

**DeLaval Property
Rinaldi Boulevard, Poughkeepsie
New York**

Health and Safety Plan

CHA Project Number: 11205

Prepared for:

The City of Poughkeepsie, New York

Prepared by:

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TABLE OF CONTENTS

| | | |
|-------------|--|-----------|
| 1.0 | INTRODUCTION | 1 |
| 2.0 | EMERGENCY CONTACTS | 2 |
| 3.0 | GENERAL SITE INFORMATION | 2 |
| 4.0 | KEY PERSONNEL | 2 |
| 5.0 | SITE CHARACTERIZATION | 3 |
| 5.1 | Project Overview | 3 |
| 5.2 | Site History and Description | 3 |
| 6.0 | SITE ENTRY | 5 |
| 6.1 | Objectives | 5 |
| 6.2 | Safety Meetings..... | 5 |
| 6.3 | Safety Training | 5 |
| 6.4 | Medical Surveillance..... | 5 |
| 6.5 | Site Mapping..... | 5 |
| 7.0 | POTENTIAL HAZARDS | 6 |
| 7.1 | Potential Exposure | 6 |
| 7.2 | Physical Hazards | 6 |
| 7.3 | Biological Hazards..... | 6 |
| 7.4 | Hazard Identification/Control | 7 |
| 8.0 | AIR MONITORING AND ACTION LEVELS | 8 |
| 8.1 | Air Monitoring..... | 8 |
| 8.2 | Action Levels | 9 |
| 8.3 | Personal Protective Equipment..... | 10 |
| 8.4 | Environmental Sampling..... | 10 |
| 9.0 | SITE CONTROL MEASURES | 11 |
| 9.1 | Work Zones | 11 |
| 9.2 | Work Procedures..... | 11 |
| 9.3 | Site Security..... | 11 |
| 9.4 | Communication..... | 11 |
| 10.0 | HAZARD COMMUNICATION | 12 |
| 11.0 | CONFINED SPACE | 13 |
| 12.0 | FIRST AID PROCEDURES | 14 |
| 13.0 | PURPOSE OF THE HEALTH AND SAFETY PLAN | 15 |

| | | |
|-------------|---|-----------|
| 14.0 | PROJECT PERSONNEL RESPONSIBILITIES..... | 16 |
| 15.0 | HAZARD EVALUATION..... | 17 |
| 15.1 | Acute Symptoms of Exposure..... | 17 |
| 16.0 | HAZARD/TASK ANALYSIS..... | 18 |
| 16.1 | All Site Activities..... | 18 |
| 16.2 | Specific Tasks | 19 |
| 17.0 | PERSONNEL PROTECTION..... | 21 |
| 17.1 | General Guidelines..... | 21 |
| 17.2 | Air Monitoring | 21 |
| 17.3 | Personnel Protective Equipment | 22 |
| 17.4 | Health and Safety Action Levels..... | 23 |
| 18.0 | SITE CONTROL..... | 24 |
| 18.1 | Scope..... | 24 |
| 19.0 | DECONTAMINATION..... | 26 |
| 19.1 | Personnel Decontamination | 26 |
| 19.2 | Personnel Decontamination Steps..... | 26 |
| 19.3 | Equipment Decontamination | 27 |
| 20.0 | EMERGENCY INFORMATION..... | 28 |
| 20.1 | General..... | 28 |
| 20.2 | Emergency Procedures for Contaminated Personnel | 28 |
| 20.3 | Physical Injuries..... | 28 |
| 20.4 | Safety Equipment | 29 |
| 20.5 | Spill Containment..... | 29 |
| 21.0 | HEAT AND COLD STRESS..... | 30 |
| 21.1 | Heat Stress – Symptoms and Remedies | 30 |
| 21.2 | Heat Stress - Precautions..... | 30 |
| 21.3 | Cold Stress – Symptoms and Remedies..... | 30 |
| 21.4 | Cold Stress – Treatment | 31 |
| 21.5 | Cold Stress - Prevention..... | 31 |
| 22.0 | HEALTH AND SAFETY PROGRAM COMPONENTS | 32 |
| 22.1 | Medical Surveillance | 32 |
| 22.2 | Training..... | 32 |
| 22.3 | Authorization | 32 |
| 23.0 | REFERENCES | 33 |
| 24.0 | HEALTH AND SAFETY PLAN AGREEMENT..... | 34 |

FIGURES

FIGURE 1: Site Location Map.....Follows Page 5

APPENDICES

APPENDIX A: New York State Department of Health Community Air Monitoring Program (CAMP)

1.0 INTRODUCTION

The following Health and Safety Plan has been created for the protection of CHA's on-site personnel and subcontractors during the field activities at the DeLaval Property located on Rinaldi Boulevard in the City of Poughkeepsie, New York (Figure 1). This project's various assignments require CHA employees to perform tasks where personal safety could be compromised due to chemical, physical, and/or biological hazards.

The requirements and guidelines in this HASP are based on a review of available information and an evaluation of potential on-site hazards. This HASP will be discussed with site personnel and will be available on-site for review while work is underway. CHA personnel will report to the CHA Health and Safety Coordinator (HSC) in matters of health and safety. While the HSC is responsible for ensuring compliance with this HASP and stopping work when necessary, the Field Team Leader is responsible for implementation of this HASP into daily site activities.

Non-intrusive activities within CHA's Scope of work are those that do NOT have the potential to jeopardize the health and safety of site workers, the public, or the environment with respect to site contaminants. Intrusive activities within CHA's Scope of work are those that have the potential to cause health and safety concerns to site workers, the public, or the environment. These activities and any non-intrusive activities conducted in an Exclusion Zone require training per 29 CFR 1910.120 which govern work on hazardous waste sites.

2.0 EMERGENCY CONTACTS

Police Department: 911
Ambulance: 911
Fire Department 911
Poison Control Center (800) 252-5655
Dig Safer or One Call Center 1-800-DIG-SAFE
City of Poughkeepsie: (845) 451-4046
Hospital Name: Saint Francis Hospital
Address 241 North Road
Poughkeepsie, NY 12601

Hospital Directions:

- Proceed north on Rinaldi Blvd.
- Make a right onto Main Street
- Merge onto Route 9S and then take ramp on the left onto Route 9N.
- Turn right onto Route 9G/Marist Drive
- Turn Left onto Marist Drive
- Take a slight left onto North Road

Follow Signs to Hospital/Emergency Dept.

