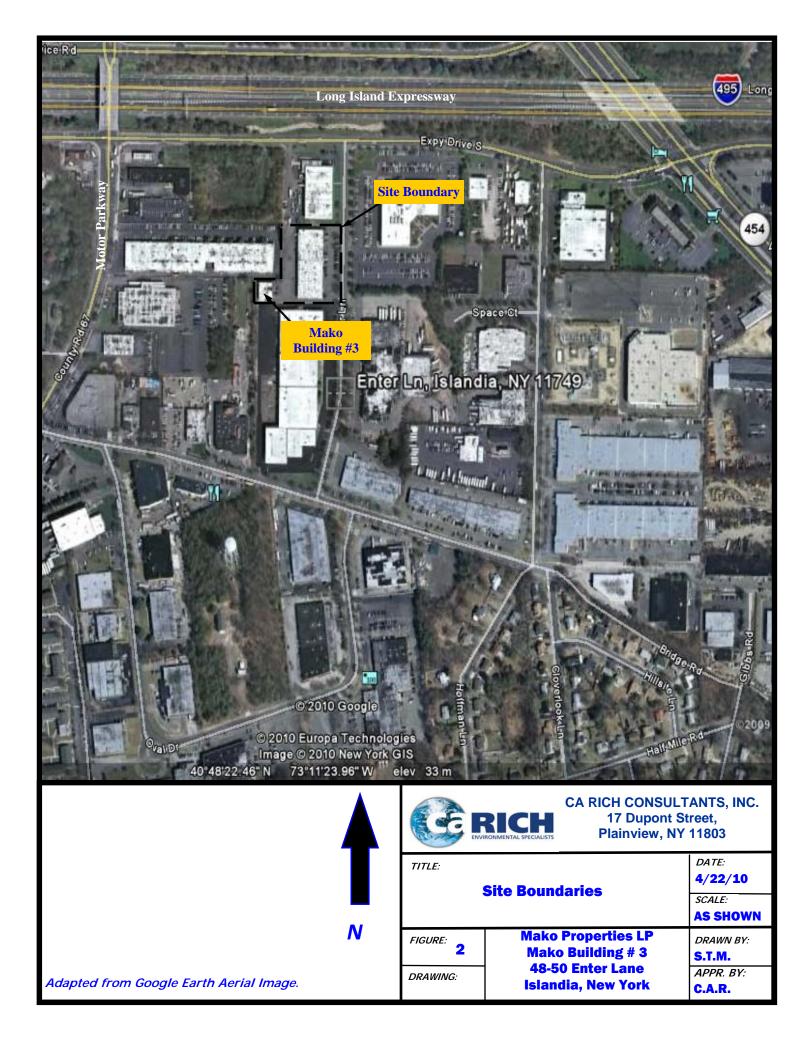
There were no deviations from the IRM Work Plan in the performance of the remedial action described herein.

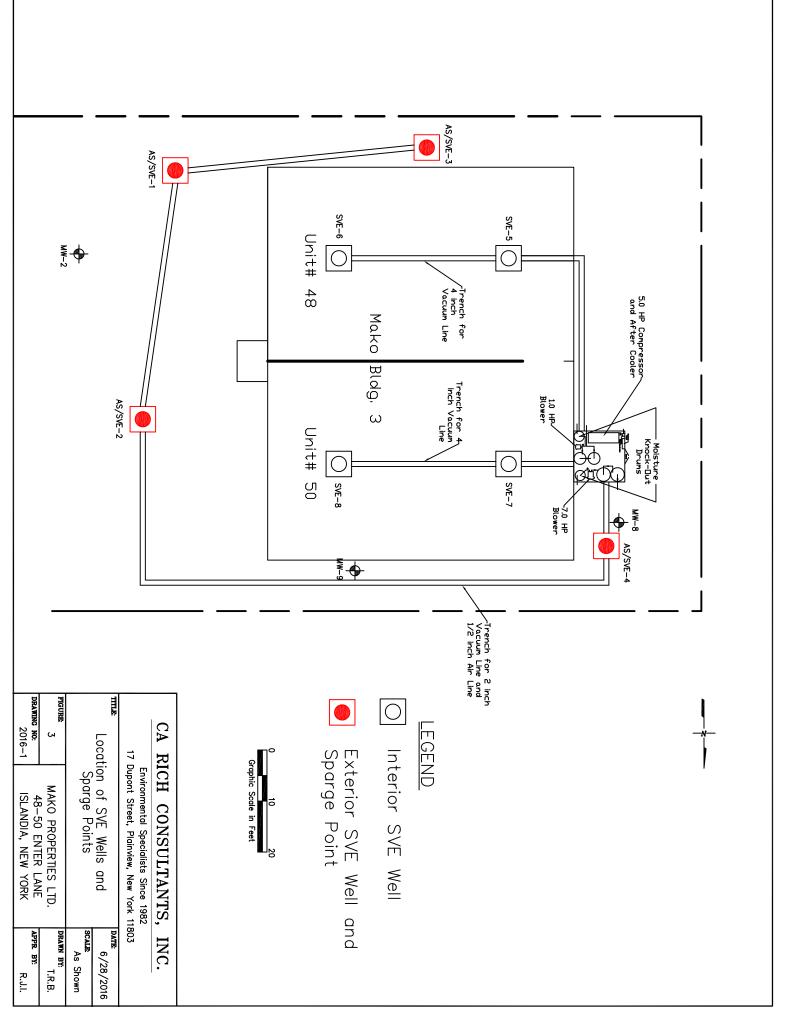
11.0 REFERENCES

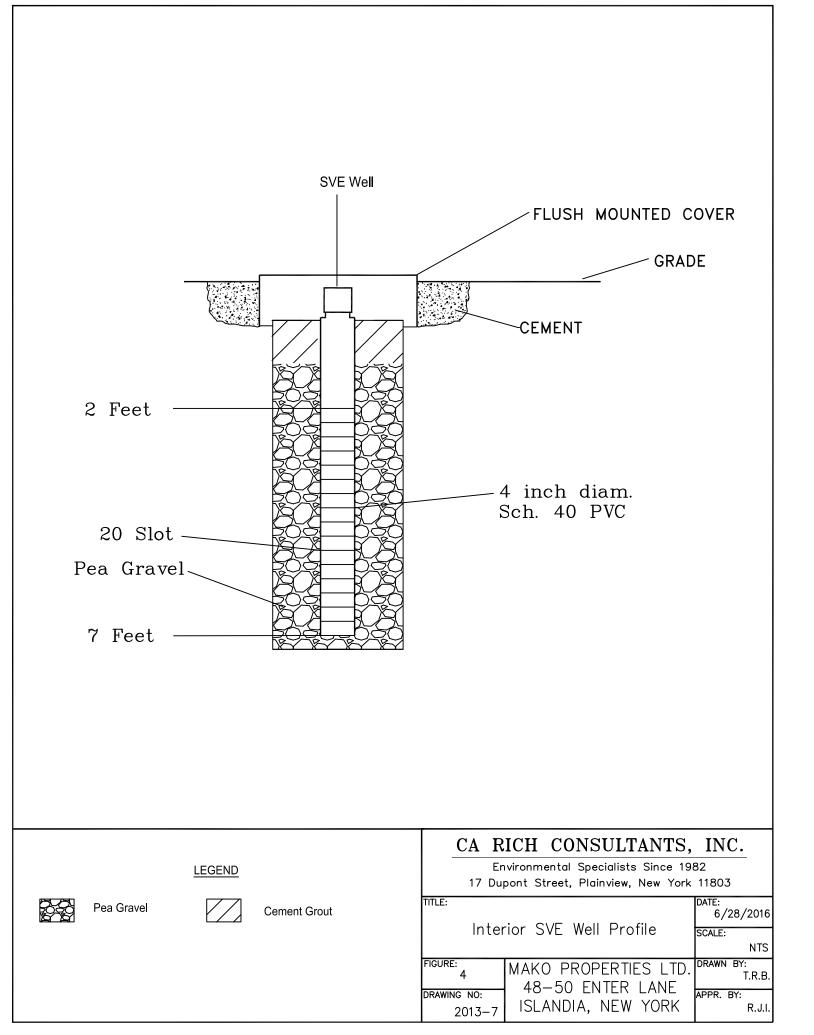
- 1. CA RICH Consultants, Inc., Interim Remedial Measures Work Plan, October 2013
- 2. CA RICH Consultants, Inc., Pilot Test and Design Report, July 2014
- 3. CA RICH Consultants, Inc., Final Site Characterization Report, November 2012

