# APPENDIX C
# Health and Safety Plan

# *Health and Safety Plan*
# 136 Fuller Road Site
# Brownfield Cleanup Program
# NYSDEC Site No. C401055

City of Albany and Town of Guilderland
Albany County, New York

June 2010

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Land Surveyors
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## 1.0 INTRODUCTION AND OBJECTIVES

The Chazen Companies (Chazen) have prepared this Health and Safety Plan (HASP) for employees of Chazen for the Former Fuller Brush Manufacturing Facility (herein after referred to as the 136 Fuller Road Site) located primarily in the City of Albany, Albany County, New York. A small portion of the property is located in the Town of Guilderland, Albany County, New York. This HASP is applicable to the remedial investigation as described in the Work Plan and has been prepared to specifically address potential hazards associated with the proposed scope of work.

The activities, equipment, and procedures described in this plan are designed to provide personal protection against potential environmental hazards which may be present on the work site. This plan includes a preliminary evaluation of site characteristics; establishes an emergency chain-of-command; details the use of basic safety equipment, personal protective equipment, and air monitoring devices, and describes equipment decontamination procedures.

The objectives of this HASP are to:

- Identify the physical, chemical, and biological hazards which may be present during the proposed site investigative activities
- Specify the protective measures necessary to control those hazards
- Define emergency procedures.
- Specify training and medical qualification criteria for personnel.

This HASP must be read and understood by all Chazen personnel who perform field activities at the 136 Fuller Road Site.

## 2.0 PROJECT PERSONNEL & EMERGENCY RESPONSE CONTACTS

The personnel and emergency response contacts associated with the proposed scope of work at the site are presented below.

**DIAL 911 FOR EMERGENCY IN ALBANY COUNTY**

| Title/Project Responsibility | Name | Main Phone | Mobile/Other Phone |
|---|---|---|---|
| **Project Personnel** | | | |
| Project Manager<br><br>Assistant PM | Kim L. Baines<br><br>Arlette Meader | (518) 783-1700<br><br>(518) 266-7328 | (518) 495-0054469-2355<br><br>(518)260-1811 |
| Field Operations Leader | Scott Dietzel | (518) 266-7314 | (518) 469-2726 |
| Health & Safety Officer | Kimberly Cuppett | (845) 454-3980 | |
| UltrePet Emergency Contact | Leigh Peritz, PE | (781) 275-6400 | |
| Equal Vision Contact | Steve Raddy | (518) 458-8250 | |
| **Emergency Personnel – DIAL 911 In Albany County** | | | |
| **Hospital**<br>St. Peter's Hospital<br>315 South Manning Boulevard<br>Albany, New York<br>(Hospital Route Map Attached On Next Page) | | Emergency-Dial 911 | (518) 525-1550 non-emergency |
| City of Albany Fire Dept. | | Dial 911 | (518) 447-7879 |
| City of Albany Police Department | | Dial 911 | (518) 458-5660 |
| NYSDEC Spills Hotline | | (800) 457-7362 | |
| NYSDEC Regional Office | | (518) 357-2045 | |
| Poison Control Center | | (800) 336-6997 | |
| National Response Center | | (800) 424-8802 | |

| | |
|---|---|
| **Hospital**<br>St. Peter's Hospital<br>315 South Manning Boulevard<br>Albany, New York<br>(Hospital Route Map Attached On Page 4) | **Emergency-Dial 911** |