NYS DEC Oil and Chemical Spill Reporting: 1-800-457-7362 (24 hours a day)

3.0 GENERAL SITE INFORMATION

Project Number: 11025
Client: City of Poughkeepsie
Client Contact (give name and phone): Mr. Edmund Murphy -- (845)451-4046
Site/Property ID: DeLaval Property
Address: Rinaldi Boulevard, Waterfront, Poughkeepsie, NY 12601

Work Tasks:

- Install test pits
- Collect surficial soil samples
- Install soil borings and monitoring wells
- Collect soil samples from test pit locations for laboratory analysis
- Collect groundwater samples from newly-installed wells for laboratory analysis
- Collect surficial soil samples with a hand auger from representative on-site locations

Duration: Anticipated 30 days on a part-time basis.

Will subcontractors be used? Yes, a test pit and drilling subcontractor for installation of test pits, borings, and monitoring wells
If yes, state for which tasks

4.0 KEY PERSONNEL

Project Manager: Keith Ziobron (518) 453-2835 Other Key Project Personnel: NA
Site Safety Officer: Jamie Herrick (518) 453-2855 Field Team Leader: Jamie Herrick (518) 453-2855
CHA Company Health & Safety Manager: Dave Taillon (518) 453-4500

5.0 SITE CHARACTERIZATION

5.1 Project Overview

The investigation and remediation of the DeLaval property is being conducted under the New York State Department of Environmental Conservation (NYSDEC) Environmental Restoration (Brownfields) Program. The Site Investigation/Remedial Alternatives Report Work Plan (SI/RAR Work Plan) has been developed in accordance with the May 2002 Municipal Assistance Environmental Restoration Projects "Brownfields Program" Procedures Handbook.

A Supplemental/Pre-Design Remedial Investigation Work Plan has been prepared to outline the procedures and protocols that will be utilized to collect the necessary field data to further characterize the site for remedial design purposes.

5.2 Site History and Description

The property under investigation is identified as a 13.4 acre parcel of land known as the "DeLaval Property" currently owned by the City of Poughkeepsie. The City of Poughkeepsie Assessor's Office identifies this parcel of land as #31-6061-43-752749. The site is an irregularly shaped piece of property located along the Hudson River with a former Sewage Treatment Plant lying to the north, a former oil tank farm to the south, a railroad right-of-way to the east and the Hudson River to the west. The site is located within the Waterfront District zone.

The DeLaval Property is currently a vacant lot. The site is mainly unpaved and almost entirely covered by grass and vegetation. Vegetation is flourishing in most areas of the site, however, a noticeable difference in the type of vegetation was observed in the central portion of the site near the former fuel unloading area during a July 2003 site visit. The vegetation in this area appeared to be less dense and different from the surrounding overgrowth vegetation observed on the property. There are presently no buildings on the subject site.

The main entrance to the property is on the northeast portion of the site, at the intersection of Rinaldi Boulevard and Pine Street. A gravel/asphalt road traverses the property, from north to south along the center of the site, parallel to the railroad tracks. Two underground steel pipes were noted at the northwestern edge of the property along the Hudson River. These two steel pipes appear to run below the

ground surface from west to east. There is also a 42-inch diameter reinforced concrete pipe observed on the river bank on the northwestern portion of the property running from west to east.

6.0 SITE ENTRY

6.1 Objectives

The supplemental Site investigation will investigate and analyze the subsurface conditions and characteristics of soils and groundwater of the subject site to confirm the presence of previously identified contamination, as well as delineate the extent of potential impacts.

6.2 Safety Meetings

To ensure that the Health and Safety Plan is being followed during the investigation, the Site Safety Officer (SSO) shall conduct a safety meeting prior to entry to the site or the initiation of any site activity, if any conditions change, and before each work day.

6.3 Safety Training

The SSO will confirm that every person assigned to a task has had adequate training for that task and that the training is up-to-date by checking with the CHA Safety Coordinator. CHA staff working on this project shall have a minimum of a 40-hour initial Hazardous Waste Operations and Emergency Response training and a current annual 8-hour refresher course. All training will have been conducted and certified in accordance with OSHA regulations as outlined in 29 CFR 1910.120.