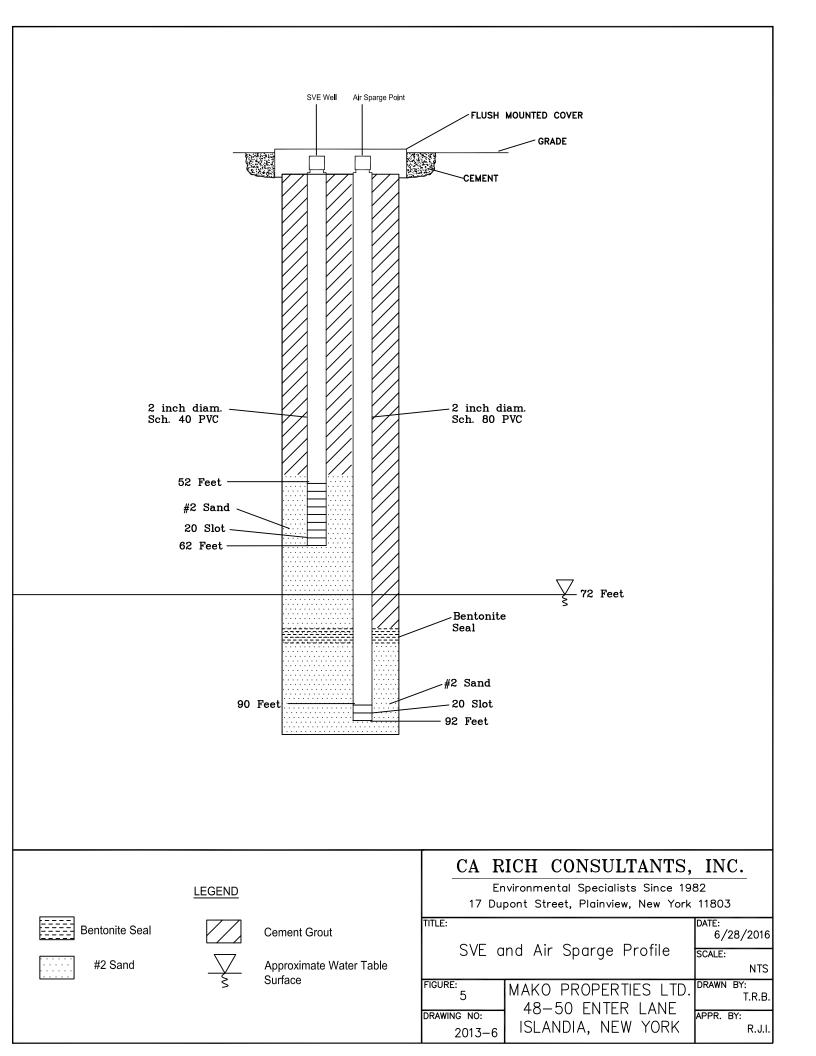
FIGURES

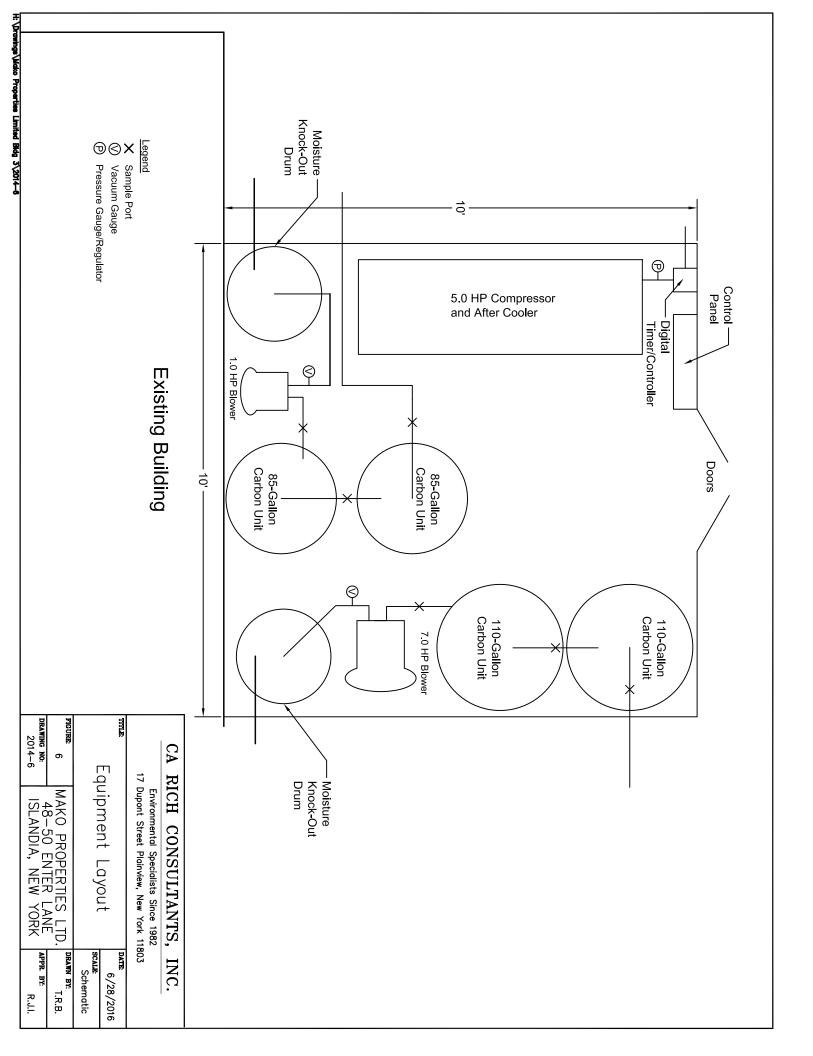


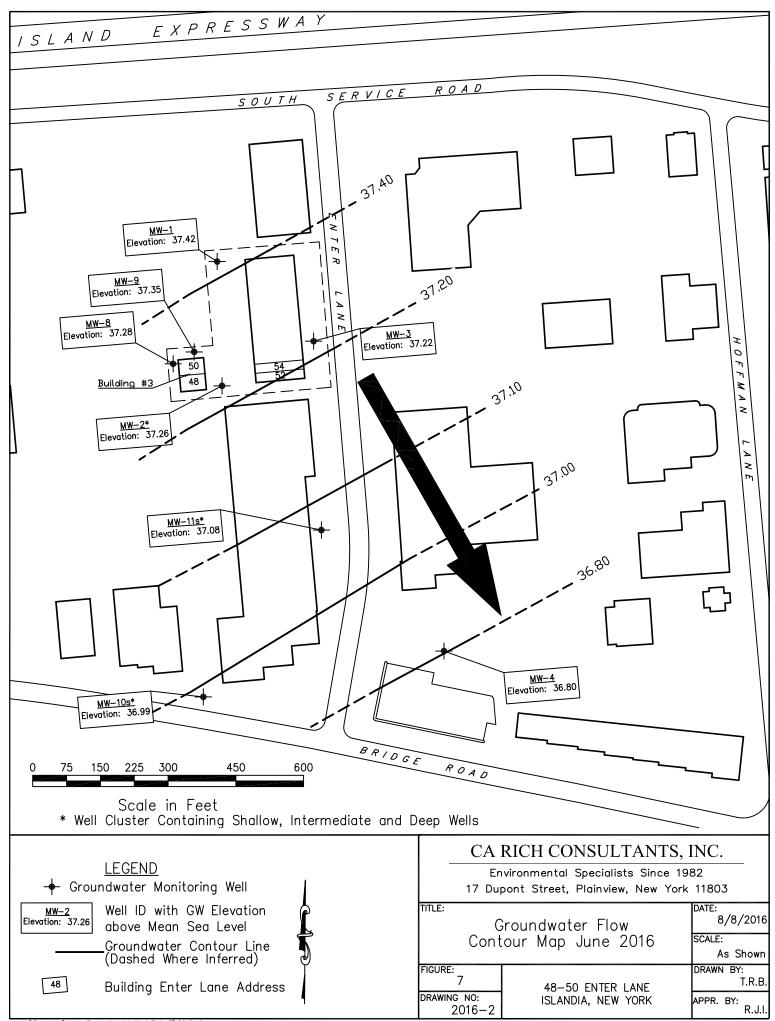




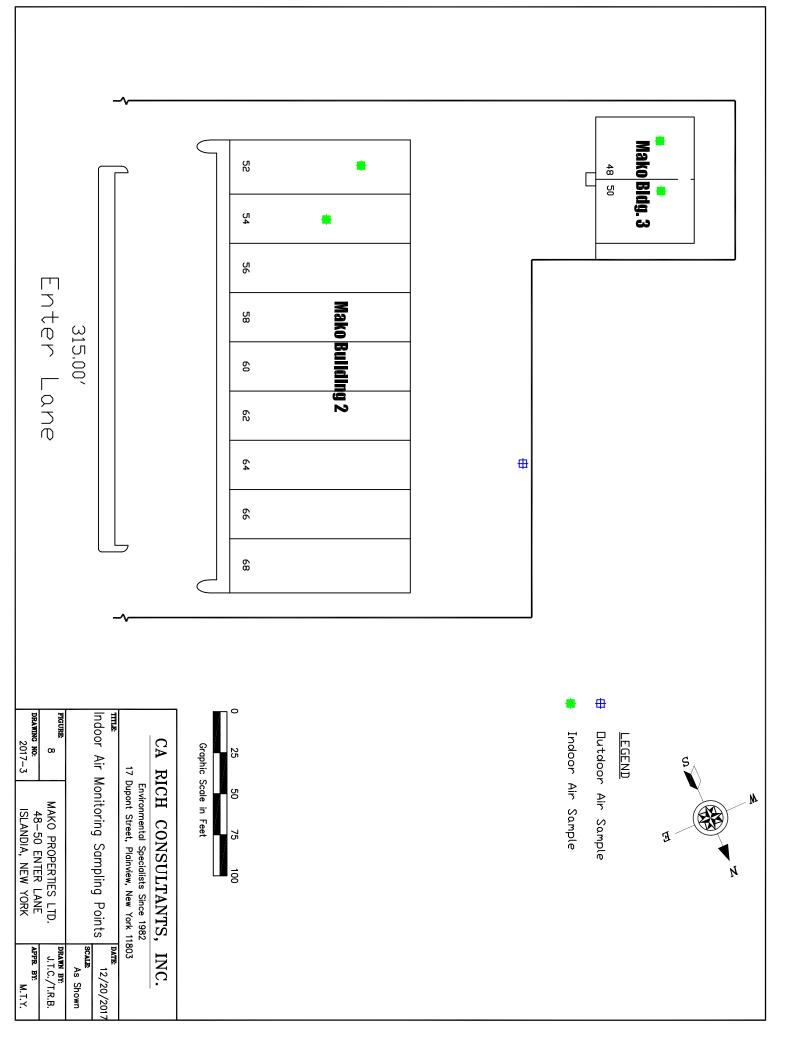








H: \Drawings\Mako Properties Limited Bldg 3\2016-2



TABLES

| Well ID # | Vapor or Sparge | Pipe Diameter | Screen Interval(s) | Slot Size | Date Installed | Intermediate Seals/Depths |
|-----------|-----------------------------------|-------------------------|-----------------------|-----------|-------------------|--|
| AS-1 | Sparge (used in pilot test) | 2 in. Sch. 80 PVC | 90-92 ft. | 20 slot | 3/25/2014 | #2 Morie/92-88 ft. Bentonite seal 86-88 ft. Grout to grade. |
| AS-2 | Sparge | 2 in. Sch. 80 PVC | 90-92 ft. | 20 slot | 10/8/2014 | #2 Morie/92-88 ft. Bentonite seal 86-88 ft. Grout to grade. |
| AS-3 | Sparge | 2 in. Sch. 80 PVC | 90-92 ft. | 20 slot | 10/13/2014 | #2 Morie/92-88 ft. Bentonite seal 86-88 ft. Grout to grade. |
| AS-4 | Sparge | 2 in. Sch. 80 PVC | 90-92 ft. | 20 slot | 10/14/2014 | #2 Morie/92-88 ft. Bentonite seal 86-88 ft. Grout to grade. |
| SVE-1 | Vapor (used in pilot test) | 2 in. Sch. 40 PVC | 52-62 ft. | 20 Slot | 3/24/2014 | #2 Morie/50-62 ft. Bentonite seal 50-51 ft. Drill cuttings to grade. |
| SVE-2 | Vapor | 2 in. Sch. 40 PVC | 52-62 ft. | 20 Slot | 10/9/2014 | #2 Morie/50-62 ftsand Bentonite seal 50-51 ft. Grout to grade. |
| SVE-3 | Vapor | 2 in. Sch. 40 PVC | 52-62 ft. | 20 Slot | 10/10/2014 | #2 Morie/50-62 ftsand Bentonite seal 50-51 ft. Grout to grade. |
| SVE-4 | Vapor | 2 in. Sch. 40 PVC | 52-62 ft. | 20 Slot | 10/15/2014 | #2 Morie/50-62 ft. Bentonite seal 50-51 ft. Grout to grade. |
| SVE-5 | Vapor | 4 in. Sch. 40 PVC | 2-7 ft. | 20 Slot | 10/31/2014 | Pea gravel/1-7 ft. Grout to grade |
| SVE-6 | Vapor | 4 in. Sch. 40 PVC | 2-7 ft. | 20 Slot | 10/31/2014 | Pea gravel/1-7 ft. Grout to grade |
| SVE-7 | Vapor | 4 in. Sch. 40 PVC | 2-7 ft. | 20 Slot | 11/3/2014 | Pea gravel/1-7 ft. Grout to grade |
| SVE-8 | Vapor | 4 in. Sch. 40 PVC | 2-7 ft. | 20 Slot | 11/3/2014 | Pea gravel/1-7 ft. Grout to grade |