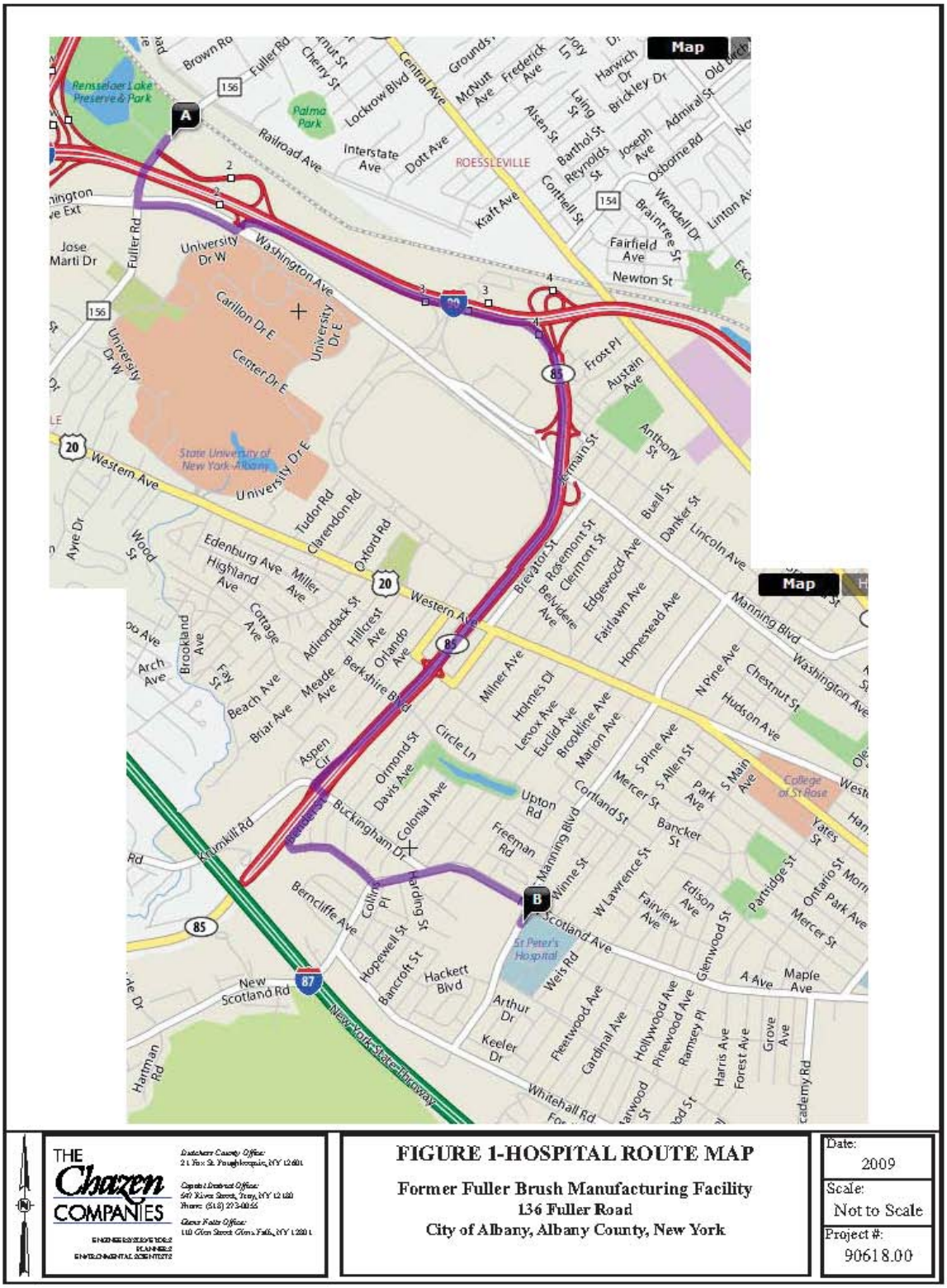
## 2.1 Hospital Route

St. Peters Hospital is located approximately 5 miles from the subject site. The travel time from the site to St. Peters Hospital is approximately eleven minutes. Directions are provided below and a route plan map is shown on the following page.

Directions to St. Peters Hospital:

| | | |
|---|---|---|
| 1. | Turn LEFT onto FULLER ROAD. | 0.4 miles |
| 2. | Turn LEFT onto WASHINGTON AVENUE. | 0.3 miles |
| 3. | Turn LEFT onto I-90E Ramp. | <0.1 miles |
| 4. | Merge onto I-90 E | 0.8 miles |
| 5. | Take the Route 85 exit [exit 4] – toward SLINGERLANDS/VOORHEESVILLE. | 0.3 miles |
| 6. | Merge onto NY-85 S. | 1.6 miles |
| 7. | Take the exit toward MARIA COLLEGE/KRUMKILL ROAD. | 0.2 miles |
| 8. | Turn LEFT onto BUCKINGHAM DRIVE. | 0.4 miles |
| 9. | Turn LEFT onto NEW SCOTLAND AVENUE. | 0.3 miles |
| 10. | Turn RIGHT onto S MANNING BOULEVARD. | 0.2 miles |
| 11. | End at 315 MANNING BOULEVARD. | |
| | Total estimated time = 11 minutes | 4.98 miles |

# 1. Hospital Route Map


Map
A
B
Rensselaer Lake Preserve & Park
Palma Park
ROESSLEVILLE
St Peter's Hospital
State University of New York-Albany
College of St Rose
Railroad Ave
Interstate Ave
Dott Ave
Lockrow Blvd
Central Ave
Washington Ave
Western Ave
New Scotland Rd
Whitehall Rd
New York State Thruway
Fuller Rd
University Dr W
University Dr E
Carillon Dr E
Center Dr E
Tudor Rd
Clarendon Rd
Oxford Rd
Edenburg Ave
Highland Ave
Miller Ave
Adirondack St
Hillcrest Ave
Orlando Ave
Berkshire Blvd
Meade Ave
Beach Ave
Briar Ave
Brookland Ave
Cottage Ave
Arch Ave
Fay St
Aspen Cir
Circle Ln
Ormond St
Davis Ave
Colonial Ave
Buckingham Dr
Bancroft Rd
Bemcliffe Ave
Collin Pl
Harding St
Hopewell St
Bancroft St
Hackett Blvd
Weis Rd
Arthur Dr
Keeler Dr
Fleetwood Ave
Cardinal Ave
Hollywood Ave
Pinewood Ave
Ramsey Pl
Harris Ave
Forest Ave
Grove Ave
Hartman Rd
Academy Rd
Frost Pl
Austain Ave
Anthony St
Lincoln Ave
Danker St
Buell St
Clermont St
Rosemont St
Belvidere Ave
Brevator St
Edgewood Ave
Fairlawn Ave
Homestead Ave
Manning Blvd
Washington Ave
Chestnut St
Hudson Ave
N Pine Ave
S Pine Ave
S Allen St
Park Ave
S Main Ave
Yates St
Mercer St
Bancker St
Cortland St
Upton Rd
Freeman Rd
Winne St
W Lawrence St
Fairview Ave
Edison Ave
Glenwood St
Partridge St
Ontario St
Park Ave
Maple Ave
A Ave
Scotland Ave
Milner Ave
Holmes Ct
Lenox Ave
Euclid Ave
Brookline Ave
Marion Ave
Osborne Rd
Joseph Ave
Admiral St
Brickley Dr
Harwich Dr
Frederick Ave
McNutt Ave
Grounds
Alsen St
Barthol St
Reynolds St
Corthell St
Kraft Ave
Fairfield Ave
Braintree St
Wendell Dr
Linton Ave
Newton St
Jose Marti Dr
Fuller Rd
Brown Rd
Cherry St
Ayre Dr
Wood St
Laing St
Old Beech
Loudonville Ext
Maumkill Rd
Rd
Freeman Rd
Manning Blvd
Circle Ln
Aspen Cir
Ormond St
Davis Ave
Colonial Ave
Buckingham Dr
Bancroft St
Bemcliffe Ave
Collin Pl
Harding St
Hopewell St
Hackett Blvd
Weis Rd
Arthur Dr
Keeler Dr
Fleetwood Ave
Cardinal Ave
Hollywood Ave
Pinewood Ave
Ramsey Pl
Harris Ave
Forest Ave
Grove Ave
Academy Rd
Hartman