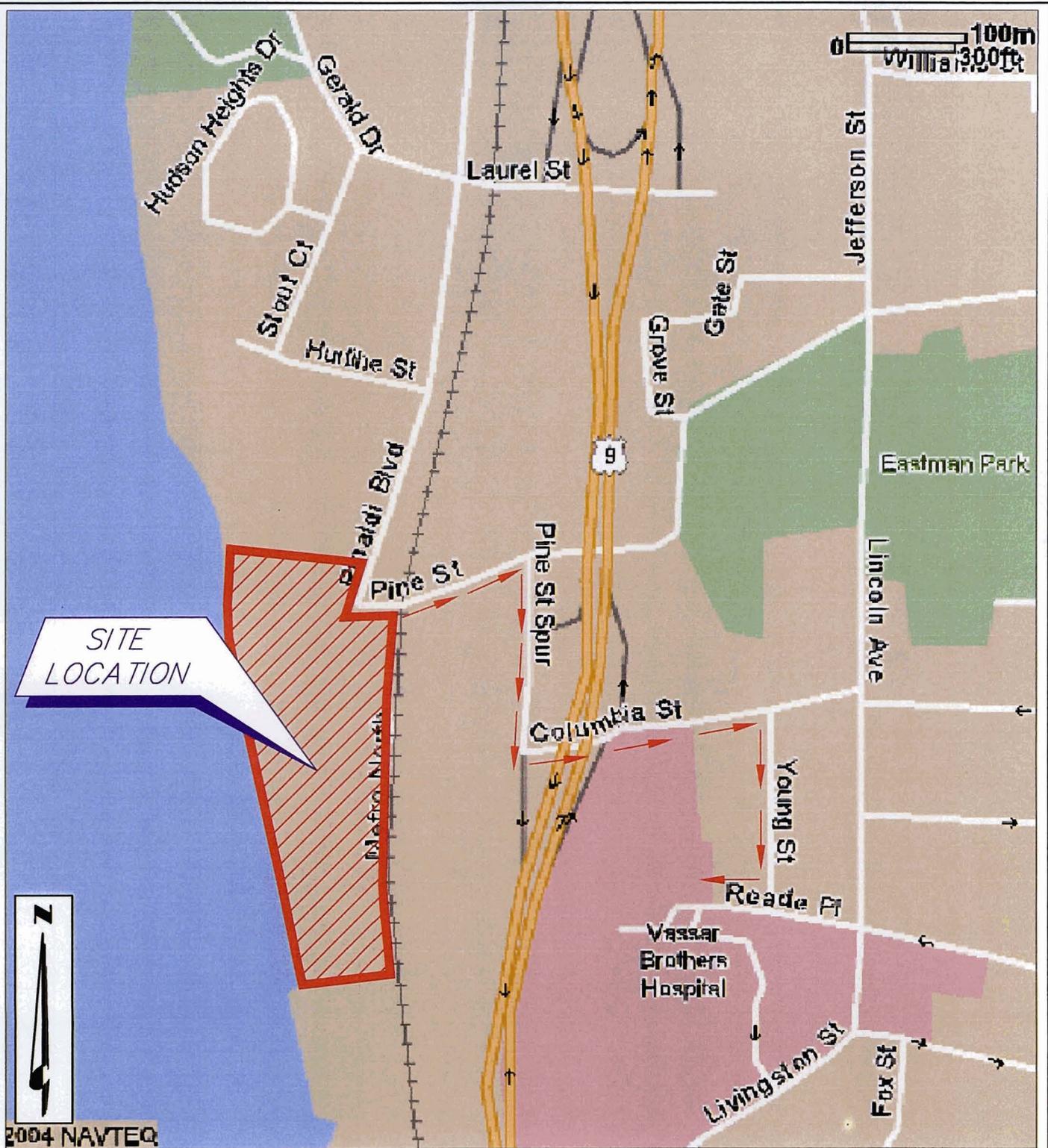
6.4 Medical Surveillance

All CHA personnel will have had a medical surveillance physical consistent with OSHA regulations in 29 CFR 1910.120 and performed by a qualified occupational health physician. The SSO shall confirm prior to initiation of work on this site that every person assigned to a task has had an annual physical and respiratory fit test, has passed the medical examination, and has been determined medically fit by the occupational health physician for this type of work. All medical records can be found with the CHA H&S coordinator.

6.5 Site Mapping

Figure 1 is a site location map showing the locations of the subject Site and the location of the nearest hospital.

100m
300ft



SITE
LOCATION



2004 NAVTEQ

SOURCE: MAPQUEST

SCALE: 1"=400'±

File: M:\11205\ACAD\11205F-1.dwg User: 1393 8/19/2004 11:26 AM



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FIGURE 1

SITE LOCATION MAP/ROUTE TO HOSPITAL

DeLAVAL PROPERTY
RINALDI BOULEVARD
POUGHKEEPSIE
STATE OF NEW YORK

11205.1001.1102

DATE: 8-19-2004

7.0 POTENTIAL HAZARDS

Residuals from hazardous materials or petroleum products may be present in the Site's subsurface soils and/or groundwater. Potential hazardous material types are summarized below.

Hazardous Material Types: Liquid X Solid X Sludge _____ Gas X

7.1 Potential Exposure

The potential exposure mechanism that can transport particulates and VOCs from the areas of the investigation and monitoring activities to other areas of the site as well as beyond the boundaries of the site are:

- Contact with contaminated ground water or soil
- Projection of contaminated material in air
- Failure to adhere to decontamination procedures
- Failure to adhere to the Field Sampling Plan and/or Standard Operating Procedures

Nuisance Dust can be a problem at any site that involves intrusive investigation activities. Dust will be controlled to the extent feasible to prevent the public from being unnecessarily concerned and to further reduce the nuisance dust hazard to Site personnel. Nuisance dust will be controlled by utilizing appropriate dust suppression techniques. The primary effect of nuisance dust is irritation of the eyes, nose, and throat when concentrations approach the OSHA exposure limits. Exposure limits will not be exceeded during this project.

7.2 Physical Hazards

Physical hazards such as the following may be encountered on site:

- Slip/Trip/Fall
- UV rays
- lifting (generators, drums, equipment)
- Transporting 55 gallon drums
- Traffic – on roadways closely bordering the subject sites.

7.3 Biological Hazards

Biological hazards such as the following may be encountered on site:

- Mosquitoes
- Deer Ticks
- Rodents
- Heat Stress

7.4 Hazard Identification and Control

Hazard controls generally consist of the following specific safety procedures: Training, Engineering Controls, Air Monitoring and PPE Selection. CHA employees are required to use the PPE appropriate to their work task and potential exposures as outlined in the HASP.

The levels of PPE assigned to each activity are based on available information on the estimation of exposure potential associated with each work task.

| AFFECTED PERSONNEL | TASK/ OPERATION | HAZARDS | HAZARD CONTROL |
|--------------------------|--|--|--|
| Exclusion Zone Personnel | Boring/Well Installation & Sampling of soil and ground water wells | Potential Exposure to volatile, semi-volatile, heavy metals, PAHs. | Exposure to chemical hazards: <ul style="list-style-type: none"> - Stand upwind when possible - Minimize direct contact - Avoid walking through discolored areas, puddles, leaning on drums or contacting anything that may be contaminated. - Don appropriate PPE - Level D PPE work as a minimum - >10ppm organic vapor for 5 minutes, upgrade to Level C. - >200ppm organic vapor for 5 minutes upgrade to Level B |
| Exclusion Zone Personnel | Boring/Well Installation & Sampling of soil and ground water wells | Inclement weather | <ul style="list-style-type: none"> - Cease site activities during electrical storm - Cease site activities in extreme temps |
| Exclusion Zone Personnel | Boring/Well Installation & Sampling of soil and ground water wells | Back Injury | <ul style="list-style-type: none"> - Use mechanical lifting device when possible - Use buddy system when lifting heavy or awkward objects - Do not jerk or twist body while lifting |

8.0 AIR MONITORING AND ACTION LEVELS

8.1 Air Monitoring

The following environmental monitoring instruments will be used on site at the specified intervals. Monitoring instruments will be calibrated prior to each full day of equipment usage or more frequently in accordance with manufacturer's recommendations. Calibrations will be recorded on the Equipment Calibration Log. All air monitoring will be conducted in accordance with the New York State Department of Health's Community Air Monitoring Program (CAMP). For reference, a copy of the CAMP is included as Appendix A.

8.1.1 *Photoionization Detector (PID)*

A PID shall be used to monitor for volatile organic compounds at both the immediate work area (e.g. exclusion zone) and the downwind perimeter of the exclusion zone. The PID shall be calibrated on a daily basis following manufacturer's recommendations. Calibration data shall be recorded in daily logs by the SSO. The monitoring schedule is provided below.

| |
|---|
| <p>Frequency:</p> <ol style="list-style-type: none">1. At start of each task.2. Whenever obvious contamination is noted.3. At least every 15 to 30 minutes. <p>Location of Measurements:</p> <ol style="list-style-type: none">1. In the breathing zone _____2. In low areas where flammable vapors may accumulate, as appropriate _____3. Headspace readings as appropriate _____4. Monitor at the exclusion zone boundary, particularly at downwind locations, if PID monitoring levels in the exclusion zone are consistently over 5 ppm. |
|---|

In accordance with the CAMP, volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area or exclusion zone on a continuous basis. Upwind concentrations will be monitored at the start of each work day and periodically thereafter to establish background levels. All perimeter monitoring will be conducted using a PID capable of measuring the anticipated VOCs of concern.

