



Health and Safety Plan

**Elks Plaza, LLC.
157-189 West Merrick Road
Freeport, NY**

June 2014

Prepared For:

**Elks Plaza LLC
28 Campbell Drive
Dix Hills, NY 11746**

Prepared by:

**CA RICH CONSULTANTS, INC.
17 Dupont Street
Plainview, New York 11803
(516) 576-8844**

**HEALTH AND SAFETY PLAN
FOR
POST REMEDIAL MONITORING
AT
Elks Plaza, LLC.
157-189 West Merrick Road, Freeport, N.Y.
NYSDEC Site No.: 1-30-193**

1.0 INTRODUCTION

This Health and Safety Plan (“HASP”) and Community Air Monitoring plan (“CAMP”) has been developed for utilization during implementation of the post remedial monitoring at the above referenced site located in Freeport, New York (the Site). The HASP and CAMP is to be enforced by CA RICH’s Project Health and Safety Manager and the on-site Health & Safety Coordinator (HSC) or his/her designee. The on-site HSC will interface with the Project Manager and is vested with the authority to make field decisions including the termination of on-site activities if an imminent health and safety hazard, condition or related concern arises. Information and protocol in the HASP is applicable to all on-site personnel who will be entering the designated work zone.

2.0 POTENTIAL HAZARDS

2.1 Chemical Hazards

CA RICH will operate as if there is a potential hazard from the volatile organic compound (VOC) associated with the dry cleaning chemical perchloroethylene (PCE).

PCE can be described as "sweet" or "aromatic" smelling and are narcotic in high concentrations. Acute exposure to significant concentrations of these chemicals can cause irritation of the skin, eyes and mucus membrane, headache, dizziness, nausea, and in high enough concentrations, loss of consciousness and death (Sax, 1984). These compounds are suspected to be carcinogenic with chronic exposure.

Physical properties and additional toxicological information is included in Appendix A.

2.2 Other Health and Safety Risks

The HASP addresses the environmentally-related chemical hazards identified on the Site. Normal physical hazards associated with using excavation and injection equipment and hand tools as well as hazards associated with adverse climatic conditions (heat & cold) also exist and represent a certain degree of risk to be assumed by on-Site personnel.

Certain provisions in this Plan, specifically the use of personnel protective equipment, may tend to increase the risk of physical injury, as well as susceptibility to cold or heat stress. This is primarily due to restrictions in dexterity, hearing, sight, and normal body heat transfer inherent in the use of protective gear.

3.0 RISK MANAGEMENT

3.1 Work / Exclusion Zones

For each proposed investigation activity (eg. monitoring well sampling, soil vapor probe point sampling, and soil sampling), a work / exclusion zone will be established. Access to this area will be limited to properly trained, properly protected personnel directly involved with investigation. Enforcement of the work / exclusion zone boundaries is the responsibility of the on-site Health & Safety Coordinator.

3.2 Personnel Protection

Health & Safety regulatory personnel have developed different levels of personnel protection to deal with differing degrees of potential risks of exposure to chemical constituents. The levels are designated as **A**, **B**, **C**, and **D** and are ranked according to the amount of personnel protection afforded by each level. Level **A** is the highest level of protection and Level **D** is the lowest level of protection as described below.

A – Fully encapsulating suit, SCBA, hard hat, chemical-resistant steel-toed boots, boot covers, inner and outer gloves.

B – One-piece, hooded chemical-resistant splash suit, SCBA, hard hat, chemical-resistant steel-toed boots, boot covers, inner and outer gloves.

C – One-piece, hooded chemical-resistant splash suit, hard hat, canister equipped face mask, chemical-resistant steel-toed boots, boot covers, inner and outer gloves.

D – Work clothes, hard hat (optional), work boots/shoes, gloves (as needed).

The different levels are primarily dependent upon the degree of respiratory protection necessary, in conjunction with appropriate protective clothing. Levels of protection mandate a degree of respiratory protection. However, flexibility exists within the lower levels (B, C, and D) concerning proper protective clothing.