# 3.0 SITE CHARACTERIZATION

## 3.1 Site Location & Description

The site is a 15.72-acre property located at 136 Fuller Road in the City of Albany and Town of Guilderland, Albany County, New York. The site is currently developed with a 266,000-square foot commercial/industrial, single-story building which is predominately occupied by UltrePet LLC, recyclers of plastic polyethelene (PET) bottles and manufacturer of PET plastic resins. The site is also occupied by Equal Vision, a T-shirt silk screening printer. The remaining portion of the site building is vacant and unused warehouse space. Crown Castle International currently leases a 0.06 ± acre portion of the northeastern site area for the location and operation of cellular telecommunications tower, antenna and associated equipment (Crown Castle Site # 806676).

## 3.2 Historic Site Uses

The site was developed circa 1955 as the Mohawk Brush Company which produced brushes for the Fuller Brush Company. The Mohawk Brush Company/Fuller Brush Company owned and operated at the site for approximately 20 years until the mid-1970s. From the mid-1970s, Star Textiles activities at the site included manufacturing poly-fill material and plastic resin from recycling plastic. In 1990, wTe Recycling Corp. acquired Star Textiles and operated a plastics recycling business. In 1999, wTe Recycling Corp. entered into a partnership agreement with Tomra of North America called UltrePET LLC. UltrePET LLC continues to operate a plastics recycling business at the site.

## 3.3 Proposed Project Scope/Site Investigation Activities

The investigative activities proposed at the site include the following:

- Drilling with Geoprobe and a hollow-stem auger (HSA) rigs and sampling
- Installation of monitoring wells
- Soil sample collection
- Groundwater sample collection/monitoring well sampling
- Vapor extraction point installation and testing

## 4.0 SITE HAZARD EVALUATION AND CONTROL

The potential for exposure to chemical, physical, and mechanical hazards at the site is considered to be minimal. Hazards which may be encountered at the site are summarized in Table 1. Additional information pertaining to these hazards is provided in later sections of this HASP.

**Table 1: Potential Hazards at the Site**

| Hazard Type | Hazard Anticipated | Associated Investigative Activities | Comments | Hazard Control Methods |
|---|---|---|---|---|
| **Chemical** | Chlorinated Solvents and Petroleum Compounds in Soil and Groundwater<br><br>Sudan IV (Red Azo Dye) | Drilling with Hollow stem augers or Geoprobe®, installation of groundwater monitoring wells, soil/groundwater/ surface water/sediment sample collection, vapor intrusion sampling, PID headspace screening<br><br>Field Soil Screening | Considered minimal | PPE<br>Training on Identification of Potential COCs<br>Safety Training & Standard Safety Operations |
| **Physical** | Slip, Trip & Fall | Any site work | Construction and Industrial equipment on-site | Safety Training & Standard Safety Operations |
| **Biological** | Tick, insect bites, poisonous plants, heat/ cold-related disorders | Any site work | Considered minimal | Safety Training & Standard Safety Operations |
| **Electrical** | Working around utilities | Drilling with auger or Geoprobe®, soil sample collection | Considered minimal | Utility Check, Safety Training & Standard Safety Operations |

## 4.1 Hazard Evaluation

### 4.1.1 Chemical Hazards

Based on available historical information, the primary chemicals of concern (COCs) present at the site include volatile organic compounds (VOCs) tetrachloroethlyene (PCE) and degradation products and some petroleum-related constituents.

Table 2 lists the potential health hazards that may be encountered and recommended exposure limits.

**Table 2: COCs & Established Permissible Airborne Exposure Limits**

| COC | Time Weighted Average Airborne Limits | | | Short-Term Exposure Limit (ppm) | IDLH (ppm) | Primary Routes Of Exposure On Site |
|---|---|---|---|---|---|---|
| | OSHA PEL | NIOSH REL | ACGIH TLV | | | |
| VOCs (PCE)[1] | 100 ppm | -- | 25 | 300 ppm | 150[Ca] | Inhalation, ingestion, dermal |
| VOC TCE | 100 ppm | -- | -- | 300 ppm | 1,000 [Ca] | Inhalation, ingestion, dermal |
| VOC DCE | 200 ppm | 200 ppm | -- | -- | 1,000 | Inhalation, ingestion, dermal |
| Benzene | 1.0 | 0.1 | 0.5 | 5.0 (1.0 NIOSH) | 500 [Ca] | Inhalation |
| Ethylbenzene | 100 | 100 | 100 | 125 | 800 | Inhalation |
| Toluene | 200 | 100 | 50 | 150 | 500 | Inhalation |
| Xylenes | 100 | 100 | 100 | 150 | 900 | Inhalation |

1. Numerous VOCs; PCE permissible exposure limit information noted as a conservative example of VOCs. A conservative permissible exposure limit of 5 ppm for VOCs will be used in the field as measured continuously using a portable photoionization detector (PID)

3. Air concentrations listed in http://www.cdc.gov/niosh/npg/npgd0368.html, accessed August 14, 2009.

Ca: NIOSH has identified the compounds as a potential occupational carcinogen

C: Ceiling value. Typically a 15-minute TWA that must not be exceeded at any point during the workday

IDLH: Immediately Dangerous to Life & Health

Skin designation indicates the potential for dermal absorption

OSHA PELs are legally enforceable.

