



# **HEALTH AND SAFETY PLAN**

**NYSDEC  
OSER AVENUE OPERABLE UNIT 2  
HAUPPAUGE  
SUFFOLK COUNTY  
SITE NUMBER 152162**

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**APPENDICES**

Appendix A: Material Safety Data Sheets

Appendix B: LIPA ROW SPECIFIC HASP ADDENDUM

## 1.0 INTRODUCTION

Aztech Technologies, Inc. will provide their employees with a safe work environment in accordance with applicable OSHA safety regulations. The mechanism to provide this is a health and safety policy and is provided in the following sections.

The program outlined in this Plan represents the primary safety areas that currently impact the company. As operations change and develop additional programs will be developed and implemented. The Aztech Technologies, Inc. health and safety policy receives management review and outside consultant review at least annually and where applicable specific programs will be developed for individual jobs.

**Management responsibility** will be to make sure that all employees have access to this policy, review this policy, and subsequently provide employees with the resources to ensure their safety. Management will provide trained supervisory staff to evaluate jobs and to make sure employees receive proper instruction on safety and follow prescribed company policies. In the event there are no Aztech Technologies, Inc. employees involved in day to day construction activity, but Aztech Technologies, Inc. acts as a general contractor, the subcontractor will be required to provide appropriate training and documentation and adhere to safe work practices.

**Employee responsibility** will be to conduct their work in a safe manner as instructed through the company policy and their safety training. Employees will be responsible for following safety procedures and wearing and using safety equipment when provided. Employees will be responsible for attending all safety meetings, and for attending company sponsored and paid for safety training. Employees who violate safety policies and procedures will be warned and where appropriate disciplined.

**A Site Specific Project Contact List and Emergency Contact Information** will be provided to employees prior to mobilization to the site. The Contact list will be posted in all onsite office trailers, and will be updated as needed during the progression of the project. In addition to the Site Specific Contact List, the Emergency Services list and Directions to the Hospital will be posted in the office trailers.

## 2.0 HEALTH AND SAFETY ORGANIZATION

The following sections outline the health and safety organization for the project and includes the responsibilities of each member of the health and safety team. The health and safety team includes a Health and Safety Coordinator, Safety Officer (SO), Health and Safety Technician, and a Medical Consultant.

### **Michael Neeham - Health and Safety Coordinator**

The Health and Safety Coordinator (HSC) is an American Board of Industrial Hygiene (ABIH) Certified Industrial Hygienist (CIH). The HSC is familiar with air monitoring techniques and the development of health and safety programs for personnel working in potentially toxic atmospheres.

The responsibilities of the HSC include the following:

1. Responsibility for the overall development and implementation of the HASP.
2. Responsibility for the initial training of on-site workers with respect to the contents of the HASP.
3. Availability during normal business hours for consultation by the Safety Officer.
4. Availability to assist the Safety Officer in follow-up training and if changes onsite conditions occur.

### **Garth Barrett - Safety Officer**

The designated SO has 6+ years of experience in the remediation of hazardous waste sites or related field experience. The SO has had formal training in health and safety and is conversant with federal and state regulations governing occupational health and safety. The SO is certified in CPR and first aid and has experience and training in the implementation of personal protection and air monitoring programs.

The responsibilities of the SO include the following:

1. Responsibility for the implementation, enforcement, and monitoring of the health and safety plan.
2. Responsibility for the pre-construction indoctrination and periodic training of all on-site personnel with regard to this safety plan and other safety requirements to be observed during construction, including:
  - a. Potential hazards.
  - b. Personal hygiene principles.
  - c. PPE.
  - d. Respiratory protection equipment usage and fit testing.
  - e. Emergency procedures dealing with fire and medical situations.
  - f. Conduct daily update meetings in regard to health and safety.
3. Responsibility for alerting the Engineer's on-site representative prior to starting any particular hazardous work.