Table 1Summary of Sparge Point & Vapor Well Construction48-50 Enter Lane, Islandia, NY



Table 2

Mako Properties LLC - Building 3

Groundwater Monitoring Well Details June 2015

On-Site Wells + MW-4 Bldg 1

| Well ID/Mako Bldg # | Diameter/Material | <u>DTB</u> | Screened Zone | DTW | LF Pump Depth |
|---------------------|-------------------|------------|---------------|-------|---------------|
| MW-1/Bldg 2 | 4 inch/PVC | 82 ft | 72 – 82 ft | 73.87 | 77 ft |
| MW-2/Bldg 3 | 4 inch/PVC | 83 ft | 73 – 83 ft | 72.78 | 81 ft |
| MW-2i/Bldg 3 | 4 inch/PVC | 128 ft | 118 – 128 ft | 72.64 | 126 ft |
| MW-2D/Bldg 3 | 4 inch/PVC | 178 ft | 168 – 178 ft | 72.55 | 176 ft |
| MW-3/Bldg 2 | 4 inch/PVC | 82 ft | 72 – 82 ft | 71.56 | 77 ft |
| MW-4/Bldg 1 | 4 inch/PVC | 72 ft | 62 – 72 ft | 62.07 | 66 ft |
| MW-8/Bldg 3 | 2 inch/PVC | 85 ft | 75 – 85 ft | 74.25 | 81 ft |
| MW-9/Bldg 3 | 2 inch/PVC | 85 ft | 75 – 85 ft | 74.78 | 81 ft |

Off-Site Wells at 40 Enter Lane

| Well ID | Diameter/Material | <u>DTB</u> | Screened Zone | DTW | LF Pump Depth |
|---------|-------------------|------------|---------------|-------|---------------|
| MW-10s | 4 inch/PVC | 84 ft | 74 – 84 ft | 71.60 | 81 ft |
| MW-10i | 4 inch/PVC | 139 ft | 129 – 139 ft | 71.83 | 136 ft |
| MW-10D | 4 inch/PVC | 190 ft | 180 – 190 ft | 71.70 | 187 ft |
| MW-11s | 4 inch/PVC | 88 ft | 78 – 88 ft | 71.25 | 81 ft |
| MW-11i | 4 inch/PVC | 138 ft | 128 – 138 ft | 71.30 | 136 ft |
| MW-11D | 4 inch/PVC | 190 ft | 180 – 190 ft | 71.20 | 186 ft |



Table 3 HISTORICAL SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS

Mako Groundwater Monitoring Program

48-50 Enter Lane, Islandia, NY

| | Downgradient of Building #3 | | | | | Downgradient of Building #3 | | | | gradient | of Build | ling #3 | Upgr | adient o | of Buildi | ng #3 | Upgradient of Building #3 | | | |
|--------------------------|-----------------------------|-------|------|------|-------|-----------------------------|-------|-------|-------|----------|----------|---------|------|----------|-----------|-------|---------------------------|------|------|------|
| | MW-2 | MW-2 | MW-2 | MW-2 | MW-21 | MW-21 | MW-21 | MW-21 | MW-2D | MW-2D | MW-2D | MW-2D | MW-8 | MW-8 | MW-8 | MW-8 | MW-9 | MW-9 | MW-9 | MW-9 |
| | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 |
| Organic Compounds (ug/L) | | | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloroethene | 460 | 50 | 6.5 | 2.4 | N/A | ND | ND | ND | N/A | ND | ND | ND | N/A | 5.5 | ND | ND | N/A | ND | ND | ND |
| 1,1,1-Trichloroethane | 55,400 | 3,800 | 350 | 130 | N/A | ND | ND | ND | N/A | ND | ND | ND | N/A | 490 | 31 | 21 | N/A | 31 | 15 | 25 |
| Tetrachloroethene | ND | 17.7 | 6.8 | 3.6 | N/A | ND | ND | ND | N/A | 4 | ND | ND | N/A | 15.8 | 1.7 | 1.2 | N/A | ND | ND | 1.1 |
| | | | | | | | | | | | | | | | | | | | | |

Notes:

ug/L - micrograms per Liter or parts per billion.

ND - Not Detected above laboratory detection limit.

NA - Not Analyzed.

* - NYSDEC Division of Water Technical and Operational Guidance series (1.1.1) Ambient Water Quality Standards

and Guidance Values, June 1998.

Exceeds GW Standard of 5 ug/L.



Table 3 (cont.) HISTORICAL SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS Mako Groundwater Monitoring Program

48-50 Enter Lane, Islandia, NY

| | Downg | radiont | of Buildi | na #3 | Downgradient of Building #3 | | | | Downgradient of Building #3 | | | | Ung | adient d | yf Buildi | na #3 | Upgradient of Building #3 | | | |
|--------------------------|--|---------|-----------|-------|-----------------------------|------|-------------------------|------|-----------------------------|--|------|------|-------|----------|-----------|-------|---------------------------|------|------|------|
| | Downgradient of Building #3 MW-2 MW-2 MW-2 MW-2 | | | | | | MW-2D MW-2D MW-2D MW-2D | | | Upgradient of Building #3 MW-8 MW-8 MW-8 MW-8 | | | | | | | MW-9 | | | |
| | Sept. | June | Dec. | June | Sept. | June | Dec. | June | Sept. | June | Dec. | June | Sept. | June | Dec. | June | Sept. | June | Dec. | June |
| | 2014 | 2015 | 2015 | 2016 | 2014 | 2015 | 2015 | 2016 | 2014 | 2015 | 2015 | 2016 | 2014 | 2015 | 2015 | 2016 | 2014 | 2015 | 2015 | 2016 |
| Organic Compounds (ug/L) | | | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloroethene | 1.6 | 1.8 | ND | ND | NS | ND | ND | ND | NS | ND | ND | ND | NS | ND | ND | ND | NS | ND | ND | ND |
| 1,1,1-Trichloroethane | 55 | 86.5 | 4 | ND | NS | ND | ND | ND | NS | 0.93 | 0.49 | ND | NS | 8.6 | ND | ND | NS | 12.2 | 1.2 | 0.38 |
| Tetrachloroethene | 2.9 | 6 | ND | ND | NS | ND | ND | ND | NS | ND | ND | 0.99 | NS | 0.91 | ND | ND | NS | 0.8 | ND | ND |
| | | | | | | | | | | | | | | | | | | | | |

Notes:

ug/L - micrograms per Liter or parts per billion.

ND - Not Detected above laboratory detection limit.

NA - Not Analyzed.

NS - Not Sampled.

* - NYSDEC Division of Water Technical and Operational Guidance series (1.1.1) Ambient Water Quality Standards and Guidance Values, June 1998.

Exceeds GW Standard of 5 ug/L.



| | | | | | | •. | | | | | | | | | | | | |
|-------------------------|-------------|--------------|--------------|-------------|-------------|-----------|-------------|-------------|-------------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|
| | | | | | | | Mako Bu | ilding #3 - | Baseline Ju | ine 2015 | | | | | | | | |
| | | | | | | | | 48-50 En | ter Lane | | | | | | | | | |
| | | | | | | | | Islandia, | New York | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Sample ID | MW-1 | MW-2 | *MW-X (Dup) | MW-2I | MW-2D | MW-3 | MW-4 | MW-8 | MW-9 | MW-10S | MW-10I | MW-10D | MW-11S | MW-11I | MW-11D | Field Blank | Trip Blank | **NYSDEC |
| Screen Depth | 68ft-83ft | 68ft-83ft | NA | 118ft-128ft | 168ft-178ft | 72ft-82ft | 62ft-72ft | 75ft-85ft | 75ft-85ft | 74ft-84ft | 129ft-139ft | 180ft-190ft | 78ft-88ft | 128ft-138ft | 180ft-190ft | NA | NA | TOGS |
| Date Sampled | | 6/18/2015 | 6/18/2015 | 6/18/2015 | | 6/17/2015 | 6/17/2015 | 6/18/2015 | 6/18/2015 | 6/16/2015 | 6/16/2015 | 6/16/2015 | 6/16/2015 | | 6/16/2015 | 6/18/2015 | 6/18/2015 | |
| Volatile Organics | 0,11,2010 | 0,10,2010 | 0,10,2010 | 0,10,2010 | 0/10/2010 | 0/11/2010 | 0/11/2010 | 0/10/2010 | 0.10.2010 | 0/10/2010 | 0/10/2010 | 0/10/2010 | 0/10/2010 | 0/10/2010 | 0/10/2010 | 0.10/2010 | 0,10,2010 | |
| Units | ug/L | ug/L | ug/L | ug/L | ug/I | ug/L | ug/I | ug/I | ug/L | ug/L | ug/l | ug/L | ug/l | ug/l | ug/I | ug/L | ug/I | ug/L |
| | | | | | <u>ug/L</u> | | <u>ug/L</u> | <u>ug/L</u> | | | <u>ug/L</u> | | <u>ug/L</u> | <u>ug/L</u> | <u>ug/L</u> | | <u>ug/L</u> | |
| Acetone | ND | ND | ND | ND | ND | 4.5 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 50 |
| Chloroform | ND | ND | ND | ND | 0.35 J | ND | ND | ND | ND | ND | ND | 0.87 J | ND | ND | 0.42 J | ND | ND | 7 |
| 1,1-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.31 J | 0.78 J | ND | ND | ND | ND | ND | 5 |
| 1,1-Dichloroethene | ND | 1.8 | 2.2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | 31.8 | ND | ND | ND | ND | 5 |
| Methyl Tert Butyl Ether | ND | ND | ND | ND | 0.41 J | ND | ND | ND | ND | ND | 0.37 J | 0.27 J | ND | ND | 0.42 J | ND | ND | 10 |
| Tetrachloroethene | ND | 6 | 5.5 | ND | ND | ND | ND | 0.91 J | 0.80 J | ND | ND | ND | 24.8 | ND | ND | ND | ND | 5 |
| Toluene | ND | 0.29 J | 0.25 J | 0.26 J | ND | ND | ND | 0.28 J | 0.23 J | ND | ND | ND | ND | ND | ND | ND | ND | 5 |
| 1,1,1-Trichloroethane | ND | 86.5 | 72.6 | ND | 0.93 J | ND | ND | 8.6 | 12.2 | ND | 0.33 J | 0.53 J | 875 | ND | 4.9 | ND | ND | 5 |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| Notes: | | | | | | | | | | | | | | | | | | |
| ND- Indicates the compo | und was and | wzod for but | not detected | | | | | | | | | | | | | | | |

TABLE 4 Summary of Analytical Detections for Groundwater Samples - Monitoring Well Network

ND= Indicates the compound was analyzed for but not detected.