RELs and TLVs are published as recommended guidelines

COCs present on the subject property are expected to vary based on location (e.g., source or plume area).

Project investigation activities will involve potential exposure to soil and groundwater. Given the nature of the proposed project activities, the potential for site personnel to encounter the site COCs during performance of the activities outlined in the scope of work is considered to be minimal as specified PPE and air monitoring (described later in this plan) will be utilized.

Symptoms of exposure to the COCs are summarized in Table 3.

**Table 3: General Signs and Symptoms of Exposure to COCs**

| Compound | Signs & Symptoms of Exposure |
|---|---|
| VOCs (general) | Irritation eyes, skin, nose, respiratory system; headache, nausea; fatigue, anorexia |
| Petroleum Hydrocarbons | Irritation to eyes, skin, nose, respiratory system; headache, nausea, staggered gait; fatigue, anorexia, lassitude (weakness, exhaustion); dermatitis |

Field screening of soil may include the use of Sudan IV, a Red Azo Dye, in the Oil-In-Soil Test Kit. The material safety data sheet (MSDS) for this test kit is attached to the QAPP. Gloves will be worn when using the test kits and the dye cube will not be crushed.

4.1.2 Physical Hazards

Site work which occurs in the vicinity of drilling and/or excavating equipment and machinery presents a general safety hazard. Uneven ground surfaces and the presence of debris on the site presents a concern for slip, trip, and fall incidents.

The potential for heat-related stress during site work exists. Heat stress may occur even in moderate temperatures and may present any or all of the following symptoms:

***Heat Rash –*** Result of continuous exposure to hot humid air and chafing clothes. Heat rash is uncomfortable and decreases the ability to tolerate heat.

***Heat Cramps –*** Result of the inadequate replacement of body electrolytes lost through perspiration. Sign include severe spasms and pain in the extremities and abdomen.

***Heat Exhaustion –*** Result of the increased stress on the vital organs of the body in the effort to meet the body's cooling demands. Signs include shallow breathing, pale, cool, moist skin, profuse sweating, dizziness, and listlessness.

***Heat Stroke –*** Result of overworked cooling system. Heat stroke is the most serious form of heat stress. Body surfaces must be cooled and medical help must be obtained immediately to prevent severe injury and/or death. Signs of heat stroke include red, hot, dry skin, absence of perspiration, nausea, dizziness, confusion and strong rapid pulse. Coma and death can result from heat stroke.

The following any or a combination of the following actions can be taken to prevent heat stress:

- Replace body fluids (water and electrolytes) lost through perspiration. Solutions may include a 0.1% salt and water solution or commercial mixes such as Gatorade and Squench. A fluid/electrolyte replacement will be used as necessary to minimize fluid loss.

- Provide cooling devices to aid in the natural body ventilation. Cooling occurs through evaporation of perspiration and limited body contact with heat absorbing protective clothing. Fans and air conditioners can assist in evaporation.

- Provide hose-down mobile shower facilities, where feasible, to cool protective clothing and reduce body temperature.

- Conduct activities early in the morning or evening during very hot weather.

- Provide shelter against heat and direct sunlight to protect personnel.

The potential for cold stress during site work exists. Working outside in cold temperatures presents a concern for cold-related disorders as described below:

***Hypothermia*** **–** Symptoms of hypothermia include shivering, slurred speech, disorientation, and loss of coordination. Advance stages of hypothermia include feelings of warmth and reckless behavior.

***Frost Bite*** **–** Symptoms of frostbite include cold feelings, red color to the skin, tingling, swelling, and pain. In advanced stated of frostbite, the skin will appear white in color.

To avoid cold stress, take the following precautions:

- Provide a shelter area where warmth is available.

- Wear thermal clothing applied in layers.

- Remain active in order to maintain blood circulation throughout the body.

- Maintain warm/hot drinks in the support zone.

Physical hazards are anticipated to be a concern for all site activities.

### 4.1.3 Biological Hazards

It is anticipated that the site field work will be performed in the fall, winter and spring months which presents some potential for biological hazards to be present. Biological hazards include poison ivy, snakes, ticks, mosquitoes, and other pests. Given the developed nature of the site, biological hazards are expected to be low, but may still be present during site activities.

#### *4.1.3.1 Tick-Borne Disease*

Ticks can carry a number of diseases. In the United States, these diseases include:

- Lyme Disease
- Ehrlichiosis
- Rocky Mountain Spotted Fever (throughout the United States but most prevalent in the east)

*Lyme Disease* - The disease commonly occurs in New York State in the spring and summer and is transmitted by the bite of infected ticks. Symptoms of Lyme disease include a rash or a peculiar red spot, like a bull's eye, which expands outward in a circular manner. The victim may have headache, weakness, fever, a stiff neck, swelling and pain in the joints, and eventually, arthritis.

*Ehrlichiosis* - The disease also commonly occurs in New York State in the summer and is transmitted by the bite of infected ticks. Symptoms of ehrlichiosis include muscle aches, joint aches, and flu-like symptoms, but there is typically no skin rash.

*Rocky Mountain Spotted Fever (RMSF)* - This disease is transmitted via the bite of an infected tick. The tick must be attached 4 to 6 hours before the disease-causing organism (*Rickettsia rickettsii*) becomes reactivated and can infect humans. The primary symptom of RMSF is the sudden appearance of a moderate-to-high fever. The fever may persist for 2 to 3 weeks. The victim may also have a headache, deep muscle pain, and chills. A rash appears on the hands and feet on about the third day and eventually spreads to all parts of the body. For this reason, RMSF may be confused with measles or meningitis. The disease may cause death, if untreated, but if identified and treated promptly, death is uncommon.