8.1.2 *Dust/Particulates*

Particulate levels shall be visibly monitored within the exclusion zone. If it appears dust levels are increasing, a particulate meter shall be utilized following the manufacturer's recommendations. At the

upwind and downwind perimeters of the exclusion zone, particulate monitoring will be conducted continuously using a real-time monitoring device capable of measuring particulate matter less than 10-micrometers in size (PM-10) 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 if the action level is exceeded.

8.1.3 Temperature

Ambient temperature should be monitored and recorded throughout the work day for potential heat stress conditions.

8.2 Action Levels

VOC Monitoring

- Upgrade to Level C when PID readings are consistently over 10 ppm over background in the exclusion zone. .
- Upgrade to Level B when readings are consistently over 200 ppm over background in the exclusion zone – notify Company Health and Safety Manager first.
- Level A is not anticipated for this project.
- If PID readings exceed 5 ppm above background for any 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases as indicated by instantaneous PID readings to levels below 5 ppm above background, work activities can resume with continued monitoring.
- If readings remain elevated in excess of 5 ppm above background but less than 25 ppm, work activities must be halted, the source of the 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.

Dust/Particulate Monitoring

- If the downwind particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for any 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that the dust suppression and other controls are successful in reducing the downwind particulate concentration to within $150 \text{mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind particulate levels are greater than $150 \text{mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind particulate concentration to within $150 \text{mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

8.3 Personal Protective Equipment

| | |
|-----------------------------------|--|
| Site work will be done in: | Level D. |
| Glove Material: | Nitrile gloves. |
| Tyvek suit: | Not required for subsurface investigation unless conditions warrant otherwise. |
| Boot Covers: | Not required. |
| Respirator Cartridge: | Combination organic vapor cartridge if relevant action levels are exceeded. |

8.4 Environmental Sampling

Environmental Sampling is fully discussed in the Work Plan/Field Sampling Plan associated with this project.

9.0 SITE CONTROL MEASURES

9.1 Work Zones

The work zone will be a 10 to 15 foot diameter circle around each test pit or boring location.

9.2 Work Procedures

| | | |
|---|--|---|
| Identify anticipated work procedures: | | |
| Drill rig operations | <input checked="" type="checkbox"/> | |
| Hand Auger | <input checked="" type="checkbox"/> | |
| Groundwater Sampling | <input checked="" type="checkbox"/> | |
| Soil Sampling | <input checked="" type="checkbox"/> | |
| Excavation/Trenching | <input checked="" type="checkbox"/> | If yes, how deep? <u>~12 ft.</u> |
| Confined space entry | <u>no</u> | |
| Other: | | |
| List chemicals Used: | Methanol <input checked="" type="checkbox"/> | Alconox <input checked="" type="checkbox"/> Other |
| List method Used: | Steam cleaning <input checked="" type="checkbox"/> | Water <input checked="" type="checkbox"/> Other |
| Identify Special Client Work Procedures: | | |

9.3 Site Security

During on-Site investigation activities, barrier tape will be placed across the entrance of each pedestrian bridge to restrict public access to the Site. All visitors to the work areas will be required to check in at the field vehicle. Only those visitors employed by the City of Poughkeepsie, or affiliated with the site owners will be allowed to enter the work areas.

Portable restriction zones may be constructed around each work area to further restrict public access, if necessary. The restriction zones would be constructed of portable snow fencing, staked and taped lines or a series of cones. There will be only one point of entry/egress in each restriction zone.

9.4 Communication

Communication shall be accomplished by person to person verbal correspondence and through the use of cellular telephones. Communication procedures will be reviewed at the Safety Meeting before entering the work zone.

10.0 HAZARD COMMUNICATION

In compliance with 29 CFR 1910.1200, any hazardous materials brought on site by any personnel (CHA or its sub-contractors) shall be accompanied with the material's MSDS. The SSO shall be responsible for maintaining the MSDSs on site, reviewing them for hazards that working personnel may be exposed to, and evaluating their use on site with respect to compatibility with other materials including personal protective equipment, and their hazards. Should the SSO deem the material too hazardous for use on any of the subject sites, the party responsible for bringing the material on site will be required to remove it from the Site.

11.0 CONFINED SPACE

During this project there are no anticipated confined space entries. If a confined space entry becomes necessary, all confined space entry procedures, techniques, and equipment shall be consistent with OSHA regulations in 29 CFR 1910.146. All entrants and attendants shall be trained in Confined Space Awareness training consistent with 29 CFR 1910.146.

12.0 FIRST AID PROCEDURES

- Skin/Eye Contact:** Flush eyes and/or skin thoroughly with water for 15 minutes. Remove contaminated clothing. If skin was contacted with a dry material, brush it off first, then flush with water. Seek medical attention if irritation develops.
- Ingestion:** Do not induce vomiting. Call Poison Control Center. Tell them what was swallowed, if possible. Follow instructions. Bring victim to hospital or call ambulance.
- Inhalation:** Remove person from contaminated environment without risking your own safety. DO NOT ENTER A CONFINED SPACE UNLESS WEARING LEVEL B AND A STANDBY PERSON IS PRESENT. DO NOT ENTER EXCLUSION ZONE UNLESS WEARING ONE LEVEL HIGHER PROTECTION THAN VICTIM WAS WEARING. Administer CPR, if necessary. Bring victim to hospital or call ambulance.
- Injuries:** Do not move a victim who may have a back injury. Cover them with coats, blankets, or other appropriate items to keep them warm. Call an ambulance.
- Apply pressure to bleeding wounds. If the victim is able, have the victim apply pressure to the wound. If they are not able, wear gloves to protect from exposure to blood. Put gauze bandages or other clean cloth over the wound. Do not remove blood-soaked bandages or cloth - instead put additional bandages or cloths over the blood-soaked bandages. Elevate the limb with the injury above the heart.
- Administer CPR if victim does not have a pulse and if you are currently certified in CPR. Have someone call for an ambulance immediately if there is any possibility that the victim is having or had a heart attack.
- Shock is likely to develop in any serious injury or illness. The following are signals of shock: restlessness or irritability; altered consciousness; pale, cool, moist skin; rapid breathing; and/or rapid pulse. In the event of shock, do the following: Immediately have someone call for an ambulance; have the victim lie down; elevate legs 12 inches unless you suspect head, neck, or back injuries; if victim is cool, cover the victim to prevent chilling; do not give the victim anything to drink, even if thirsty.