The four levels of protection were developed for utilization in situations which involve suspected or known atmospheric and/or environmental hazards including airborne contamination and skin-affecting substances.

It is anticipated that all of the remedial work will be performed using Level D protection (no respiratory protection with protective clothing requirements limited to shirts, long pants or coveralls, work gloves and work boots).

Level D may be modified by the HSC to include protective clothing or equipment (Saran-coated disposable coveralls or PVC splash suits, safety glasses, hard hat with face shield, and chemically resistant boots) based upon physical hazards, skin contact concerns, and real-time monitoring.

Real-time air monitoring for total airborne organics using either a PID or an HNU will determine if and when an upgrade from Level D to a higher level of respiratory protection is warranted. Decisions for an upgrade from Level D to higher levels of protection, mitigative actions, and/or suspension of work are the responsibility of the Project Manager and/or the designated on-Site HSC.

3.3 Air Monitoring

The HSC or his properly trained assignee will conduct “Real Time” air monitoring for total organic vapor and total particulates. ‘Real-time’ monitoring refers to the utilization of instrumentation, which yields immediate measurements. The utilization of real time monitoring helps determine immediate or long-term risks to on-site personnel and the general public, the appropriate level of personnel respiratory protection necessary, and actions to mitigate the recognized hazard. Air monitoring will be conducted in accordance with NYSDOH's Community Air Monitoring Program.

3.3.1 Organic Vapor

a. Instrumentation

Real-time monitoring for total organic vapor (TOV) utilizes either a photo-ionization detector (PID) or flame ionization detector (FID). The appropriate PID is an intrinsically safe HNU Systems Model PI-101 (HNU) or MiniRae™ or equivalent, which is factory calibrated to benzene. The appropriate FID is a Foxboro model 128 Organic vapor Analyzer (OVA) or equivalent, which is factory calibrated to methane.

b. Application

Organic vapor monitoring is performed as outlined in the NYSDOH Community Air Monitoring Plan. Specifically, monitoring shall be conducted at the downwind perimeter of the work zone periodically during work activities. If TOV levels exceed 5 parts per million (ppm) above established pre-work background levels, work activities will be halted and monitoring will be continued under the provision of a Vapor Emission Response Plan (as outlined in the Community Air Monitoring Plan).

3.4 Worker Training

Personnel overseeing the sampling of water, soil vapor or soil as well as other activities will be trained, fit-tested, and medically certified (OSHA 29 CFR 1910. 134). This includes the HSC or his/her properly trained assignee.

Prior to any work, all workers involved with the project should be aware of the potential chemical, physical and biological hazards discussed in this document, as well as the general safety practices outlined below. A safety briefing by the on-Site HSC and/or designee shall take place at the outset of work activities.

The HSC will be available to address project-related health & safety issues a site worker (such as an equipment operator or laborer) may have regarding the Site conditions. Once an issue is brought to the HSC's attention, he or she will evaluate the issue and apply the procedures outlined in this HASP.

3.5 General Safety Practices

All project personnel shall adhere to the following safety practices:

1. Avoid unnecessary skin exposure to subsurface materials. Shirts tucked into long pants (or coveralls), work gloves, and work boots are required unless modified gear is approved by the HSC. Remove any excess residual soil from clothes prior to leaving the site.
2. No eating, drinking, gum or tobacco chewing, or smoking allowed in designated work areas. Thoroughly wash hands prior to these activities outside the work area. Avoid sitting on the ground during breaks or while eating and drinking. Thoroughly wash all exposed body areas at the end of the workday.
3. Some symptoms of acute exposure include: nausea, dizziness, light-headedness, impaired coordination, headache, blurred vision, and nose/throat/eye irritation. If these symptoms are experienced or strong odor is detected, leave the work area and immediately report the incident to the on-site HSC.