#### *4.1.3.2 Other Biological Hazards*

Poisonous plants, such as poison ivy and sumac, maybe present on the site and present a hazard for site personnel. Signs and symptoms of exposure to such poisonous plants include itching, burning, redness, rash, blistering and swelling.

Snakes may be present on the site property and present the potential for snake bites. Poisonous snakes are not expected to be present on the site, however, even bites from non-poisonous snakes can cause adverse health symptoms such as redness, swelling, and allergic reaction.

Site personnel may be exposed to mosquitoes and/or black flies during site work. While the presence of mosquitoes and/or black flies is not anticipated to be a significant health and safety concern, bites can cause adverse health symptoms such as redness, swelling, and allergic reaction.

#### 4.1.4 Electrical Hazards

Drill rigs will be used on the site to install soil borings. The presence of overhead utilities and underground obstacles poses a hazard if equipment contacts them. As indicated in Table 1, electrical hazards are considered to be a concern for the installation of borings on the site.

### 4.2 Hazard Control

#### 4.2.1 Hazards Associated With Soil Sampling

Soil sampling consists of the installation of soil borings using a hydraulic, direct-push drilling rig or hollow stem auger rig and the collection of soil samples from the soil borings for analysis. The hazards associated with the collection of soil samples are considered to be minimal and include dermal exposure to soil contaminants, inhalation exposure to VOCs and slip, trip, and fall hazards from scattered debris and irregular walking surfaces.

All drillers must possess required state or local licenses. The driller is responsible for the safe operation of the drill rig as well as adherence to the requirements of this HASP. The driller is responsible for ensuring that the drill rig is in proper condition and is properly used. Rig conditions will be evaluated daily prior to the start of work.

Prior to any subsurface sampling or remedial activities, underground utilities must be located using facility plans and the Dig Safely NY Program (1-800-962-7962). These protective measures will be taken to minimize the potential health and safety risks associated with investigation activities near underground utility lines.

If drilling activities are conducted in the vicinity of overhead power lines, the rig will be positioned such that no part of the drilling rig is within OSHA's maximum clearance distance of 25 feet.

To control dermal exposure during soil, sediment, groundwater and surface water sampling activities, a minimum of Modified Level D PPE will be worn as described in Section 6.0 of this HASP.

Based on available information, volatile organic compounds (VOCs) are present the site subsurface and therefore the potential for inhalation exposure to airborne VOCs will be evaluated and controlled during site activities as a general safety precaution.

Air monitoring will be performed during site work to evaluate airborne concentrations of chemical contaminants to which site workers may be exposed. Air monitoring control measures are discussed in Section 6.0 of this HASP.

General safety precautions will be employed on-site to control for slip, trip, and fall hazards.

### 4.2.5 Physical Hazards

#### *4.2.5.1 Biological Hazards*

Ticks

The best way to prevent tick borne diseases is to avoid tick bites. Preventative measures to reduce the potential for tick bites include, but are not limited to, the following:

- Wearing long pants and long sleeved shirts
- Tucking shirts into pants. Tucking pants into socks or boots, or using tape to close the opening where they meet.
- Using an EPA approved insect repellant or arachnicide (pesticide) which is effective for ticks, such as DEET (N,N-diethyl-m-toluamide) or pyrethrin. Be sure to heed all precautionary information, and be aware that some people are sensitive to these chemicals.
- Wearing light colored clothing so that a tick can be seen more easily.
- Changing clothes when you return from an area where ticks may be located.
- Showering to wash off any loose ticks.
- Throughout the work day, perform Tick Checks and Removal Procedures as follows:
    - Check clothing for ticks. If you find a tick, do a more thorough tick check.
    - Inspect parts that bend (back of knee, between fingers and toes, underarms), pressure points where clothing presses against skin (underwear elastic, belts, neck); other common areas (belly button, around or in ear, hairline, and top of head).
    - Once indoors, do a final tick check and change clothes.
    - If you are in a tick infested area or an area known to have disease carrying ticks, perform checks on a more regular basis
    - Remove unattached ticks promptly.
    - Remove attached ticks are removed using fine pointed tweezers:
        1. The mouth parts of the tick are grasped with the tweezers as close to the skin as possible
        2. Apply firm steady pressure upward until the tick releases - do not jerk, twist, squash or squeeze the tick

3. Clean the wound and the tweezers with an antiseptic

Do not use petroleum jelly, nail polish remover, or prick or burn the tick. These actions can cause infected secretions to enter the wound.

Plants

Preventative measures will be implemented to avoid contact with poisonous plants on the site property. These measures will include, but are not limited to, the following activities:

- Wear clothing that covers arms and hands if possible
- Frequently wash exposed skin
- Avoid skin contact with objects or protective clothing that have touched the plants
- Treat every surface that may have touched the plant as contaminated, and practice contamination avoidance
- If skin contact is made, the area should be washed immediately with soap and water and observed for signs of reddening.

Snakes

All personnel walking through vegetated areas must be aware of the potential for encountering snakes. If a snake bite occurs, apply a constriction band and wash the area around the wound to remove any unabsorbed venom.

#### *4.2.5.2 Heat Stress*

When feasible, the most stressful site activities should be performed during the coolest parts of the day. Site workers will be instructed to stay hydrated throughout the day. An intake of 5 to 7 ounces of fluids every 15 to 20 minutes is recommended.