13.0 PURPOSE OF THE HEALTH AND SAFETY PLAN

The purpose of this Health and Safety Plan (HASP) is to provide specific guidelines, and establish procedures, for the protection of CHA personnel and its subcontractors during the activities conducted at this Site. This HASP is based upon previous studies and information available to date. The plan procedures shall be updated based upon the on-going investigation of site conditions including the most current information available for each media.

All personnel conducting activities on-site in which a potential exposure exists must be in compliance with all applicable federal/state rules and regulations. All personnel conducting site activities must also be familiar with the procedures, requirements and provisions of this plan. In the event of conflicting plans/requirements, personnel must implement those safety practices which afford the highest level of protection. This HASP has been developed in accordance with the requirements set forth in 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response; Final Rule.

14.0 PROJECT PERSONNEL RESPONSIBILITIES

The implementation of this health and safety plan will be the coordinated effort of the CHA project team consisting of hydrogeologists, geologists, chemists, and engineers experienced with hazardous waste site characterization. The team will consist of a Project Manager, Company Health & Safety Manager, Site Safety Officer, Task Leaders, and additional staff as necessary. The following paragraphs identify the key CHA project personnel and briefly describe the health and safety designations and general responsibilities that will be used at this site.

| | |
|--|--|
| PROJECT MANAGER | <p>The Project Manager (PM) is responsible for communicating any applicable information to the Health and Safety Manager so that when the HASP is written, all potential hazards have been evaluated. The PM is responsible for ensuring that the requirements stated in this HASP are complied with during all site activities. The PM is responsible for ensuring an adequate budget to cover the costs of air monitoring, personal protective equipment, and other health and safety supplies needed to perform work safely at the site. The PM is also responsible for ensuring that the Company Health and Safety Manager is informed of any unexpected incidents that occur on the site.</p> |
| PROJECT HEALTH AND SAFETY OFFICER | <p>The Project Health and Safety Officer, (HSO) is responsible for safety procedures and operations at the site, including the following:</p> <ul style="list-style-type: none">- Determining the level of personal protection required,- Updating health and safety equipment requirements or procedures based on new information gathered during the investigation,- Monitoring compliance with the health and safety requirements,- Requiring that all CHA personnel working on the site, who may potentially be exposed to toxic substances or hazardous materials, have completed a 40-hour initial and eight-hour annual hazardous waste site worker training program in accordance with OSHA regulations 29 CFR 1910.120; and- Monitoring team members to determine compliance with the applicable physical requirements as stipulated in the health and safety program. |
| SITE SAFETY OFFICER | <p>The SSO is responsible for ensuring the procedures outlined in the HASP are followed by all CHA personnel at all times on a site. The SSO will also be responsible for conducting site safety meetings before the commencement of work to review the HASP with on-site personnel. In addition to these duties the SSO, or designee is responsible for the following:</p> <ul style="list-style-type: none">- Changing the levels of personal protection based on site observations,- Conducting required air monitoring on this site,- Stopping work, if required, to protect worker safety or where noncompliance with health and safety requirements is found,- Informing personnel (other than team members) who want access to work areas of the potential hazards of the site, <p>Any changes in site conditions that may require a modification to the HASP will be coordinated between the HSO and SSO and/or PM.</p> |

15.0 HAZARD EVALUATION

15.1 Acute Symptoms of Exposure

Workers should go to the support zone as soon as any of these symptoms are experienced:

- Rotten egg odor (indicates hydrogen sulfide)
- Sweet almond-like odor (indicates cyanide presence)
- Headache
- Nausea or vomiting
- Fatigue
- Weakness
- Confusion
- Dizziness
- Irritation of eyes, nose, throat
- Dermatitis
- Chills
- Chest tightness
- Cough
- Muscle spasms
- Staggered gait
- Increased salivation
- Indigestion
- Diarrhea
- Irritability
- Metallic taste in mouth

16.0 HAZARD/TASK ANALYSIS

16.1 All Site Activities

Potential hazards that may be associated with potential on-site activities are listed below:

| Hazards: | Precaution |
|--|---|
| 1) Skin and/or eye contact with contaminated soil and/or groundwater, decon solutions, and sample preservation agents. 2) The inhalation of volatile organic vapors during site activities. 3) The inhalation of contaminated dusts and other airborne particles during site activities. | <ul style="list-style-type: none"> - Wear the required personal protective equipment when conditions or activities indicate the need for it. - Avoid walking through puddles, and contacting other potential sources of contaminants such as drums. - Keep airborne dust levels to a minimum by wetting down surfaces. |
| Physical injuries, such as abrasions, insect bites, back injuries, slips, trips, falls. | <ul style="list-style-type: none"> - Avoid slippery surfaces when possible. - Practice safe lifting techniques. - Know the location of other site workers at all times, especially before moving and/or starting up heavy equipment such as drill rig or truck. - Be observant of possible insect nesting areas. - Have a first aid kit on hand. |
| Heat and cold stress | <ul style="list-style-type: none"> - Dress appropriately, wear dry clothing. - Take frequent breaks during extreme weather conditions. - Refer to the section on heat stress or cold stress, as appropriate for additional precautions. |
| Fire | <ul style="list-style-type: none"> - Have a fire extinguisher on hand. - Keep ignition sources away from flammable materials and atmospheres. |
| Security | <ul style="list-style-type: none"> - Stay alert to neighborhood activities |

16.2 Specific Task

The hazards associated with specific site tasks are described below:

| Hazards: | Precaution |
|--|---|
| Soil Boring and Monitoring Well Installation | |
| Inhalation of and skin contact with contaminants in soil and groundwater. | <ul style="list-style-type: none"> - Stand upwind to reduce inhalation hazard. - Wear respiratory protection when conditions indicate the need for it. - Wear chemical resistant gloves and safety glasses to prevent skin/eye contact. |
| Contact with overhead power lines and/or buried utilities/debris while drilling. | <ul style="list-style-type: none"> - Do not move drill rig when mast is up. - Do not drill within 20 feet of overhead power lines. - Call a utility locator to check for location of underground utilities. - Use common sense when choosing drilling locations. |
| Noise Exposure and Contact with moving parts of drill rig and/or flying debris | <ul style="list-style-type: none"> - Wear hearing protection if you must shout to hear someone who is standing one foot or less away. - Do not stand unnecessarily close to the drill rig when it is operating. - Know the location of the emergency shut-off switch. - Wear a hard hat |
| Groundwater Sample Collection and Soil Sampling | |
| Inhalation of and skin contact with contaminants in the groundwater and soil. | <ul style="list-style-type: none"> - Stand upwind to reduce inhalation hazard. - Wear respiratory protection when conditions indicate the need for it. - Wear safety glasses and nitrile gloves to prevent eye and skin contact. - Wear vinyl boots over safety boots if free product is encountered. |