3.6 Enforcement

Enforcement of the Site Safety Plan will be the responsibility of the HSC or his/her designee. The Coordinator should be on-site on a full-time basis and perform or directly oversee all aspects of Project Health & Safety operations including: air monitoring; environmental mitigation; personnel respiratory and skin protection; general safety practices; documentation; emergency procedures and protocol; and reporting and recordkeeping as described below.

3.7 Reporting and Recordkeeping

Incidents involving injury, symptoms of exposure, discovery of contained (potentially hazardous) materials, or unsafe work practices and/or conditions should be immediately reported to the HSC.

A log book must be maintained on-Site to document all aspects of HASP enforcement. The log is paginated and dated with entries made on a daily basis in waterproof ink, initialed by the HSC or designee. Log entries should include date and time of instrument monitoring, instrument type, measurement method, test results, calibration and maintenance information, as well as appropriate mitigative actions responding to detections. Miscellaneous information to be logged may include weather conditions, reported complaints or symptoms, regulatory inspections, and reasons to upgrade personnel protection above the normal specification (Level D).

4.0 EMERGENCIES

4.1 EMERGENCY RESPONSE SERVICES

- | | | |
|-----|--|-----------------------|
| (1) | HOSPITAL
South Nassau Community Hospital
1 Healthy Way, Oceanside, NY 11572

(See Figure 1 for Map Route) | (516) 632-3000 |
| (2) | AMBULANCE | 911 |
| (3) | FIRE DEPARTMENT
HAZARDOUS MATERIAL | 911 |
| (4) | POLICE DEPARTMENT | 911 |
| (5) | POISON CONTROL CENTER | (800) 222-1222 |

The preceding list and associated attached map (Figure 1) illustrating the fastest route to the nearest hospital must be conspicuously posted in areas of worker congregation and adjacent to all on-site telephones (if any).

4.2 EMERGENCY PROCEDURES

4.2.1 Contact or Exposure to Suspected Hazardous Materials

In the event of a fire, chemical discharge, medical emergency, workers are instructed to immediately notify the HSC and proper emergency services (posted). Should physical contact with unknown or questionable materials occur, immediately wash the affected body areas with clean water and notify the HSC. Anyone experiencing symptoms of exposure should exit the work area, notify the HSC, and seek medical attention.

4.2.2 Personnel Decontamination, First Aid, and Fire Protection

The first step in the treatment of skin exposure to most chemicals is to rinse the affected area with water. For this reason, adequate amounts of potable water and soap are maintained on-Site in a clearly designated and readily-accessible location. Portable emergency eyewash stations and a first aid kit must be made available and maintained in the same locations as the potable water. Fire extinguishers are also to be maintained on-Site in designated locations. All on-Site personnel are to be made aware of the locations of the above-mentioned on-Site Health & Safety accommodations during the initial Health and Safety briefing.

4.2.3 Ingress/egress

Clear paths of ingress/egress to work zones and Site entrances/exits must be maintained at all times. Unauthorized personnel are restricted from accessing the site.

5.0 COMMUNITY AIR MONITORING PLAN

Real-time air monitoring for volatile compounds and particulate levels at the perimeter of the work area is necessary. This plan includes the following:

- Volatile organic compounds must be monitored at the downwind perimeter of the work area on a continuous basis. If total organic vapor levels exceed 5 ppm above background, work activities must be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. All readings must be recorded and be available for State (DEC & DOH) personnel to review.

5.1 Vapor Emission Response Plan

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities can 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 can resume provided:

- The organic vapor level 200 ft. 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.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown. When work shutdown occurs, downwind air monitoring as directed by the Safety Officer will 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.

5.2 Major Vapor Emission

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 must be halted.

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, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts to abate the emission source are unsuccessful and if organic vapor levels are approaching 5 ppm above background for more than 30 minutes in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect;

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

5.3 Major Vapor Emission Response Plan

Upon activation, the following activities will be undertaken:

1. All Emergency Response Contacts as listed in the HASP will go into effect.
2. The local police authorities will immediately be contacted by the Safety Officer and advised of the situation.
3. Frequent air monitoring will be conducted at 30 minutes intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Safety Officer.