Site workers will be monitored for the signs and symptoms of heat stress during work activities. The signs and symptoms of heat stress are dizziness, vomiting, hot, dry skin, rapid heartbeat, throbbing headache, rash, cramps, chest pain, muscle spasms, pain in the hands, feet, or abdomen, loss of coordination, and decreased cognitive ability.

Site workers expressing or demonstrating any of these symptoms will be immediately excused of their duties and instructed to rest in a cool environment. Site work/rest cycles will be determined based on ambient conditions and based on guidance pertaining to heat stress provided by OSHA and NIOSH.

### 4.2.6 General Health and Safety Controls

#### *4.2.6.1 Communications System*

Telephones will be available on site and both on-site and off-site project personnel will be accessible for communication. If there is a lack of cell phone signal at the site, then

personnel should locate the closest public payphone prior to work commencement. Personnel should also be trained in the use of standard hand signals for health and safety. Personnel in the work zone will use the following standard hand signals:

- Hand gripping throat ----- Can't breathe
- Grip partner's wrist or both hands around waist ----- Leave area immediately
- Hands on top of head ----- Need assistance
- Thumbs up ----- OK, I am all right, I understand
- Thumbs down ----- No, negative

*4.2.6.2 Basic Safety Equipment*

Safety equipment will be kept on site for monitoring and responding to emergency situations. Basic safety equipment will include, but is not limited to, the following:

- ABC type fire extinguishers
- First Aid kits
- Air Monitoring Equipment
- Reference books containing basic first-aid procedures and information

*4.2.6.3 Safe Work Practices*

All Chazen personnel and all subcontractors working on site are expected to follow established safe work practices for their specialties (i.e. excavators, surveying, etc.). The need to exercise caution in the performance of specific work tasks is frequently made more acute due to:

- Weather conditions
- Restricted mobility and reduced peripheral vision caused by protective gear
- The need to maintain the integrity of the protective equipment

Work at the 136 Fuller Road site will be conducted in accordance with established protocols and guidelines for the safety and health of all involved. General safety practices employed at the site will include but are not limited to the following:

- No smoking, eating, or drinking in an exclusion zone or before personnel decontamination. Ingestion of contaminants is the second most likely means of introducing toxic substances into the body.

- In any unknown situation, always assume the worst conditions and plan responses accordingly.

- Personal protective equipment is never 100% effective, so all personnel must minimize contact with potentially contaminated material. Do not place equipment on potentially contaminated ground. Do not sit or kneel on potentially contaminated material. Avoid standing in or walking through puddles or stained soil.

- Avoid heat and other work stresses related to the wearing of protective equipment and clothing. Work breaks should be scheduled *(and actually taken)* to prevent stress-related accidents or fatigue.

- As often as possible, the handling of contaminated materials should be done remotely. Every effort should be made to identify the contents of containers found on-site before they are handled.

- Personnel must be observant of not only their own immediate surroundings, but also of others.

- Rigorous contingency planning and dissemination of plans to all personnel minimizes the impact of rapidly changing safety protocols in response to changing site conditions.

- Personnel must be aware that chemical contaminants may mimic or enhance symptoms of other illnesses or intoxication. Avoid field work while feeling ill. Company policies prohibit use of alcohol while working.

The site Health and Safety Officer or their designee will maintain project Health and Safety records in a safe and secure manner. The Health and Safety records will remain on site for the duration of the project so that any designated replacement can update and maintain the records. At the conclusion of field work, the records will be included with the overall project file.

## 5.0 PERSONAL PROTECTIVE EQUIPMENT

Site workers will be provided with the appropriate personal protective equipment (PPE) and will be trained on the use of this equipment. PPE will be selected to provide an appropriate level of protection against known and reasonably anticipated site hazards. Given the available data, the level of PPE selected for the 136 Fuller Road Site is a modified Level D which will include the items listed in Table 4.

**Table 4: Site-Specific PPE Components**

| Area | PPE Item |
|---|---|
| Head | Hard Hat (OSHA approved) |
| Feet | Work Boots (steel-toed, unless conducting electromagnetic survey) |
| Skin | Nitrile Gloves |
| Hearing | Ear Plugs/Hearing Protection |
| Vision | Safety Glasses |

The level of PPE will be continually evaluated and will be modified as necessary, depending on site conditions. If necessary, the level of PPE will be upgraded to one of, or a combination of the following levels:

**Level C protection consists of:**

(a) Full-face air-purifying respirator

(b) Tyvek or Poly-tyvek coveralls

(c) Chemical-resistant gloves taped to coveralls

(d) Chemical-resistant boots taped to coveralls

**Level B protection consists of:**

(a) Level C protection for the body, plus

(b) Positive pressure Self-contained Breathing Apparatus (SCBA) or a tethered cascade breathing system.

It will be the responsibility of the on-site Health and Safety Officer to insure that all personnel and subcontractors are knowledgeable of the level of personal protection required in all work situations. Further, it is the obligation of the Health and Safety Officer to see that proper equipment is worn and work rules are observed. All subcontractors are responsible for supplying their personnel with the necessary equipment.

## 6.0 AIR MONITORING

Air monitoring for volatile organic compounds in ambient air will be performed during outdoor site activities with a hand-held photoionization detector (PID). Ambient concentrations of volatile organic compounds will be measured at the downwind perimeter of the work zone. Upwind concentrations are measured at the start of the workday, and periodically thereafter throughout the workday.

If VOC concentrations are above the recommended threshold of 5 ppm, work activities will be halted and monitoring continued. If organic vapor levels are greater than 5 ppm sustained (15-minute average) over background but less than 25 ppm over background at the perimeter of the work area, activities will 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. If air sampling indicates airborne concentrations of volatile organic compounds above the permissible exposure limits, then site operations will cease and personnel will leave the immediate work area. Work will resume when ambient monitoring indicates that airborne concentrations have stabilized below the permissible exposure limits.