Bold indicates that value is above NYSDEC TOGS Cleanup Levels.

*MW-X(Dup) is the duplicate of MW-2.

**NYSDEC Technical and Operational Guidance Series (1.1.1), Ambient Water QualityStandards and Guidance Values and Groundwater Effluent Limitations, June 1998.

| | | | | | | | | TAE | BLE 5 | | | | | | | | | |
|-------------------------|--------------------------------------|------------|-------------|-------------|-------------|------------|------------|-------------|------------|-------------|-------------|------------|--------------|-------------|-------------|-------------|------------|----------|
| | Summary of Analytical Detections for | | | | | | | | | | | | | | | | | |
| | | | | | | G | roundwate | Samples · | Monitorin | g Well Netv | work | | | | | | | |
| | | | | | | | Mako | Building #3 | B Decemb | per 2015 | | | | | | | | |
| | | | | | | | | | nter Lane | | | | | | | | | |
| | | | | | | | | Islandia, | New York | | | | | | | | | |
| Sample ID | MW-1 | MW-2 | MW-2I | MW-2D | MW-3 | MW-4 | MW-8 | MW-9 | MW-10S | MW-10I | MW-10D | MW-11S | 'MW-XX (Dup) | MW-11I | MW-11D | Field Blank | Trip Blank | **NYSDEC |
| | | | | | - | | | - | | _ | - | | · · · | | | | • | |
| Screen Depth | 66ft-81ft | 68ft-83ft | 120ft-130ft | 176ft-186ft | 65ft-80ft | 53ft-68ft | 75ft-85ft | 75ft-85ft | 70ft-85ft | 130ft-140ft | 185ft-195ft | 70ft-85ft | NA | 130ft-140ft | 185ft-195ft | NA | NA | TOGS |
| Date Sampled | 12/16/2015 | 12/16/2015 | 12/16/2015 | 12/16/2015 | 12/16/2015 | 12/16/2015 | 12/17/2015 | 12/17/2015 | 12/15/2015 | 12/15/2015 | 12/15/2015 | 12/15/2015 | 12/15/2015 | 12/15/2015 | 12/15/2015 | 12/17/2015 | 12/17/2015 | |
| Volatile Organics | | | | | | | | | | | | | | | | | | |
| Units | ug/L | ug/L | ug/L | ug/L | <u>ug/L</u> | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Acetone | R | R | ND | R | ND | ND | ND | ND | R | ND | ND | R | ND | ND | ND | ND | ND | 50 |
| Chloroform | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.97 J | ND | ND | ND | ND | ND | ND | 7 |
| 1,1-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.69 J | ND | ND | ND | ND | ND | ND | 5 |
| 1,1-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 22.9 | 30.1 | ND | ND | ND | ND | 5 |
| Methyl Tert Butyl Ether | ND | ND | ND | 0.76 J | ND | ND | ND | ND | ND | 0.38 J | 0.27 J | ND | ND | ND | ND | ND | ND | 10 |
| Tetrachloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 27.4 | 30.5 | ND | ND | ND | ND | 5 |
| Toluene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 5 |
| 1,1,1-Trichloroethane | ND | 4.0 | ND | 0.49 J | ND | ND | ND | 1.2 | ND | ND | 0.50 J | 517 | 553 D | ND | 2.0 | ND | ND | 5 |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

Notes:

ND = Indicates the compound was analyzed for but not detected.

J = Indicates analyte was detected below reporting limit; value given is an estimate.

R = Indicates the data are unusable; the analyte may or may not be present in the sample

D = Indicates analyte concentration is from diluted analysis.

Bold indicates value is above NYSDEC TOGS Cleanup Levels.

*MW-XX(Dup) is the duplicate of MW-11S.

**NYSDEC Technical and Operational Guidance Series (1.1.1), Ambient Water QualityStandards and Guidance Values and Groundwater Effluent Limitations, June 1998.

| | | | | | | | | TA | BLE 6 | | | | | | | | | |
|-------------------------|---|-----------|-------------|-------------|-----------|-----------|-----------|-----------|--------------|-------------|-------------|-----------|--------------|-------------|-------------|-------------|------------|----------|
| | Summary of Analytical Detections for | | | | | | | | | | | | | | | | | |
| | Groundwater Samples - Monitoring Well Network | | | | | | | | | | | | | | | | | |
| | | | | | | | M | | ng #3 - June | e 2016 | | | | | | | | |
| | | | | | | | | | Enter Lane | | | | | | | | | |
| | | | | | | | | Islandia | a, New York | C | | | | | | | | |
| Sample ID | MW-1 | MW-2 | MW-2I | MW-2D | MW-3 | MW-4 | MW-8 | MW-9 | MW-10S | MW-10I | MW-10D | MW-11S | *MW-XX (Dup) | MW-111 | MW-11D | Field Blank | Trip Blank | **NYSDEC |
| Screen Depth | 66ft-81ft | 68ft-83ft | 120ft-130ft | 176ft-186ft | 65ft-80ft | 53ft-68ft | 75ft-85ft | 75ft-85ft | 70ft-85ft | 130ft-140ft | 185ft-195ft | 70ft-85ft | NA | 130ft-140ft | 185ft-195ft | NA | NA | TOGS |
| Date Sampled | 6/22/2016 | 6/22/2016 | 6/22/2016 | 6/22/2016 | 6/22/2016 | 6/22/2016 | 6/22/2016 | 6/22/2016 | 6/21/2016 | 6/21/2016 | 6/21/2016 | 6/21/2016 | 6/21/2016 | 6/21/2016 | 6/21/2016 | 6/22/2016 | 6/22/2016 | |
| olatile Organics | | | | | | | | | | | | | | | | | | |
| Units | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| Acetone | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | UJ | 50 |
| Chloroform | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.75 J | ND | ND | ND | 0.26 J | ND | ND | 7 |
| 1,1-Dichloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.22 J+ | 0.55 J | 0.28 J | 0.28 J | ND | ND | ND | ND | 5 |
| 1,1-Dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 23.7 | 24.3 | ND | ND | ND | ND | 5 |
| Methyl Tert Butyl Ether | ND | ND | ND | 0.92 J | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 10 |
| Methylene Chloride | ND | ND | ND | ND | ND | 37.2 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 5 |
| Tetrachloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 14.5 | 14.6 | ND | ND | ND | ND | 5 |
| Toluene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 5 |
| 1,1,1-Trichloroethane | ND | ND | ND | 0.99 J | ND | ND | ND | 0.38 J | ND | 0.26 J | 0.33 J | 323 D | 323 D | ND | 1.2 | ND | ND | 5 |
| | | | | | | | | | | | | | | | | | | |

Notes:

ND = Indicates the compound was analyzed for but not detected.

UJ = Indicates analyte was analyzed for , but not detected. The reported quantitatic

J = Indicates analyte was detected below reporting limit; value given is an estimate.

J+= The result is an estimated quantity and may be biased high.

D = Analyte concentration is from diluted analysis.

Bold indicates value is above NYSDEC TOGS Cleanup Levels.

*MW-XX(Dup) is the duplicate of MW-11S.

**NYSDEC Technical and Operational Guidance Series (1.1.1), Ambient Water QualityStandards and Guidance Values and Groundwater Effluent Limitations, June 1998.