6.0 HEALTH AND SAFETY PLAN REFERENCES

1. American Conference Governmental Industrial Hygienists, 1989; Threshold Limit Values And Biological Exposure Indices.
2. Geoenvironmental Consultants, Inc., 1987; Safety & Operations At Hazardous Materials Sites.
3. US Department Of Health And Human Services, Centers For Disease Control, 1985; NIOSH Guide To Chemical Hazards.
4. US Department Of Labor Occupational Safety & Health Administration, 1989; Hazardous Waste Operations And Emergency Response Interim Final Rule, 29 CFR Part 1910.
5. Sax, N. I., 1984; Dangerous Properties Of Industrial Materials.

7.0 KEY PERSONNEL

<u>Responsibility</u>	<u>Name and Phone Number</u>	<u>Task Description</u>
Project Manager	<u>Eric Weinstock (516) 576-8844</u>	Oversee and coordinate all technical aspects for the project
Site Safety Officer	<u>Jason Cooper (516) 576-8844</u>	Coordinate and inspect all health and safety operations from the project site
Client Representative	<u>Lois Reisman, Galaxy Management, Inc (631) 462-8621</u>	
Project Manager Alternate	<u>Steve Sobstyl (516) 576-8844</u>	
Site Safety Officer Alternate	<u>Mike Yager (516) 576-8844</u>	

Figure 1
Hospital Route Map

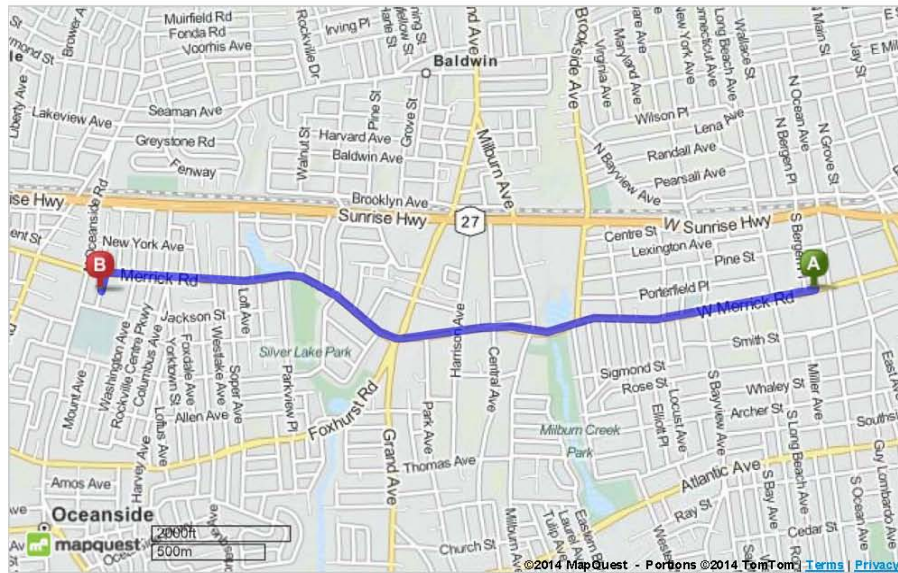
Map Showing Route from the site to the Hospital:

Driving Directions from 157 W Merrick Rd, Freeport, New York 11520 to South Nassau ... Page 1 of 1



Trip to:
**South Nassau Communities
Hospital**
1 Healthy Way
Oceanside, NY 11572
(516) 632-3000
2.39 miles / 6 minutes

Notes



©2014 MapQuest, Inc. Use of directions and maps is subject to the MapQuest Terms of Use. We make no guarantee of the accuracy of their content, road conditions or route usability. You assume all risk of use. [View Terms of Use](#)