If organic levels persist at least 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial structure, then air quality will be monitored within 20 feet of the perimeter of the nearest residential or commercial structure. If efforts to abate the emission are unsuccessful and if the levels in the 20 foot zone are approaching 5 ppm above background for more than 30 minutes or are greater than 10 ppm, then the following Major Vapor Emission Response Plan shall be placed into effect:

1.) All emergency response contacts listed in this Health and Safety Plan will go into effect and the local police will be contacted and advised of the situation.

2.) Air monitoring will be conducted at 30 minute intervals within the 20 foot zone. If two consecutive readings are below action levels, air monitoring will be halted or modified by the Safety Officer.

Fugitive dust is unlikely to be generated by the proposed investigation activities. If fugitive dusts are generated during outdoor site activities, ambient concentrations of airborne dusts will be measured during the site activities which generate fugitive dust. Particulate levels will be monitored upwind, downwind and within the work area at temporary monitoring stations using an MIE *personal* DataRam® handheld dust/aerosol monitor. The instrument is sensitive to particulates which range in size from 0.1 - 10µm, which include both respirable[1] and non-respirable dusts. If the downwind particulate levels exceed the OSHA PEL for total dusts of 15-mg/m$^3$ or the PEL for respirable dusts of 5-mg/m$^3$, then dust suppression techniques will be employed or the work process will be modified to further reduce dust generation. All readings will be recorded and available for State (DEC and DOH) personnel to review.

[1] Respirable dust refers to dust particles that are invisible to the human eye, settle deep within the lungs, and that are not ejected by exhaling, coughing, or expulsion by mucus. Respirable dusts are typically <0.5µm in size.

As the majority of indoor site activities are expected to take place within an active plastic recycling facility, the ambient air quality will be assessed using a PID prior to the start of indoor work. Periodic air sampling will be conducted within the work zone and compared to the ambient concentrations.

# 7.0 TRAINING & MEDICAL SURVEILLANCE

## 7.1 Personnel Safety Training

The site is not an uncontrolled hazardous waste site; however, as part of Chazen policies, field personnel shall have received a minimum of 40 hours of comprehensive health and safety training (29 CFR 1910.120) and an annual 8 hour refresher course.

All workers must recognize and understand the potential hazards to health and safety that are associated with the investigation activities and must be thoroughly familiar with programs and procedures contained in the safety plan.

The objectives of Chazen training program, for employees involved in hazardous site activities are:

- To make workers aware of the potential hazards they may encounter.
- To provide the knowledge and skills necessary to perform the work with minimal risk to the health and safety of the workers.
- To make workers aware of the purpose and limitations of safety equipment.
- To ensure that workers can safely avoid or escape from emergencies.

## 7.2 Medical Surveillance

All Chazen personnel are currently involved in a medical monitoring program in accordance with 29 CFR 1910.120.

Based on the proposed scope of work, the potential for exposure to site COCs is considered to be negligible following the heath and safety procedure described herein. Medical monitoring for common COCs is performed as part of the existing Chazen medical monitoring program. Any provisions for alterations to the existing medical surveillance program will be made by the Health & Safety Officer based on the site characterization and job hazard analysis.

# 8.0 WORKING ZONE

## 8.1 Exclusion Zone

An Exclusion Zone will be established in areas where work activities will occur. The Exclusion Zone will be cordoned off while work is in progress. Entry to and exit from this area will be provided only to those persons directly involved in the work activities and only if the prescribed level of personal protection is worn.

The personnel working in the Exclusion Zone will be the health and safety officer, work crews, and specialized personnel. All personnel within the Exclusion Zone must wear the level of protection required by the site safety plan. All personnel in the Exclusion Zone will be health and safety trained.

## 8.2 Contamination Reduction Zone

If needed, the Contamination Reduction Zone (CRZ) will be established at the perimeter of the exclusion zone, where personal decontamination will take place. The CRZ is a transition zone between contaminated and uncontaminated areas of the site.

When personnel, equipment, or materials suspected to be contaminated are taken out of the exclusion zone, they will be properly contained, or decontaminated in the CRZ.

## 8.3 Support Zone

The Support Zone is considered the area outside the CRZ. The Support Zone will be reserved for the support vehicle and for clean equipment storage. It is separated from the CRZ, and is considered a "Clean" area. Only uncontaminated or decontaminated personnel or materials may enter this zone from the CRZ.

The support vehicle serves as the communications center, clean storage area, and source of emergency assistance for field operations. Certain safety equipment (i.e. fire extinguisher, first aid kit, etc.) are stored in the support vehicle.

## 9.0 DECONTAMINATION

Standard operating procedures are in place to minimize worker contact with site contaminants. However, procedures may be necessary to remove and/or minimize contaminants that have accumulated on equipment and personnel.

### 9.1 Personnel and Equipment Decontamination

All personnel and equipment leaving the work zone must be decontaminated. Decontamination procedures prior to leaving Level "D" areas will consist of brushing loose soil from clothing and equipment, washing equipment and clothing with water and a mild detergent. Disposable gloves, scoops, paper towels and Tyvek suits will be discarded in trash receptacles provided within these areas. All wastes generated in Level "D" areas will be bagged and disposed of on site without any additional restrictions.