| | TABLE 7 Summary of VOCs in Indoor & Outdoor Air Mako Building 2&3, Enter Lane Islandia, New York October 22, 2015 | | | | | | | | |
|---|---|-------------------------|-------------------------|-------------------------|-------------------------|------------------------------|--|--|--|
| | | | | | | | | | |
| Sample II Sample Dat | | IA-50 10/22/2015 | IA-52 10/22/2015 | IA-54 10/22/2015 | IA-AA 10/22/2015 | *NYSDOH Mitigation Levels | | | |
| Volatile Organic Compounds Uni | ts <u>µg/m³</u> Q | <u>µg/m³</u> Q | <u>µg/m³</u> Q | <u>µg/m³</u> Q | <u>µg/m³</u> Q | <u>µg/m³</u> | | | |
| Acetone | 60.3 | 78.2 | 31.4 | 194 | 12 | NVG | | | |
| 1,3-Butadiene | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.069) | NVG | | | |
| Benzene | 1.8 | 0.96 | 0.77 | 1.4 | 0.67 | NVG | | | |
| Bromodichloromethane Bromoform | ND (0.21) ND (0.21) | ND (0.21) ND (0.21) | ND (0.21) ND (0.21) | ND (0.21) ND (0.21) | ND (0.21) ND (0.21) | NVG NVG | | | |
| Bromomethane | ND (0.21) ND (0.085) | ND (0.21) | ND (0.21) ND (0.085) | ND (0.21) ND (0.085) | ND (0.21) ND (0.085) | NVG | | | |
| Bromoethene | ND (0.087) | ND (0.087) | ND (0.087) | ND (0.087) | ND (0.087) | NVG | | | |
| Benzyl Chloride | ND (0.13) | ND (0.13) | ND (0.13) | ND (0.13) | ND (0.13) | NVG | | | |
| Carbon disulfide | ND (0.090) | ND (0.090) | ND (0.090) | 0.65 | ND (0.090) | NVG | | | |
| Chlorobenzene | ND (0.15) | ND (0.15) | ND (0.15) | ND (0.15) | ND (0.15) | NVG | | | |
| Chloroethane | ND (0.058) | ND (0.058) | ND (0.058) | ND (0.058) | ND (0.058) | NVG | | | |
| Chloroform | 0.54 J | ND (0.15) | ND (0.15) | 0.59 J | ND (0.15) | NVG | | | |
| Chloromethane | 1.9 | 1.2 | 1.2 | 1.4 | 1.1 | NVG | | | |
| 3-Chloropropene | ND (0.088) | ND (0.088) | ND (0.088) | ND (0.088) | ND (0.088) | NVG | | | |
| 2-Chlorotoluene | ND (0.17) | ND (0.17) | ND (0.17) | ND (0.17) | ND (0.17) | NVG | | | |
| Carbon tetrachloride1 | ND (0.16) | ND (0.16) | ND (0.16) | ND (0.16) | ND (0.16) | 5.0 | | | |
| Cyclohexane | ND (0.11) | ND (0.11) | ND (0.11) | 3 | ND (0.11) | NVG | | | |
| 1,1-Dichloroethane | ND (0.13) | ND (0.13) | ND (0.13) | ND (0.13) | ND (0.13) | NVG | | | |
| 1,1-Dichloroethene ² | ND (0.11) | ND (0.11) | ND (0.11) | ND (0.11) | ND (0.11) | 100 | | | |
| 1,2-Dibromoethane | ND (0.27) | ND (0.27) | ND (0.27) | ND (0.27) | ND (0.27) | NVG | | | |
| 1,2-Dichloroethane | ND (0.11) | ND (0.11) | ND (0.11) | ND (0.11) | ND (0.11) | NVG | | | |
| 1,2-Dichloropropane | ND (0.23) | ND (0.23) | ND (0.23) | ND (0.23) | ND (0.23) | NVG | | | |
| 1,4-Dioxane Dichlorodifluoromethane | ND (0.23) | ND (0.23) | ND (0.23) | ND (0.23) | ND (0.23) | NVG | | | |
| Dichlorodifiuoromethane | 2.3 | 2.6 | 2.5 | 2.6 | 2.3 | NVG NVG | | | |
| trans-1,2-Dichloroethylene | ND (0.35) 6.3 | ND (0.35) ND (0.079) | ND (0.35) ND (0.079) | ND (0.35) ND (0.079) | ND (0.35) ND (0.079) | NVG | | | |
| cis-1,2-Dichloroethene ² | ND (0.099) | ND (0.099) | ND (0.099) | ND (0.099) | ND (0.099) | 100 | | | |
| cis-1,3-Dichloropropene | ND (0.16) | ND (0.16) | ND (0.16) | ND (0.16) | ND (0.16) | NVG | | | |
| m-Dichlorobenzene | ND (0.17) | ND (0.17) | ND (0.17) | ND (0.17) | ND (0.17) | NVG | | | |
| o-Dichlorobenzene | ND (0.18) | ND (0.18) | ND (0.18) | ND (0.18) | ND (0.18) | NVG | | | |
| p-Dichlorobenzene | ND (0.11) | ND (0.11) | ND (0.11) | ND (0.11) | ND (0.11) | NVG | | | |
| trans-1,3-Dichloropropene | ND (0.091) | ND (0.091) | ND (0.091) | ND (0.091) | ND (0.091) | NVG | | | |
| Ethanol | 1080 E | 34.3 | 12 | 97.2 | 7.3 | NVG | | | |
| Ethylbenzene | 2 | 0.65 J | 0.69 J | 6.5 | ND (0.21) | NVG | | | |
| Ethyl Acetate | 3 | 3.5 | ND (0.23) | ND (0.23) | 1.1 | NVG | | | |
| 4-Ethyltoluene | 1.4 | ND (0.11) | 0.88 J | 90.5 | ND (0.11) | NVG | | | |
| Freon 113 | ND (0.21) | ND (0.21) | ND (0.21) | ND (0.21) | ND (0.21) | NVG | | | |
| Freon 114 | ND (0.17) | ND (0.17) | ND (0.17) | ND (0.17) | ND (0.17) | NVG | | | |
| Heptane | 24 | 3.9 | 18 | 5.3 | 0.7 J | NVG | | | |
| Hexachlorobutadiene | ND (0.35) | ND (0.35) | ND (0.35) | ND (0.35) | ND (0.35) | NVG | | | |
| Hexane | 2.4 | 2.2 | 7.4 | 30 | 1.3 | NVG | | | |
| 2-Hexanone | ND (0.18) | ND (0.18) | ND (0.18) | ND (0.18) | ND (0.18) | NVG | | | |
| Isopropyl Alcohol Methylene chloride | 16 2 | 3.7 1 | 8.6 5.2 | 167 8.3 | 0.71 0.83 | NVG NVG | | | |
| Methyl ethyl ketone | 2 | 2.3 | 2.1 | 6.8 | 1.4 | NVG | | | |
| Methyl Isobutyl Ketone | ND (0.11) | 2.5 0.66 J | ND (0.11) | ND (0.11) | ND (0.11) | NVG | | | |
| Methyl Tert Butyl Ether | ND (0.094) | ND (0.094) | ND (0.094) | ND (0.094) | ND (0.094) | NVG | | | |
| Methylmethacrylate | ND (0.12) | ND (0.12) | ND (0.12) | ND (0.12) | ND (0.12) | NVG | | | |
| Propylene | ND (0.14) | 1.9 | ND (0.14) | ND (0.14) | ND (0.14) | NVG | | | |
| Styrene | 11 | 8.1 | ND (0.11) | 0.55 J | ND (0.11) | NVG | | | |
| 1,1,1-Trichloroethane ² | ND (0.17) | ND (0.17) | ND (0.17) | 8.2 | ND (0.17) | 100 | | | |
| 1,1,2,2-Tetrachloroethane | ND (0.21) | ND (0.21) | ND (0.21) | ND (0.21) | ND (0.21) | NVG | | | |
| 1,1,2-Trichloroethane | ND (0.20) | ND (0.20) | ND (0.20) | ND (0.20) | ND (0.20) | NVG | | | |
| 1,2,4-Trichlorobenzene | ND (0.33) | ND (0.33) | ND (0.33) | ND (0.33) | ND (0.33) | NVG | | | |
| 1,2,4-Trimethylbenzene | 4.8 | 1.3 | 2.4 | 331 | 0.59 J | NVG | | | |
| 1,3,5-Trimethylbenzene | 1.4 | ND (0.15) | 0.69 J | 76.7 | ND (0.15) | NVG | | | |
| 2,2,4-Trimethylpentane | 1.7 | 0.98 | 0.65 J | 2.8 | 0.7 J | NVG | | | |
| Tertiary Butyl Alcohol | 0.61 | 2 | ND (0.15) | 0.7 | ND (0.15) | NVG | | | |
| Tetrachloroethene ² | 0.55 | 0.26 J | ND (0.16) | 1.4 | ND (0.16) | 100 NVC | | | |
| Tetrahydrofuran | 27 | ND (0.13) | ND (0.13) | 2.9 | ND (0.13) | NVG | | | |
| Toluene Trichloroethene ¹ | 11 ND (0.13) | 9 ND (0.13) | 35 ND (0.13) | 7.9 ND (0.13) | 2.3 ND (0.13) | NVG 5.0 | | | |
| Trichlorofluoromethane | ND (0.13) 1.3 | ND (0.13) 1.3 | ND (0.13) 1.3 | ND (0.13) 1.5 | ND (0.13) 1.2 | 5.0 NVG | | | |
| Vinyl chloride ¹ | 1.3 ND (0.082) | ND (0.082) | ND (0.082) | ND (0.082) | ND (0.082) | 5.0 | | | |
| Vinyl Acetate | ND (0.19) | ND (0.19) | ND (0.19) | ND (0.19) | ND (0.082) ND (0.19) | NVG | | | |
| m,p-Xylene | 6.9 | 2.1 | 2.5 | 31 | 0.83 J | NVG | | | |
| o-Xylene | 2.9 | 0.91 | 0.78 J | 19 | ND (0.11) | NVG | | | |
| Xylenes (total) | 10 | 3 | 3.3 | 49.5 | 0.83 J | NVG | | | |

Abbreviation:

ND = The compound was analyzed for, but not detected.

Q = Qualifier
 J = The compound was detected below reliable detection limits. The value given is an estimate.
 NVG = No Value Given by NYSDOH

E = Indicates value exceeds calibration range

Notes:

- Matrix 1 compound. According to NYSDOH, concentrations for indoor air above 5.0 µg/m³ require mitigation.

- Matrix 2 compound. According to NYSDOH, concentrations for indoor air above 100 µg/m³ require mitigation