4. Responsibility for informing project personnel of the New York State Labor Law Section 876 (Right-to-Know Law).
5. Responsibility for the maintenance of separation of Exclusion Zone (Dirty) from the Support Zone (Clean) areas as described hereafter.

**James Morey - Health and Safety Technician (CHA)**

The Health and Safety Technician (HST) has 8 years of hazardous waste site or related experience and is knowledgeable of applicable occupational health and safety regulations. The HST is certified in CPR and first aid. The HST will be under direct supervision of the SO during on-site work. The HST is familiar with the operations, maintenance and calibration of monitoring equipment used in this remediation. An HST will be assigned to each work crew or task in potentially hazardous areas.

**Center for Occupational Health (Wilton, NY) – Medical Consultant**

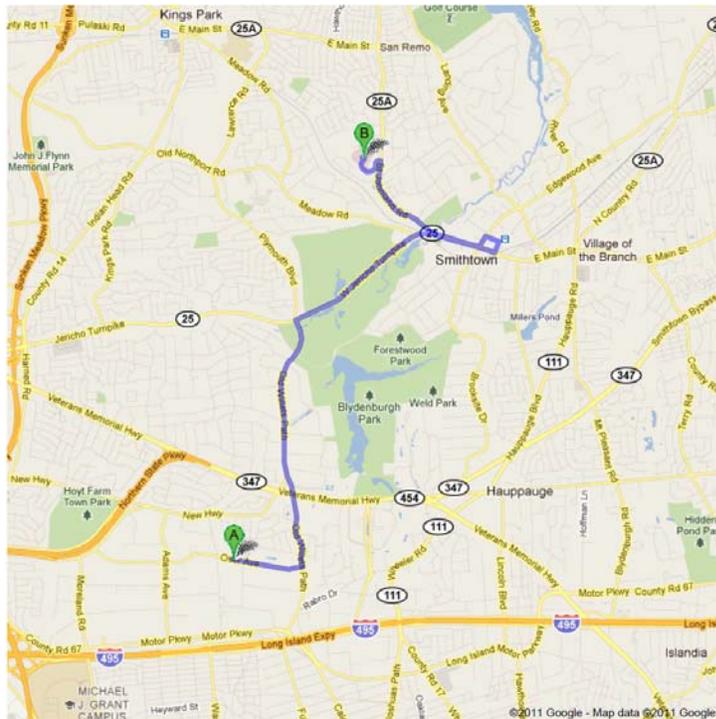
A Medical Consultant (MC), certified in occupational medicine, is available to provide annual physicals and to provide additional medical evaluations of personnel when necessary. Aztech regularly uses the Center for Occupational Health in Wilton, NY and their physicians are experienced in the occupational health area and is familiar with potential site hazards of remedial action projects.

### 3.0 EMERGENCY CONTACTS

|  |   |   |
|--|---|---|
| <b>Hospital</b>  | Saint Catherine of Siena Medical Center | 50 Route 25A<br>Smithtown, NY 11787<br>(631) 862 - 3000 |
| <b>Ambulance</b>   | National Emergency Services             | 911 / (631) 265 – 7450                                  |
| <b>Chemical Emergency Advice</b>                         | CHEMTREC                                | (800 424-9300   |
| <b>Poison Control Center</b>                             |   | (800) 336-6997  |
| <b>Fire Department</b>                                   | Hauppauge Fire Department               | 911 / (631) 979 – 2348                                  |
| <b>Police Department</b>                                 | Suffolk County Police Department        | 911 / (631) 854 – 8400                                  |
| <b>NYS Spill Hotline</b>                                 | NYSDEC                                  | 800-457-7362  |
| <b>National Response Center</b><br>(for all emergencies) | USCG                                    | 800-424-8802  |

|  |              |
|--|--------------|
| <b>Aztech Technologies, Inc.</b>                   |              |
| <b>In case of accident notify</b><br>Aztech Office | 518-885-5383 |