| Hazards: | Precaution |
|--|---|
| Test Pitting - Heavy Equipment | |
| <ul style="list-style-type: none"> - Operation of and work around heavy equipment | <ul style="list-style-type: none"> - Comply with all applicable regulations on construction activities. - Before operating any equipment, take a good look around to ensure that there are no site personnel nearby who are unaware of your intentions. - When walking around the site, watch for moving vehicles. Do not look down at feet or at notes while walking. - Do not stand unnecessarily close to operating equipment. - Be sure equipment is stabilized while operating. Chock the wheels as appropriate for equipment parked on a slope. - Wear hearing protection around loud equipment. Hearing protection must be worn if you must shout to be heard by someone standing one foot or less away. - Ensure that all equipment is in good operating condition and that proper maintenance checks have been done. - Use fall protection for all work conducted at heights that are six (6) feet or greater that the surrounding land or level. - When lifting heavy loads, use mechanical assistance whenever possible. Always use at least one other person to help lift the load. Lift with leg and arm muscles, not the back muscles. |
| Traffic | |
| | <ul style="list-style-type: none"> - At a minimum, use cones and/or cones with flags inserted in them to draw attention to work areas and to keep vehicles away from work areas. - When working in roads or in right-of-ways, set up cones at least 50 feet ahead of the actual work area. If the speed limit is over 35 mph, set up the cones 50 to 100 feet ahead of the work area. Use barricades around work areas when speed limits exceed 45 mph and on heavily traveled roads. Also enlist the assistance of local authorities when working on heavily traveled roads. |

17.0 PERSONNEL PROTECTION

17.1 General Guidelines

1. Construction activities shall be performed in compliance with all OSHA Construction Industry Standards/Regulations.
2. All work conducted on-site shall be coordinated through the Project Manager, or the Site Safety Officer.
3. During any activity conducted on-site in which a potential exists for exposure to hazardous materials or, accident or injury, at least two persons shall be present who are in constant communication with each other.
4. Following the procedures, requirements, and provisions of this plan, all personnel who may be potentially exposed to hazardous materials or wastes shall be in compliance with federal/state regulations, OSHA 29 CFR 1910.120.
5. Any drum or tank discovered on-site shall not be sampled, opened, or handled until an appropriate task-specific plan for unknown drum/tank sampling has been implemented.
6. Samples from areas known, or suspected, to be contaminated with hazardous substances shall be handled with appropriate personal protective equipment.
7. All equipment used in site operations shall be properly cleaned and maintained in good working order. Equipment shall be inspected for signs of defect and/or contamination before and after use.
8. Eating, drinking, chewing gum, and smoking shall be prohibited while performing site activities and in work zones. Personnel shall wash thoroughly before initiating any of the aforementioned activities.
9. The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated shall result in evacuation of site personnel and reevaluation of the hazards and the level of protection. Contact the Company Health and Safety Manager to determine the appropriate actions to take.
10. The walls and faces of trenches 5 feet or more deep and all excavations in which workers are exposed to danger from moving ground or cave-ins shall be guarded by a shoring system, sloping of the ground, or some other equivalent measure per OSHA and CHA requirements.

17.2 Air Monitoring

Monitoring shall be performed within the work area on-site to detect the presence, and the relative levels of toxic substances (i.e. photoionization detector readings). The data collected throughout monitoring shall be used to determine the appropriate levels of personal protective equipment. Monitoring shall be conducted to determine baseline data on potential hazards before entry in the work area, and periodically

while conducting work on-site to evaluate any changes in conditions of the specific work area. Each work area must be screened for ambient levels of contamination before initiating work activities.

Periodic monitoring on the site will consist of initial monitoring, during changes in site conditions (i.e. drilling activities, opening of a monitoring well, soil sampling etc.), and at regular intervals throughout the day as deemed necessary by the SSO, but at least once every two hours.

Any activity which is to be conducted in a confined or enclosed area or in on-site buildings must be monitored for oxygen deficiency and explosion potential, as well as chemical contamination.

17.3 Personal Protective Equipment

The purpose of personal protective clothing and equipment is to shield or isolate individuals from the chemical and physical hazards that may be encountered during work activities. The level of protection required must correspond to the level of hazard known, or suspected, in the specific work area.

There are four basic levels (A,B,C, and D) of personal protection as established by the U.S. Environmental Protection Agency (EPA). Level A provides the highest level of protection and Level D provides the lowest.

- **Level D** will consist of field clothes, outer gloves (if soil/water contact is likely), steel toe and shank safety boots, safety glasses (for splash hazards), and a hard hat (if overhead hazards are present).
- **Modified Level D** will consist of tyvek coverall, safety glasses (for dust/splash hazards) outer gloves with disposable inner gloves, steel toe and shank work boots, overboots if free product is encountered or as otherwise specified, hearing protection and, if overhead hazards are present, such as during drilling, a hard hat. Safety glasses must also be worn during drilling.
- **Level C** will consist of the same equipment as listed for modified Level D with the addition of a full-faced air purifying cartridge equipped respirator.
- **Level B**, if required for working on this project site, consists of the same equipment as listed for Level C with the substitution of a full-faced Self Contained Breathing Apparatus (SCBA) in place of a full-faced air purifying respirator.
- **Level A** is not anticipated for this project.

When wearing Level C, B, or A, all junctures between the chemical protective coverall (i.e., tyvek suit) and boots, gloves, and respirator must be taped. The suit must be placed over the boots and gloves. When

taping, remember to leave a tab for easy removal. Stress spots in the suit must also be taped, such as under the arms, down the zipper, and up or across the back.

Personal protective equipment has been selected consistent with the hazards associated with the expected field activities. Personal protective equipment (PPE) is available in various sizes to provide a good fit for all personnel. PPE must be stored in a clean location with access by site workers. Site workers are responsible for maintenance and storage of equipment at the site.

17.4 Health and Safety Action Levels

An action level is a point at which increased protection is required due to the concentration of contaminants in the work area or other environmental conditions. Each action level is determined by the concentration level (above background level) and the ability of the personal protective equipment to protect against that specific contaminant. The action levels are based on concentrations in the breathing zone.

If ambient levels are measured which exceed the action levels in areas accessible to the public or unprotected personnel, necessary site control measures (barricades, warning signs, and mitigative actions, etc.) must be implemented before commencing activities at the specific work site.

Personnel should also be able to upgrade or downgrade their level of protection with the concurrence of the SSO and task manager.