| | TABLE 8 Summary of VOCs in Indoor & Outdoor Air | | | | | | | | | |
|---|--|------------------------|------------------------|------------------------|------------------------|------------------------------|--|--|--|--|
| | Mako Building 2&3, Enter Lane Islandia, New York December 22, 2015 | | | | | | | | | |
| Sample ID: Sample Date: | IA-48 12/22/2015 | IA-50 12/22/2015 | IA-52 12/22/2015 | IA-54 12/22/2015 | IA-AA 12/22/2015 | *NYSDOH Mitigation Levels | | | | |
| Volatile Organic Compounds Units | <u>µg/m³</u> Q | <u>µg/m³</u> Q | <u>µg/m³</u> Q | <u>µg/m³</u> Q | <u>µg/m³</u> Q | μg/m³ | | | | |
| Acetone | 34.2 | 123 | 70.6 | 463 | 4.8 | NVG | | | | |
| 1,3-Butadiene | ND (0.44) | ND (0.44) | ND (0.44) | ND (0.44) | ND (0.44) | NVG | | | | |
| Benzene Bromodichloromethane | 1.9 ND (1.3) | 6.4 ND (1.3) | 0.67 ND (1.3) | 0.67 ND (1.3) | 0.48 J ND (1.3) | NVG NVG | | | | |
| Bromoform | ND (1.3) ND (2.1) | ND (1.3) ND (2.1) | ND (1.3) ND (2.1) | ND (1.3) ND (2.1) | ND (1.3) ND (2.1) | NVG | | | | |
| Bromomethane | ND (0.78) | ND (0.78) | ND (0.78) | ND (0.78) | ND (0.78) | NVG | | | | |
| Bromoethene | ND (0.87) | ND (0.87) | ND (0.87) | ND (0.87) | ND (0.87) | NVG | | | | |
| Benzyl Chloride | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | NVG | | | | |
| Carbon disulfide | ND (0.62) | ND (0.62) | ND (0.62) | 1 | ND (0.62) | NVG | | | | |
| Chlorobenzene | ND (0.92) | ND (0.92) | ND (0.92) | ND (0.92) | ND (0.92) | NVG | | | | |
| Chloroethane | ND (0.53) | ND (0.53) | ND (0.53) | ND (0.53) | ND (0.53) | NVG | | | | |
| Chloroform | ND (0.98) | 0.54 J | ND (0.98) | 0.54 J | ND (0.98) | NVG | | | | |
| Chloromethane | ND (0.41) | ND (0.41) | 0.72 | 0.72 | 0.68 | NVG | | | | |
| 3-Chloropropene 2-Chlorotoluene | ND (0.63) ND (1.0) | ND (0.63) ND (1.0) | ND (0.63) ND (1.0) | ND (0.63) ND (1.0) | ND (0.63) ND (1.0) | NVG NVG | | | | |
| Carbon tetrachloride ¹ | ND (1.0) ND (1.3) | ND (1.0) ND (1.3) | ND (1.0) ND (1.3) | ND (1.0) ND (1.3) | ND (1.3) | 5.0 | | | | |
| Cyclohexane | 1 | 3.2 | 1.2 | 1.1 | ND (0.69) | NVG | | | | |
| 1,1-Dichloroethane | ND (0.81) | ND (0.81) | ND (0.81) | ND (0.81) | ND (0.81) | NVG | | | | |
| 1,1-Dichloroethene ² | ND (0.79) | ND (0.79) | ND (0.79) | ND (0.79) | ND (0.79) | 100 | | | | |
| 1,2-Dibromoethane | ND (1.5) | ND (1.5) | ND (1.5) | ND (1.5) | ND (1.5) | NVG | | | | |
| 1,2-Dichloroethane | ND (0.81) | ND (0.81) | ND (0.81) | ND (0.81) | ND (0.81) | NVG | | | | |
| 1,2-Dichloropropane | ND (0.92) | ND (0.92) | ND (0.92) | ND (0.92) | ND (0.92) | NVG | | | | |
| 1,4-Dioxane | ND (0.72) | ND (0.72) | ND (0.72) | ND (0.72) | ND (0.72) | NVG | | | | |
| Dichlorodifluoromethane | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | NVG | | | | |
| Dibromochloromethane | ND (1.7) | ND (1.7) | ND (1.7) | ND (1.7) | ND (1.7) | NVG | | | | |
| trans-1,2-Dichloroethylene cis-1,2-Dichloroethene ² | 8.7 ND (0.79) | 0.95 ND (0.79) | ND (0.79) ND (0.79) | ND (0.79) ND (0.79) | ND (0.79) ND (0.79) | NVG 100 | | | | |
| cis-1,3-Dichloropropene | ND (0.91) | ND (0.91) | ND (0.91) | ND (0.91) | ND (0.91) | NVG | | | | |
| m-Dichlorobenzene | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) | NVG | | | | |
| o-Dichlorobenzene | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) | NVG | | | | |
| p-Dichlorobenzene | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) | NVG | | | | |
| trans-1,3-Dichloropropene | ND (0.91) | ND (0.91) | ND (0.91) | ND (0.91) | ND (0.91) | NVG | | | | |
| Ethanol | 482 E | 48.4 | 45.8 | 166 | 4.3 | NVG | | | | |
| Ethylbenzene | 1.5 | 5.6 | 1.4 | 7.4 | 0.24 J | NVG | | | | |
| Ethyl Acetate | 7.6 | 4 | 27 | 4 | 9.7 | NVG | | | | |
| 4-Ethyltoluene | 0.64 J | 2 | 0.93 J | 51.1 | ND (0.98) | NVG | | | | |
| Freon 113 Freon 114 | ND (1.5) ND (1.4) | ND (1.5) ND (1.4) | ND (1.5) ND (1.4) | ND (1.5) ND (1.4) | ND (1.5) ND (1.4) | NVG NVG | | | | |
| Heptane | 4.5 | 16 | 3.9 | 2.5 | ND (0.82) | NVG | | | | |
| Hexachlorobutadiene | ND (2.1) | ND (2.1) | ND (2.1) | ND (2.1) | ND (2.1) | NVG | | | | |
| Hexane | 8.1 | 2.9 | 2.1 | 14 | 0.74 | NVG | | | | |
| 2-Hexanone | ND (0.82) | ND (0.82) | ND (0.82) | ND (0.82) | ND (0.82) | NVG | | | | |
| Isopropyl Alcohol | 23 | 8.6 | 43.3 | 126 | 14 | NVG | | | | |
| Methylene chloride | 7.6 | 2.7 | 2.2 | 9.7 | 0.73 | NVG | | | | |
| Methyl ethyl ketone | 23 | 90.8 | 5.6 | 6.5 | 4.7 | NVG | | | | |
| Methyl Isobutyl Ketone Methyl Tert Butyl Ether | ND (0.82) | ND (0.82) | ND (0.82) | ND (0.82) | ND (0.82) | NVG NVG | | | | |
| Methylmethacrylate | ND (0.72) ND (0.82) | ND (0.72) ND (0.82) | ND (0.72) ND (0.82) | ND (0.72) ND (0.82) | ND (0.72) ND (0.82) | NVG | | | | |
| Propylene | ND (0.86) | ND (0.82) ND (0.86) | ND (0.82) ND (0.86) | ND (0.82) ND (0.86) | ND (0.82) | NVG | | | | |
| Styrene | 0.98 | 4.3 | ND (0.85) | ND (0.85) | ND (0.85) | NVG | | | | |
| 1,1,1-Trichloroethane ² | ND (1.1) | ND (1.1) | ND (1.1) | 1.7 | ND (1.1) | 100 | | | | |
| 1,1,2,2-Tetrachloroethane | ND (1.4) | ND (1.4) | ND (1.4) | ND (1.4) | ND (1.4) | NVG | | | | |
| 1,1,2-Trichloroethane | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) | NVG | | | | |
| 1,2,4-Trichlorobenzene | ND (1.5) | ND (1.5) | ND (1.5) | ND (1.5) | ND (1.5) | NVG | | | | |
| 1,2,4-Trimethylbenzene | 1.6 | 5.4 | 1.6 | 155 | ND (0.98) | NVG | | | | |
| 1,3,5-Trimethylbenzene 2,2,4-Trimethylpentane | 0.59 J | 1.7 | 0.74 J | 45 | ND (0.98) | NVG | | | | |
| 2,2,4-1 rimethylpentane Tertiary Butyl Alcohol | 1.1 1.9 | 2 ND (0.61) | ND (0.93) ND (0.61) | 1.3 ND (0.61) | ND (0.93) ND (0.61) | NVG NVG | | | | |
| Tetrachloroethene ² | 0.28 | 0.51 | 0.46 | 2.7 | 0.57 | 100 | | | | |
| Tetrahydrofuran | 0.65 | ND (0.59) | 1.4 | 11 | ND (0.59) | NVG | | | | |
| Toluene | 17 | 79.1 | 9.8 | 6.8 | 2.3 | NVG | | | | |
| Trichloroethene ¹ | ND (0.21) | ND (0.21) | ND (0.21) | ND (0.21) | ND (0.21) | 5.0 | | | | |
| Trichlorofluoromethane | 1.1 | 1.2 | 0.9 J | 1.2 | 0.84 J | NVG | | | | |
| Vinyl chloride1 | ND (0.51) | ND (0.51) | ND (0.51) | ND (0.51) | ND (0.51) | 5.0 | | | | |
| Vinyl Acetate | ND (0.70) | ND (0.70) | ND (0.70) | ND (0.70) | ND (0.70) | NVG | | | | |
| m,p-Xylene | 5.6 | 22 | 3.8 | 34 | 0.87 | NVG | | | | |
| o-Xylene Xylenes (total) | 2 7.4 | 7.8 30 | 0.91 | 14 48.2 | 0.27 J | NVG NVG | | | | |
| Xylenes (total) | 7.4 | 30 | 4.8 | 40.Z | 1.2 | INVG | | | | |

Abbreviation:

ND = The compound was analyzed for, but not detected.

Q = Qualifier
 J = The compound was detected below reliable detection limits. The value given is an estimate.
 NVG = No Value Given by NYSDOH

E = Indicates value exceeds calibration range

Notes:

- Matrix 1 compound. According to NYSDOH, concentrations for indoor air above 5.0 µg/m³ require mitigation.

- Matrix 2 compound. According to NYSDOH, concentrations for indoor air above 100 µg/m³ require mitigation

TABLE 9 Summary of VOCs in Indoor & Outdoor Air

Mako Properties LLC - Building 2&3 48-54 Enter Lane, Islandia, New York June 29, 2016