## Map and Directions to Hospital



**A** 100 Oser Ave, Hauppauge, NY 11788

- |    |  |                           |
|----|--|---------------------------|
| 1. | Head east on <b>Oser Ave</b> toward <b>Plant Ave</b><br>About 1 min        | go 0.6 mi<br>total 0.6 mi |
|    | 2. Turn left onto <b>County Route 108/Old Willets Path</b><br>About 6 mins | go 2.3 mi<br>total 2.9 mi |
|    | 3. Turn right onto <b>W Jericho Turnpike</b><br>About 3 mins               | go 1.4 mi<br>total 4.3 mi |
| 4. | Continue onto <b>W Main St</b><br>About 1 min                              | go 0.4 mi<br>total 4.7 mi |
|    | 5. Turn left onto <b>County Rd 87/Edgewood Ave</b><br>About 1 min          | go 0.1 mi<br>total 4.9 mi |
|    | 6. Take the 1st right onto <b>Prospect St</b>                              | go 0.1 mi<br>total 5.0 mi |
|    | 7. Take the 1st right onto <b>Elliott Pl</b>                               | go 0.1 mi<br>total 5.1 mi |
|    | 8. Turn right onto <b>W Main St</b><br>About 2 mins                        | go 0.5 mi<br>total 5.6 mi |
|    | 9. Slight right onto <b>St Johnland Rd</b><br>About 1 min                  | go 0.9 mi<br>total 6.5 mi |
|    | 10. Turn left<br>About 2 mins  | go 0.3 mi<br>total 6.8 mi |
|    | 11. Turn left<br>Destination will be on the right                          | go 131 ft<br>total 6.9 mi |

**B** **Saint Catherine of Siena Medical Center**  
 50 Route 25A, Smithtown, NY 11787 - (631) 862-3000

## 12.0 AIR MONITORING PROGRAM

### 12.1 GENERAL

The purpose of the Air Monitoring Program (AMP) is to provide a measure of protection for the downwind community as well as to establish action levels for worker respiratory protection and personal protection equipment and response measures. The AMP comprises the real time monitoring, documentation monitoring, and community air monitoring requirements outlined in the project specifications. The AMP will provide for the protection of the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and in select circumstances complete work shutdown. In addition, the AMP will ensure that the proper level of personnel protective equipment is used and document that the level of worker protection is adequate.

The following sections discuss the air monitoring equipment required, the procedures, requirements and established action levels for both area and personal air sampling, and the reporting requirements for all air sampling data that is collected.

### 12.2 AIR MONITORING EQUIPMENT

Volatile organic vapors will be monitored with Photovac TIP, total organic vapor analyzer as manufactured by Photovac International, 739B Park Avenue, Huntington, New York 11743 or equivalent. A Photovac TIP or equivalent will be provided for each and every hazardous work zone operation.

Particulate monitoring will be performed using real-time particulate monitors (MiniRadm Model MIEPDM-3 or equivalent) and will monitor particulate matter in the range of 0 to 10 microns diameter (PM<sub>10</sub>) with the following minimum performance standards:

|  |   |
|--|---|
| Objects to be measured:                      | Dust, mists or aerosols   |
| Measurement Ranges:                          | 0.001 to 400 mg/m <sup>3</sup> (1 to 400,000 µg/m <sup>3</sup> )  |
| Precision (2-sigma) at constant temperature: | +/- 10 µg/m <sup>3</sup> for one second averaging; and +/- 1.5 g/m <sup>3</sup> for sixty second averaging                            |
| Accuracy:                                    | +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 µm, g= 2.5, as aerosolized) |
| Resolution:                                  | 0.1% of reading or 1g/m <sup>3</sup> , whichever is larger  |
| Particle Size Range of Maximum Response:     | 0.1-10  |
| Total Number of Data Points in Memory:       | 10,000  |
| Logged Data:                                 | Each data point with average concentration, time/date and data point number   |
| Run Summary:                                 | overall average, maximum concentrations,  |

time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number

Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required

Operating Time: 48 hours (fully charged NiCd battery); continuously with charger

Operating Temperature: -10 to 50o C (14 to 122o F)

Particulate levels will be monitored and integrated over a period not to exceed 15 minutes and instrumentation will have necessary averaging hardware to accomplish this task.