Reasons to upgrade:

- Known or suspected presence of dermal hazards.
- Occurrence or likely occurrence of gas, vapor or dust emission.
- Change in work task that will increase the exposure or potential exposure with hazardous materials.

Reasons to downgrade:

- New information indicating that the situation is less hazardous than was originally suspected.
- Change in site conditions that decreases the potential hazard.
- Change in work task that will reduce exposure to hazardous materials.

18.0 SITE CONTROL

18.1 Scope

The purpose of site control is to minimize potential contamination of workers, protect the public from the site's hazards, and prevent vandalism. The degree of site control necessary depends on the site characteristics, site size, and the surrounding community.

The restriction zones will be constructed of portable snow fencing and/or stakes and tapes, as necessary, to restrict public access. The restriction zones will have one point of entry/egress.

Site work zones may be established at each work area, and if required, will be established directly before the work being conducted by Clough Harbour & Associates LLP.

Each work area will establish three zones when the establishment of exclusion zones is required:

- Exclusion Zone - contaminated work area.
- Contamination Reduction Zone - the decontamination area.
- Support Zone -uncontaminated, clean area.

Each zone will be periodically monitored in accordance with the air monitoring requirements established in this Plan. The Exclusion Zone and the Contamination Reduction Zone are considered work areas. The Support Zone is considered an area which is accessible to the public.

- The Exclusion Zone is the area where primary activities occur, such as sampling, installation of wells, clean up work, etc. This area must be clearly marked with hazard tape, barricades or cones, or enclosed by fences or ropes. Only personnel involved in work activities will be allowed in the Exclusion Zone.
- The Contamination Reduction Zone is the transition area between the contaminated area and the clean area. Decontamination is the main focus in this area. The decontamination of workers and equipment limits the physical transfer of hazardous substances into the clean area. This area must also be clearly marked with hazard tape and access limited to personnel involved in decontamination. Decontamination is explained in a later section of this plan.
- The Support Zone is an uncontaminated zone which is the location of administrative and other support functions, such as first aid, equipment supply, emergency information, etc. The Support Zone should have negligible potential for exposure to contaminants and is equivalent to that of background.

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- CHA will establish a decontamination area and support zone (if necessary) at the site before the commencement of on-site activities. The support zone would also serve as the entry point for controlling site access. All personnel leaving the support zone, at a minimum, in addition to the associated PPE required, will be required to wear chemical resistant outer boots when traversing the site.

19.0 DECONTAMINATION

19.1 Personnel Decontamination

All personal protective equipment will be disposed or decontaminated at the conclusion of each work day. A designated container for tyvek suits and other disposables will be located in the field vehicle. Tyvek suits, respirator cartridges, and other disposables (inner gloves) will be doffed at the conclusion of each work day and replaced with new equipment before commencing work on the following work day. Respiratory equipment, boots, outer gloves, and foul weather gear will be washed and rinsed at the end of the day and stored in sanitized bags. Decontamination of personal protective equipment will consist of manual rinses ofalconox/tap water, and/or tap water.

19.2 Personnel Decontamination Steps

Modified Level D

- Remove coveralls and protective equipment.
- Discard disposable garments.
- Containerize wash and decon waters for disposal, as necessary.

Level C

- Drop equipment off in a segregated area in the decon zone.
- Wash/rinse outer suit and boots.
- Wash/rinse outer gloves.
- Remove outer boots.
- Remove outer gloves.
- Deposit disposables in container for proper disposal.
- Remove suit.
- Remove respirator.
- Remove inner gloves.
- Containerize wash and decon waters for disposal, as necessary.

Level B

- Drop equipment off in a segregated area in the decon zone.
- Wash/rinse outer boots.
- Wash/rinse chemical resistant outer gloves.
- Wash/rinse air tank, hose, and protective suit.
- Remove duct tape from boots, gloves, and face piece and discard.
- Remove boot covers and outer gloves.
- Remove face piece, air line, and emergency respirator.
- Remove chemical resistant suit.
- Remove inner boots.
- Remove hard hat.
- Remove inner gloves and discard.

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- Containerize wash and decon waters for disposal.

Level A

- Will not be used.

19.3 Equipment Decontamination

All drilling/excavating equipment will be decontaminated by steam cleaning. All soil and groundwater sampling equipment will be washed using a mixture ofalconox and distilled water, rinsed with tap water, rinsed with methanol, and followed by a final rinse with distilled water. All decontamination fluids, as necessary, will be stored in containers at the subject site. Decontamination fluids, if suspected to be hazardous, will be analyzed. If the analysis reveals the decontamination fluid is hazardous, it will be handled as a hazardous waste. If the analysis reveals that the fluid is non-hazardous, then the material will be handled in a manner consistent with standard operating procedure. If the analysis indicates no levels of contamination above regulatory standards, then the material will be discharged to the ground on the site.

20.0 EMERGENCY INFORMATION

20.1 General

On-site emergencies can range in intensity from minor to serious conditions. Various procedures for responding to site emergencies are listed in this section. The designated SSO is responsible for contacting local emergency services in emergency situations (however, others must assume responsibility if the situation warrants). An injured person shall be accompanied by another worker at all times.

An emergency information sheet containing the hospital location, directions, phone access, and emergency service phone numbers shall be posted at each work area during site activities.

20.2 Emergency Procedures for Contaminated Personnel

Whenever possible, personnel should be decontaminated before administering first aid. In the Contamination Reduction Zone there will be a separate decontamination line for emergency use only to reduce the risk of exposure.

- **Skin Contact:** Remove contaminated clothing, wash immediately with water, use soap if available.
- **Inhalation:** Remove from contaminated atmosphere; initiate artificial respiration; if necessary arrange for emergency transport to hospital.
- **Ingestion:** Remove from contaminated area; do not induce vomiting if the victim is unconscious; never induce vomiting when acids, alkalines, or petroleum products are suspected.
- If site personnel have unexplainably collapsed, all personnel must evacuate work area. Rescue personnel must don a level of protection higher than the victim was in before evacuating victim from work area. Confined space rescue always requires Level B protection. No one will re-enter the work area until the cause has been determined and the Site Safety Officer (SSO) has determined that the area is safe to re-enter.
- In case of fire, all personnel must evacuate work area and the SSO will contact local fire department.

20.3 Physical Injuries

Horn blasts will be used as emergency signals. Two horn blasts indicate an injury has occurred. Three horn blasts followed by a continuous blast indicates that all personnel in the Exclusion Zone must immediately evacuate. Personnel will move to the predesignated, safe reassembly points. On-site

activities will stop until the added risk is removed or minimized. Do not walk through a vapor cloud to go to the safe area. In the event that the number of site personnel is limited to two to four persons, verbal communications will suffice.