| Sample II Sample Dat | | | | | IA-52 6/29/2016 | | IA-54 6/29/2016 | | IA-AA 6/29/2016 | | *NYSDOH Mitigation Levels |
|---|------------------------|---|-------------------------|---|----------------------|---|-------------------------|---|-------------------------|---|------------------------------|
| Volatile Organic Compounds Uni | te ua/m³ | ð | ua/m³ | ð | ug/m ³ | Q | ug/m ³ | Q | ug/m ³ | Ø | ug/m ³ |
| Acetone | ts <u>µg/m³</u> 577 | Q | <u>μg/m³</u> 1190 | Q | <u>µg/m³</u> 58.7 | Q | <u>µg/m³</u> 371 | ų | <u>µg/m³</u> 23 | Q | <u>ug/m³</u> NVG |
| 1,3-Butadiene | ND (0.062) | | ND (0.062) | | ND (0.062) | | ND (0.062) | | ND (0.062) | | NVG |
| Benzene | 5.1 | | 32 | | 0.38 | J | 0.51 | J | 0.48 | J | NVG |
| Bromodichloromethane | ND (0.26) | | ND (0.26) | | ND (0.26) | J | ND (0.26) | J | ND (0.26) | 3 | NVG |
| Bromoform | ND (0.17) | | ND (0.17) | | ND (0.17) | | ND (0.17) | | ND (0.17) | | NVG |
| Bromomethane | ND (0.070) | | ND (0.070) | | ND (0.070) | | ND (0.070) | | ND (0.070) | | NVG |
| Bromoethene | ND (0.079) | | ND (0.079) | | ND (0.079) | | ND (0.079) | | ND (0.079) | | NVG |
| Benzyl Chloride | ND (0.14) | | ND (0.073) | | ND (0.079) | | ND (0.14) | | ND (0.14) | | NVG |
| Carbon disulfide | ND (0.097) | | 0.34 | J | 0.34 | J | 0.34 | J | ND (0.097) | | NVG |
| Chlorobenzene | ND (0.26) | | ND (0.26) | J | ND (0.26) | J | | J | | | NVG |
| Chloroethane | ND (0.26) | | ND (0.26) ND (0.095) | | ND (0.26) | | ND (0.26) ND (0.095) | | ND (0.26) ND (0.095) | | NVG |
| Chloroform | ND (0.083) | | ND (0.083) | | ND (0.083) | | ND (0.083) | | ND (0.083) | | NVG |
| Chloromethane | 1.4 | | 1.9 | | 1.8 | | 1.5 | | 1.3 | | NVG |
| | | | | | | | | | | | |
| 3-Chloropropene | ND (0.085) | | ND (0.085) | | ND (0.085) | | ND (0.085) | | ND (0.085) | | NVG |
| 2-Chlorotoluene | ND (0.088) | | ND (0.088) | | ND (0.088) | | ND (0.088) | | ND (0.088) | | NVG |
| Carbon tetrachloride ¹ | 0.75 | J | ND (0.20) | | 0.6 | J | ND (0.20) | | ND (0.20) | | 5.0 |
| Cyclohexane | 2.3 | | 10 | | 1.4 | | 1 | | ND (0.055) | | NVG |
| 1,1-Dichloroethane | ND (0.061) | | ND (0.061) | | ND (0.061) | | ND (0.061) | | ND (0.061) | | NVG |
| 1,1-Dichloroethene ² | ND (0.083) | | ND (0.083) | | ND (0.083) | | ND (0.083) | | ND (0.083) | | 100 |
| 1,2-Dibromoethane | ND (0.32) | | ND (0.32) | | ND (0.32) | | ND (0.32) | | ND (0.32) | | NVG |
| 1,2-Dichloroethane | ND (0.073) | | ND (0.073) | | ND (0.073) | | ND (0.073) | | ND (0.073) | | NVG |
| 1,2-Dichloropropane | ND (0.10) | | ND (0.10) | | ND (0.10) | | ND (0.10) | | ND (0.10) | | NVG |
| 1,4-Dioxane | ND (0.16) | | ND (0.16) | | 0.65 | J | ND (0.16) | | ND (0.16) | | NVG |
| Dichlorodifluoromethane | 2.4 | | 2.6 | | 2.8 | | 2.6 | | 2.4 | | NVG |
| Dibromochloromethane | ND (0.45) | | ND (0.45) | | ND (0.45) | | ND (0.45) | | ND (0.45) | | NVG |
| trans-1,2-Dichloroethylene | 5.9 | | 0.4 | J | ND (0.11) | | ND (0.11) | | ND (0.11) | | NVG |
| cis-1,2-Dichloroethene ² | ND (0.083) | | ND (0.083) | | ND (0.083) | | ND (0.083) | | ND (0.083) | | 100 |
| cis-1,3-Dichloropropene | ND (0.068) | | ND (0.068) | | ND (0.068) | | ND (0.068) | | ND (0.068) | | NVG |
| m-Dichlorobenzene | ND (0.12) | | ND (0.12) | | ND (0.12) | | ND (0.12) | | ND (0.12) | | NVG |
| o-Dichlorobenzene | ND (0.096) | | ND (0.096) | | ND (0.096) | | ND (0.096) | | ND (0.096) | | NVG |
| p-Dichlorobenzene | ND (0.16) | | ND (0.16) | | ND (0.16) | | ND (0.16) | | ND (0.16) | | NVG |
| trans-1,3-Dichloropropene | ND (0.082) | | ND (0.082) | | ND (0.082) | | ND (0.082) | | ND (0.082) | | NVG |
| Ethanol | 637 | | 151 | | 61 | | 38.6 | | 11 | | NVG |
| Ethylbenzene | 13 | | 11 | | 1.9 | | 4.8 | | ND (0.18) | | NVG |
| Ethyl Acetate | 43.6 | | 12 | | 9.7 | | ND (0.27) | | 0.79 | | NVG |
| 4-Ethyltoluene | 1.7 | | ND (0.084) | | 3.4 | | 28 | | ND (0.084) | | NVG |
| Freon 113 | ND (0.16) | | 0.74 | J | ND (0.16) | | ND (0.16) | | ND (0.16) | | NVG |
| Freon 114 | ND (0.22) | | ND (0.22) | | ND (0.22) | | ND (0.22) | | ND (0.22) | | NVG |
| Heptane | 13 | | 27 | | 2.3 | | 2.3 | | 0.57 | J | NVG |
| Hexachlorobutadiene | ND (0.21) | | ND (0.21) | | ND (0.21) | | ND (0.21) | | ND (0.21) | | NVG |
| Hexane | 6.3 | | 19 | | 6.3 | | 264 | | 0.49 | J | NVG |
| 2-Hexanone | 0.61 | J | ND (0.18) | | 0.86 | | 0.45 | J | ND (0.18) | | NVG |
| Isopropyl Alcohol | 119 | | 31 | | 56.8 | | 164 | | 8.4 | | NVG |
| Methylene chloride | 31 | | 358 | | 1.5 | | 2.6 | | 0.83 | | NVG |
| Methyl ethyl ketone | 22 | | 60.5 | | 5.6 | | 10 | | 5 | | NVG |
| Methyl Isobutyl Ketone | 1.7 | | 4.1 | | 0.74 | J | 0.61 | J | ND (0.23) | | NVG |
| Methyl Tert Butyl Ether | ND (0.072) | | ND (0.072) | | ND (0.072) | | ND (0.072) | | ND (0.072) | | NVG |
| Methylmethacrylate | 1.2 | | ND (0.16) | | ND (0.16) | | ND (0.16) | | ND (0.16) | | NVG |
| Propylene | ND (0.055) | | ND (0.055) | | ND (0.055) | | ND (0.055) | | 0.77 | J | NVG |
| Styrene | 4 | | ND (0.064) | | 0.94 | | 1.6 | | ND (0.064) | - | NVG |
| 1,1,1-Trichloroethane ² | ND (0.13) | | ND (0.13) | | ND (0.13) | | 0.82 | J | ND (0.13) | | 100 |
| 1.1.2.2-Tetrachloroethane | ND (0.11) | | ND (0.11) | | ND (0.11) | | ND (0.11) | - | ND (0.11) | | NVG |
| 1,1,2-Trichloroethane | ND (0.21) | | ND (0.21) | | ND (0.21) | | ND (0.21) | | ND (0.21) | | NVG |
| 1,2,4-Trichlorobenzene | ND (0.42) | | ND (0.42) | | ND (0.42) | | ND (0.42) | | ND (0.42) | | NVG |
| 1,2,4-Trimethylbenzene | 4.7 | | ND (0.074) | | 10 | | 81.1 | | ND (0.42) | | NVG |
| 1,3,5-Trimethylbenzene | 1.5 | | ND (0.074) | | 3.2 | | 26 | | ND (0.22) | | NVG |
| 2,2,4-Trimethylpentane | 7.9 | | 33 | | 0.61 | J | 1.7 | | 0.51 | J | NVG |
| Tertiary Butyl Alcohol | 6.4 | | 21 | | 0.97 | 3 | 0.7 | | ND (0.16) | 5 | NVG |
| Tetrachloroethene ² | 0.27 | | 1.6 | | 0.97 | | 0.64 | | ND (0.16) ND (0.16) | | 100 |
| Tetrahydrofuran | 17 | | 1.0 | | 0.53 | J | 1.4 | | 0.44 | J | NVG |
| Toluene | 30 | | 82.9 | | 4.1 | J | 4.1 | | 1.1 | J | NVG |
| Trichloroethene ¹ | | | 82.9 ND (0.10) | | 4.1 ND (0.10) | | 4.1 0.21 | J | ND (0.10) | | 5.0 |
| | ND (0.10) | | | | | | 0.21 | J | ND (0.10) 1.3 | | |
| Trichlorofluoromethane Vinyl chloride1 | 1.3 | | 1.5 | | 1.6 | | | | | | NVG |
| | ND (0.054) | | ND (0.054) | | ND (0.054) | | ND (0.054) | | ND (0.054) | | 5.0 |
| Vinyl Acetate | ND (0.19) | | ND (0.19) | | ND (0.19) | | ND (0.19) | | ND (0.19) | | NVG |
| m,p-Xylene | 49.1 | | 20 | | 6.5 | | 18 | | 0.61 | J | NVG |
| o-Xylene | 16 | | 4.8 | | 2 | | 6.9 | | ND (0.22) | | NVG |
| Xylenes (total) | 65.2 | | 25 | | 8.3 | | 25 | | 0.61 | J | NVG |

Abbreviation:

ND = The compound was analyzed for, but not detected.

Q = Qualifier
 J = The compound was detected below reliable detection limits. The value given is an estimate.

NVG = No Value Given by NYSDOH

Notes:

Matrix 1 compound. According to NYSDOH, concentrations for indoor air above 5.0 µg/m³ require mitigation.
 Matrix 2 compound. According to NYSDOH, concentrations for indoor air above 100 µg/m³ require mitigation