In addition, a meteorological station will be installed at the site that is capable of downloading daily information including temperature, wind direction and strength, time and relative humidity to a laptop or on-site PC.

## 12.3 AREA MONITORING

### 12.3.1 Real-Time / Community Air Monitoring

Real-time air monitoring for VOCs and particulate levels at the perimeter of the exclusion zone will be required. The following real-time air monitoring program will be utilized for any qualifying activities being conducted at the site and will include both continuous and periodic air monitoring. The purpose of real-time monitoring will be to determine if off-site receptors are potentially being impacted as well as whether an upgrade (or downgrade) of PPE is required while performing on-site work. This monitoring will allow for the implementation of engineering controls, protocols, or emergency procedures if action levels are encountered.

#### 12.3.1.1 Continuous Air Monitoring

Continuous monitoring will be required for all ground intrusive activities. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells. Continuous monitoring will entail full shift real-time monitoring.

#### VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the exclusion zone on a continuous basis or as otherwise specified. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an

appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the exclusion zone, activities must be shutdown.
4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

#### Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM<sub>10</sub>) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. Particulate levels will be monitored for 10 to 15 minutes upwind of the exclusion zone to established background levels. The background level will be established before the start of each shift, every day. If the wind direction changes during the course of the day, a new background level will be established.
2. In the event that downwind particulate concentrations are detected at levels in excess of 150 µg/m<sup>3</sup> or 2.5 times greater than the established background level, the background concentrations upwind of the work zone will be re-measured using the same equipment. If the measured particulate level at the exclusion zone is 100 µg/m<sup>3</sup> above background, the downwind perimeter will be monitored and additional dust controls in the work zone will be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective

measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques.

3. Upwind background concentrations will continue to be measured and compared to concentrations in the work zone until the downwind level at the work zone is less than 100  $\mu\text{g}/\text{m}^3$  above the upwind level. If at any time the measure particulate level at the work zone is more than 150  $\mu\text{g}/\text{m}^3$  over background concentration, work at the site will immediately be suspended, the Safety Officer will be notified, and engineering controls will be implemented before work resumes.
4. If action levels are exceeded at the perimeter location for fugitive dust, work will be suspended and engineering controls will be implemented to bring concentrations down to acceptable levels.
5. The generation of dust from waste or contaminated soil that migrates off-site has the potential for transporting contaminants off-site. There may be situations when visible dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Therefore, if dust is observed leaving the work site, additional dust suppression techniques will be employed. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:
  - a. Applying water on haul roads;
  - b. Wetting equipment and excavation faces;
  - c. Spraying water on buckets during excavation and dumping;
  - d. Hauling materials in properly tarped or watertight containers;
  - e. Restricting vehicle speeds to 10 mph;
  - f. Covering excavated areas and material after excavation activity ceases;  
and
  - g. Reducing the excavation size and/or number of excavations.
6. All readings and observations will be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

It should be noted that the exclusion zone for work being conducted within a public right-of-way will be limited due to the inherent access restraints. In the same manner, upwind and downwind monitoring locations will also be restricted within the public right-of-way. This will mean that in select situations the downwind VOC monitoring and more importantly confirmatory downwind monitoring, undertaken if levels are in excess of 5 ppm over background, may be located less than 20 feet from the exclusion zone. Sample locations will always be selected to provide the best level of protection and will be based on both prevailing wind direction and the proximity of the nearest receptors.

### 12.3.1.2 Periodic Air Monitoring

Periodic monitoring for VOCs only, will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection will consist of:

- Taking an ambient air reading upon arrival at a sample location;
- Collection of readings while opening a well cap, overturning soil, monitoring during well baling/purging and,
- Taking an ambient air reading prior to leaving a sample location.