20.4 Safety Equipment

Safety and personal protective equipment will be kept in a dry and sanitary condition in a designated area in the support zone or designated site vehicle. The safety equipment available on-site is as follows: respiratory equipment, hard hats, tyvek coveralls, safety glasses, gloves, boots, emergency eyewash, fire extinguisher, first aid kit, first aid manual, potable drinking water, portable radios, log books to record readings, and absorbent materials.

20.5 Spill Containment

If on-site work results in the accidental spill or release of oil or hazardous materials, containment to the extent possible will be required by on-site personnel (in proper PPE). Containment should include the use of absorbent pads or materials, diking with soils, covering and/or diverting spills from sewers, drains, surface water bodies, etc. For spills that cannot be controlled by on-site personnel or are above the reportable quantities, the SSO or designee will secure the area and notify the State Police, and the NYS DEC Oil and Chemical Spill Reporting Hotline (see page 1) for all emergency contact information.

21.0 HEAT & COLD STRESS

21.1 Heat Stress - Symptoms and Remedies

Acclimatization and frequent rest periods must be established for conducting activities where heat stress may occur. Symptoms of heat stress and appropriate responses include:

- Heat Rash - redness of skin. Remedy - frequent rest and change of clothing.
- Heat Cramp - painful muscle spasms in hands feet, and/or abdomen. Remedy - administer lightly salted water (1/4 teaspoon per gallon) orally unless there are medical restrictions.
- Heat Exhaustion - clammy, moist, pale skin; dizziness, nausea rapid pulse, fainting. Remedy - remove to cooler area and administer fluids orally or have physician administer saline solution intravenously.
- Heat Stroke - hot dry skin; red, spotted or bluish; high body temperature of 104°F or greater, mental confusion, loss of consciousness, convulsions or coma. Remedy -immediately cool victim by immersion in cool water. Wrap in wet sheet while fanning, sponge with cool liquid. While fanning, treat for shock. Call for an ambulance. **DO NOT DELAY TREATMENT. COOL BODY WHILE AWAITING AMBULANCE.**

21.2 Heat Stress - Precautions

Precautions to take to reduce the possibility of heat stress include the following:

- Avoid caffeine and alcohol both during work hours and 24 hours before on-site activity.
- Drink water before feeling thirsty.
- Watch for signs and symptoms of heat stress.
- Rest in cool/dry areas, such as air conditioned vehicle or building or in the shade.
- Use cooling devices such as water sprays or fans to cool off.

21.3 Cold Stress – Symptoms and Remedies

Cold Stress symptoms may include any or all of the following:

- Excessive fatigue
- Irritability
- Euphoria

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- Drowsiness
 - Uncontrollable shivering
 - Frost nip

Medical assistance is necessary if these symptoms persist.

21.4 Cold Stress - Treatment

Cold Stress and Frostbite Emergency Care:

- Remove the patient to a warm, dry place.
- If clothing is wet, remove and replace with dry clothing.
- Keep patient warm. Rewarming of the patient should be gradual to avoid heat stroke symptoms.
- Dehydration, or the loss of body fluids may result in cold injury due to a significant change in blood flow to the extremities. If patient is conscious and alert, warm sweet drinks should be provided.
- Extremities affected by frostbite should be gradually warmed up and returned to normal temperature. Moist compresses should be applied; begin with lukewarm compresses and slowly increase the temperature as changes in skin temperature are detected.
- Keep patient warm and calm, remove to a medical facility as soon as possible.

21.5 Cold Stress - Prevention

- Take breaks in heated shelters at frequent intervals when working in temperatures below 20°F, including wind chill.
- Remove outer layer of clothing when entering the shelter. Loosen other layers to allow sweat to evaporate.
- Drink warm, sweet liquids or soups to reduce possibility of cold injury. Avoid caffeine and alcohol.

22.0 HEALTH & SAFETY PROGRAM COMPONENTS

22.1 Medical Surveillance

All CHA project personnel who work at hazardous waste operations participate in the company medical surveillance program. This program tracks the physical condition of employees in compliance with OSHA regulations. Medical examinations and consultations are completed for all employees prior to assignment, annually, upon termination, and in the event of injury and/or illness resulting from exposure at a work site.

22.2 Training

All CHA project personnel have completed a minimum of 40 hours of hazardous waste activity instruction plus a minimum of three days of field training under the direct supervision of a trained, experienced person. Project personnel also receive 8 hours of annual refresher training. The Site Safety Officer receives an additional 8 hours of training. All training meets the requirements of 29 CFR 1910.120.

22.3 Authorization

CHA employees shall acknowledge and comply with the policies and procedures established in this Health and Safety Plan.

If any site worker performs work in an unsafe manner and/or in violation of Federal, state, or local regulations, notify the Site Safety Officer and/or the Project Manager. The Project Manager is responsible to notify the client so that appropriate actions may be taken.

CHA personnel have the authority to shut down field operations at this site if our subcontractors are not conducting work in accordance with requirements of this Plan, or if site conditions are determined to be unsafe to continue operations.

23.0 REFERENCES

1. Project Specific Site Investigation/Remedial Alternatives Report Work Plan
2. Quality Assurance Project Plan (QAPP)
3. U.S. Environmental Protection Agency, Standard Operating Safety Guides, U.S. EPA, November 1984.
4. U.S. Environmental Protection Agency, Superfund Public Health Evaluation Manual, EPA/540/1-86/060, January 1986.
5. 29 CFR 1910 Hazardous Waste Operations and Emergency Response, March 8, 1989.
6. NIOSH, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, DHHS/NIOSH-85-115, October 1985.
7. ACGIH, Threshold Limit Values and Biological Exposure Indices.
8. Supplemental/Pre-design Remedial Investigation Work Plan, CHA, July 13, 2004.

24.0 HEALTH AND SAFETY PLAN AGREEMENT

This agreement must be signed by all CHA employees, subcontractors, and visitors before conducting field activities at this site and/or entering the exclusion or decontamination zones.

I have read this Health and Safety Plan and I understand the requirements of the Plan. I will conduct work at this site in accordance with the requirements of the Health and Safety Plan.

| | | |
|--------------------|---------------|------------------|
| _____ Signature | _____ Date | _____ Company |

**APPENDIX A
NYSDOH COMMUNITY AIR MONITORING PROGRAM
(CAMP)**

New York State Department of Health Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for 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/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. 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.

Periodic monitoring for VOCs 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 might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a **continuous** basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or 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.
- If total organic vapor levels at the downwind perimeter of the work area or 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.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored **continuously** at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must 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.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \text{ mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

June 20, 2000

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