APPENDICES

APPENDIX A Metes & Bounds

| • | 10762 M245 |
|--|--|
| | 18496 THIS INDENTURE, made the 26th day of September, nineteen hundred and eighty-eight BETWEEN BRENT ASSOCIATES, INC. a New York Corporation with offices at 931 B Conklin Street, Farmingdale, New York 11735 and MASCIOLI INVESTMENT COMPANY, a New York Partnership with offices at 30. Jericho Executive, Plaza, Suite East 500, Jericho, New York 11753, |
| NO | party of the first part, and MAKO PROPERTIES LIMITED PARTNERSHIP, a New York Limited |
| ONSIDERATIO | |
| | |
| | party of the second part, WITNESSETH, that the party of the first part, in consideration of Ten Dollars and other valuable consideration paid by the party of the second part, does hereby grant and release unto the party of the second part, the heirs or successors and assigns of the party of the second part forever, |
| Dist. 0504 | ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Islip, County of Suffolk and State of New York, being bounded and described as follows: |
| Sect. 006.00 Elk. 01.00 Lot 018.000 | BEGINNING at a point lying in the westerly side of Center Lane, distant 288.00 feet southerly from the southerly end of a curve having a radius of 20.00 feet joining the westerly side of Center Lane with the southerly side of the Long IELand Expressway Service Road, as said distance is measured along the westerly side of Center Lane; running thence from this point of beginning, south 10 degrees 15 minutes 14 seconds west along the westerly side of Center Lane, 315.00 feet; thence north 79 degrees 44 minutes 46 seconds west 379.92 feet; thence, north 10 degrees 30 minutes 10 seconds east, 96.97 feet; thence, south 79 degrees 28 minutes 10 seconds east, 120.65 feet; thence, north 10 degrees 53 minutes 46 seconds east, 218.63 feet; thence, south 79 degrees 44 minutes 46 seconds east, 218.63 feet; thence south 79 degrees 44 minutes 46 seconds east, 218.63 feet; thence, south 79 degrees 44 |
| Buunity 5 | (Center Lane is also known as Enter Lane) 18496 |
| 3- | SAID premises being and intended to be the same premises being conveyed to Mascioli Investmant Company by Deed dated Schmary 13, 1980 and recorded in the Suffolk County Clerk's Office in Liber 8797 of Conveyances at Page 315. |
| | RECEIVED SEEL ESTETE VO DEC 22 1989 TRANSFER TAX SUFFOLK COLINIY |
| φ | TOGETHER with all right, title and interest, if any, of the party of the first part in and to any streets and roads abutting the above described premises to the center lines thereof; TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises; TO HAVE AND TO HOLD the premises herein granted into the party of the second part, the heirs or successors and assigns of the party of the second part forever. |
| 17 | AND the party of the first part covenants that the party of the first part has not done or suffered anything whereby the said premises have been encumbered in any way whatever, except as aforesaid. AND the party of the first part, in compliance with Section 13 of the Lien Lien Lien covenants that the party of the first part will receive the consideration for this conveyance and will hold the right to receive such consideration as a trust fund to be applied first for the purpose of paying the cost of the improvement and will apply the same first to the payment of the cost of the improvement before using any part of the total of the same for any other purpose. |
| | The word "party" shall be construed as if it read "parties" whenever the sense of this indenture so requires. IN WITNESS WHEREOF, the party of the first part has duly executed this deed the day and year first above written. IN PRESENCE OF: |
| | Juild dryff aught, Secret Jewild dryff Jacob James Kogel, President Mascioli Investment COMPANY |
| ¢ | Lundsay M. Orma By Jore Managing Partner |

APPENDIX B Electronic Copy of CCR (rear pocket)

APPENDIX C NYSDEC Approvals

New York State Department of Environmental Conservation Division of Environmental Remediation, Region One Stony Brook University

50 Circle Road, Stony Brook, New York 11790-3409 **Phone:** (631) 444-0240 • **Fax:** (631) 444-0248 **Website:** <u>www.dec.ny.gov</u>



August 25, 2014

Mr. Steve Sobstyl CA Rich Consultants, Inc. 17 Dupont Street Plainview, NY 11803-1614

Re: 48-50 Enter Lane Site #1-52-230 Order on Consent Index #A1-0649-08-10 Interim Remedial Measures (IRM) Design Document: July 2014

Dear Mr. Sobstyl,

The New York State Department of Environmental Conservation (DEC) and the New York State Department of Health (DOH) have reviewed the referenced IRM design document and the pilot test results for the referenced site and hereby approve the report. Please contact DEC five days prior to the start of construction activities. If you should have any questions, feel free to contact me at (631) 444-0246.

Sincerely,

Jarkie Ascher Engineering Geologist 2

ec: J. Harrington, DECW. Parish, DECA. Perretta, DOHE. Weinstock, CA Rich

APPENDIX D Progress Reports



May 8, 2014

New York STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Region I SUNY at Stony Brook 50 Circle Road Stony Brook, NY 11790 Attention: Jamie Ascher

> Re: Progress Report: March-April 2014 Mako Properties Building #3 48-50 Enter Lane – NYSDEC Site #152230 Islandia, New York Agreement Index # A1-0649-08-10

Dear Mr. Ascher:

In accordance with the above referenced Agreement, CA RICH is pleased to provide you with the following Progress Report. This Report includes selected work items outlined in Section III Progress Reports pursuant to the Agreement.

During the months of March and April, the following activities were performed:

- We have installed and developed the off-site monitoring wells.
- We have performed the pilot test for the SVE system design for the interior of Mako Building #3 and the pilot test for the AS/SVE for groundwater remediation system.

The following work is planned for the month May-June:

- We will submit the pilot test data along with the designs for both the SVE system inside Mako Building #3 and the AS/SVE for groundwater treatment system.
- We will prepare a Work Plan for the collection of groundwater samples from the preexisting monitoring well network that will include the newly installed monitoring wells installed off-site.

We trust that the level of detail provided herein is sufficient at this time. If there is a need for further detail, please contact us.

Yours sincerely,

CA RICH CONSULTANTS, INC.

Steve Sobstyl Project Manager

cc: see attached distribution

Distribution List

48-50 Enter Lane, Islandia, NY - NYSDEC Site #152230

Jamie Ascher (1 hard copy unbound & 1 electronic copy) **NYSDEC Region I Division of Environmental Remediation** SUNY at Stony Brook 50 Circle Road Stony Brook, NY 11790 jxascher@gw.dec.state.ny.us

Anthony Perretta (electronic copy) Bureau of Environmental Exposure Investigation New York State Department of Health Flanigan Square 547 River Street Troy, New York 12180-2216 acp06@health.state.ny.us

Jacqueline Nealon (electronic copy) Bureau of Environmental Exposure Investigation New York State Department of Health Flanigan Square 547 River Street Troy, New York 12180-2216 Jen02@health.state.ny.us

Dena Putnick, Esq. (electronic copy) **NYSDEC** 625 Broadway/11th Floor Albany, New York 12233-7015 <u>dnputnic@gw.dec.state.ny.us</u>

Mako Properties Limited Partnership (1 hard copy unbound & 1 electronic copy) Att. Jim Kogel 931B Conklin Street Farmingdale, NY 11735 jimkog@optonline.net

Charlotte A. Biblow, Esq. (electronic copy) **Farrell Fritz, P.C.** 1320 Reckson Plaza Uniondale, NY 11556-0111 cbiblow@farrellfritz.com



April 6, 2015

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Region I SUNY at Stony Brook 50 Circle Road Stony Brook, NY 11790 Attention: Jamie Ascher

> Re: Progress Report: June 2014 - March 2015 Mako Properties Building #3 48-50 Enter Lane – NYSDEC Site #152230 Islandia, New York Agreement Index # A1-0649-08-10

Dear Mr. Ascher:

In accordance with the above referenced Agreement, CA RICH is pleased to provide you with the following Progress Report. This Report includes selected work items outlined in Section III Progress Reports pursuant to the Agreement.

As we discussed recently, during the months of April through March 2015, the following activities were performed:

- We submitted the pilot test data along with the designs for both the SVE system inside Mako Building #3 and the exterior AS/SVE for groundwater treatment system. We have installed the remaining exterior AS/SVE and the remaining interior SVE wells;
- We have constructed the remediation system equipment shed and have installed the remediation system equipment;
- We have retained an electrical contractor and met on-site with PSE&G to discuss the process for connecting the electric service line directly to a nearby transformer; and
- We completed and submitted a PSEG application for a new service line.

The following work is planned for the month April:

- We will connect the necessary electric supply to operate and power the remediation equipment in preparation of system start-up. Our schedule for April is to connect the remediation equipment to the electric power supply on April 12th.
- Prior to starting up the remediation system, we will collect a "baseline" of groundwater samples from the existing monitoring wells (14 wells) that will include the on-site and offsite monitoring well network. The groundwater samples will be collected using the "lowflow" sampling methodology and analyzed for Volatile Organic Compounds (VOCs-Method 8260) with NYSDEC-ASP Category B Deliverables. We plan on collecting the "baseline" groundwater samples form the monitoring well network the week of April 20th.

Ca RICH Environmental Specialists

 At the time that the remediation system is first started, we will collect SUMMA® canister air samples (USEPA Method T0-15) from the installed sampling ports associated with the treatment system carbon assembly. Once the remediation system is fully operational, we will collect vacuum measurements from the sub-slab of the building to confirm that the design goals have been achieved. We will collect one SUMMA® canister air sample (USEPA Method T0-15) from the interior air of each tenant unit space (one sample per each unit space) approximately one month after the startup of the system.

We trust that the level of detail provided herein is sufficient at this time. If there is a need for further detail, please contact us.

Yours sincerely,

CA RICH CONSULTANTS, INC.

228AUSS

Steve Sobstyl Sr. Project Manager

cc: see attached distribution

Distribution List

48-50 Enter Lane, Islandia, NY - NYSDEC Site #152230

Jamie Ascher (1 hard copy unbound & 1 electronic copy) **NYSDEC Region I Division of Environmental Remediation** SUNY at Stony Brook 50 Circle Road Stony Brook, NY 11790 jxascher@gw.dec.state.ny.us

Anthony Perretta (electronic copy) Bureau of Environmental Exposure Investigation New York State Department of Health Flanigan Square 547 River Street Troy, New York 12180-2216 acp06@health.state.ny.us

Jacqueline Nealon (electronic copy) Bureau of Environmental Exposure Investigation New York State Department of Health Flanigan Square 547 River Street Troy, New York 12180-2216 Jen02@health.state.ny.us

Dena Putnick, Esq. (electronic copy) **NYSDEC** 625 Broadway/11th Floor Albany, New York 12233-7015 <u>dnputnic@gw.dec.state.ny.us</u>

Jim Kogel (1 hard copy unbound & 1 electronic copy) **Mako Properties Limited Partnership** 931B Conklin Street Farmingdale, NY 11735 jimkog@optonline.net

Charlotte A. Biblow, Esq. (electronic copy) **Farrell Fritz, P.C.** 1320 Reckson Plaza Uniondale, NY 11556-0111 cbiblow@farrellfritz.com

Tanya Crawford, Analyst (electronic copy) **Chartis – Pollution Insurance Products** 101 Hudson Street – 29th Floor Jersey City, NJ 07302 <u>tanya.crawford@chartisinsurance.com</u>

APPENDIX E Digital Photo Log



Mako Building #3 48-50 Enter Lane, Islandia, NY

<u>Digital Photo Log</u>

Drilling 2015











Mako Building #3 48-50 Enter Lane, Islandia, NY

<u>Digital Photo Log</u>

System Installation 2015





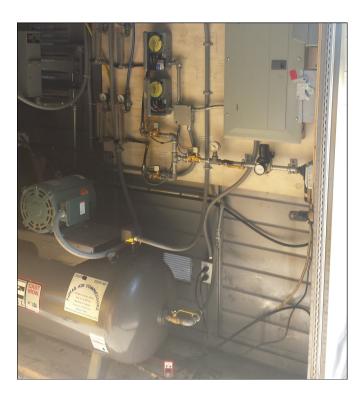






Mako Building #3 48-50 Enter Lane, Islandia, NY <u>Digital Photo Log</u>

Treatment Equipment









APPENDIX F Laboratory Reports & DUSRS (included in electronic copy of CCR)

APPENDIX G Equipment Manuals (Included in electronic copy of CCR)