### 12.3.2 Documentation Air Monitoring

Documentation monitoring will be conducted only during excavation and management of contaminated soils. In the case of this project this work is expected to be limited to the 100 Oser Avenue Property. The monitoring will include sample collection for total nuisance dust and will be conducted at the perimeter of the site at a minimum of four locations (one upwind and three downwind).

- Total nuisance dust samples will be collected using PVC collection filter and personal sampling pump and analyzed gravimetrically according to NIOSH 89-127 Method 0500 by an AIHA-accredited laboratory.
- Documentation samples will be collected at established perimeter locations. The four locations will be chosen according to site activities and expected wind direction. The three downwind locations will be located at approximately equidistant points and will be collected at a height of approximately 6 feet above ground surface.
- Documentation samples will be collected continuously during for an eight (8) hour work period. At the end of the week, one days worth of sampling (i.e. three downwind locations and one upwind location) will be selected by the NYSDEC's Representative for analysis.

## 12.4 PERSONAL AIR MONITORING

During perimeter documentation monitoring, personal documentation samples will be collected once a week. On-site samples will be collected by choosing "high risk" workers to wear the appropriate collection media for metals and particulates. "High Risk" workers are those who are most likely to encounter contamination on a particular task. One high risk worker will be chosen to wear collection media for a particular day each week and the media will be analyzed with the documentation air monitoring samples.

## 12.5 REPORTING

A written copy of the real-time air monitoring results for each workday will be available at the work site by 10:00 am the following workday. The results will include an appropriately scaled map of the work area depicting sample locations, wind direction and other pertinent

meteorological data: date, time, analytical results, applicable standards and engineering controls implemented (if necessary).

A written copy of the documentation and personal air monitoring results will be available at the work site within 7 days of sampling and will include an appropriately scaled map of the work area depicting sample locations, wind direction and other pertinent meteorological data: date, time, analytical results, applicable standards and engineering controls implemented (if necessary). In the case of the personal monitoring results the person's name and task/activity at the time at which the sample was collected will also be included.

## **19.0 COMMUNITY PROTECTION PLAN**

### **19.1 GENERAL**

The following Community Protection Plan (CPP) outlines those steps to be implemented to protect the health and safety of surrounding human population and the environment during the project

### **19.2 AIR MONITORING**

Refer to Section 12.0, Air Monitoring Plan for the all air monitoring requirements.

### **19.3 VAPOR EMISSION RESPONSE PLAN**

1. If the ambient air concentration of organic vapors exceed 5 ppm above background at the perimeter of the work area, activities shall be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities may resume. If the organic vapor levels are greater than 5 ppm over background but less than 25 ppm over background at the perimeter of the work area, activities may resume provided the organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.
2. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities shall be shutdown. When work shutdown occurs, downwind air monitoring as directed by the SO shall be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section (Section 19.4).

### **19.4 MAJOR VAPOR EMISSION**

1. If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities shall be halted.
2. If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, the air quality shall be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).
3. If efforts to abate the emission source are unsuccessful and if organic vapor levels are approaching 5 ppm above background and persist for more than 30 minutes in the 20 Foot Zone, the Major Vapor Emission Response Plan shall automatically be placed into effect.

4. However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background levels in the 20 foot zone.

### **19.5 MAJOR VAPOR EMISSION RESPONSE PLAN**

1. Upon activation, the following shall be undertaken:
  - a. Emergency contacts will be notified.
  - b. The local police authorities shall immediately be contacted by the SO and advised of the situation. Coordinate with local officials to arrange for notification and evacuation of the surrounding community.
  - b. Frequent air monitoring shall be conducted at 30 minutes intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring say be halted or modified by the SO.
2. Coordinate with local officials to arrange for notification and evacuation of the surrounding community in the event that off-site emissions pose a threat.

### **19.6 ODOR**

If odor complaints are received, active work areas will be foamed to reduce odors. Odor masking agents or other odor control methods will be submitted to the Engineer for approval. Odor suppression techniques will be continued during each day that odor complaints are received.