The decontamination for Level "C", if needed, will involve a plastic liner to "catch" wash solutions and contaminated soil. When exiting the work zone, workers will enter the decontamination zone. Instruments, sample containers, and reusable equipment will be placed on a plastic covered table. These items will be cleaned with the appropriate cleaning solutions. The workers will then decontaminate their protective clothing. Disposable items will be discarded in trash receptacles which will be provided within the decontamination area.

## 10.0 EMERGENCY/CONTINGENCY PLAN

### 10.1 Personnel Roles, Lines of Authority, and Communication

The Health & Safety Officer (HSO) or the on-site designee is the primary authority for directing site operations under emergency conditions. All Health and Safety related emergency communications both on and off site will be directed through the Health and Safety Officer.

### 10.2 Site Evacuation

The emergency response capabilities of the local authorities and agencies will be assessed prior to the initiation of work.

Prior to the evacuation of any off site area, the Exclusion Zone and the CRZ will be expanded. Monitoring of the expanded CRZ will be conducted to determine if offsite evacuation is truly necessary.

When the HSO determines that conditions may actually warrant the evacuation of downwind residences and commercial operations, local agencies will be notified and assistance requested. Designated personnel will initiate evacuation of the immediate off site area without delay.

All work crews should be aware of surrounding conditions including the wind conditions while working outdoors. When conditions warrant moving away from a work site, the field crew will relocate up wind. If site access is restricted, or limited in any way, the crew may be instructed by the HSO to evacuate the site rather than move upwind, especially if an upwind withdrawal moves the field crew away from an acceptable escape route.

If conditions warrant a site evacuation, the field crew will proceed upwind of the work site and will notify the HSO or their designated representative. If the decontamination area is upwind and more than 500 feet from the work site, the crew will pass through the decontamination area to remove their outer suits. Following decontamination, the field crew will proceed to the support vehicle and an assessment of the situation will be made by the HSO, or their designated representative. As soon as it is practical, and as additional information about site conditions is received from the field crew, the situation will be communicated to the Health and Safety Supervisor, Health and Safety Manager, the project manager, and if applicable the appropriate local emergency response agencies.

### 10.3 Emergency Medical Treatment and First Aid

First aid will be available to any person injured. A First Aid Kit will be on hand. The injured person may be transported to a medical center for further examination and treatment. The preferred transport method is a professional emergency transportation service; however, if this option is not readily available or would result in excessive delay, other transport is authorized.

> *Under no circumstances should an injured person transport themselves to a medical facility for treatment, no matter how minor the injury may appear.*

If an injury occurs in the Exclusion Zone, provisions for decontamination of the victim will be made. However, if injuries are deemed life-threatening, then normal decontamination procedures may be dispensed with. In such cases arrangements will be made with the emergency response personnel to provide the necessary containment or decontamination.

### 10.4 Spill Response

The proposed site activities do not involve the use, storage, or generation of bulk quantities of petroleum, chemicals or hazardous wastes (i.e. drums, containers, etc.) which would present a potential for spill hazards.

# APPENDIX D
# Citizen Participation Plan

# Brownfield Cleanup Program

# *Citizen Participation Plan*
# 136 Fuller Road Site
# NYSDEC Site No. C401055

City of Albany and Town of Guilderland
Albany County, New York

April 2010

THE Chazen COMPANIES®
Engineers
Environmental Professionals
Land Surveyors
Landscape Architects
Planners

**Prepared for:**

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## APPENDICES

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Appendix B: Project Contacts and Document Repositories
Appendix C: Site Contact List
Appendix D: Identification of Citizen Participation Activities
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**Note:** The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the brownfield site's remedial process.

Applicant: **Fuller Partners, LLC**
Site Name: **136 Fuller Road Site**
Site Address: **136 Fuller Road Albany, New York**
Site County: **Albany**
Site Number: **C401055**

## 1.0 WHAT IS NEW YORK'S BROWNFIELD CLEANUP PROGRAM

New York's Brownfield Cleanup Program (BCP) is designed to encourage the private sector to investigate, remediate (clean up) and redevelop brownfields sites. A brownfield is any real property where redevelopment or reuse may be complicated by the presence or potential presence of a contaminant. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal and financial burdens on a community. If the brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (DEC) which oversees Applicants that conduct brownfield site remedial activities. An Applicant is a person whose request to participate in the BCP has been accepted by the DEC. The BCP contains investigation and remediation (cleanup) requirements, ensuring that cleanups protect public health and the environment. When the DEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at:
http://www.dec.ny.gov/chemical/brownfields.html

## 2.0 CITIZEN PARTICIPATION PLAN OVERVIEW

This Citizen Participation (CP) Plan provides members of the affected and interested public with information about how the DEC will inform and involve them during the investigation and remediation of the site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Appendix A contains a map identifying the location of the site.

*Project Contacts*

Appendix B identifies NYSDEC project contact(s) to whom the public should address questions or request information about the site's remedial program. The public's suggestions about this CP Plan and the CP program for the site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

*Document Repositories*

The locations of the site's document repositories are identified in Appendix B. The document repositories provide convenient access to important project documents for public review and comment.

*Site Contact List*

Appendix C contains the site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and remediation process. The site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming remedial activities at the site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

The site contact list includes, at a minimum:

- chief executive officer and official(s) principally involved with relevant zoning and planning matters of each county, city, town and village in which the site is located;
- residents, owners, and occupants of the site and properties adjacent to the site;
- the public water supplier which services the area in which the site is located;
- any person who has requested to be placed on the site contact list;
- the administrator of any school or day care facility located on or near the site for purposes of posting and/or dissemination of information at the facility; and
- document repositories.

The site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the DEC project contact(s) identified in Appendix B. Other additions to the site contact list may be made on a site-specific basis at the discretion of the DER project manager, in consultation with other DEC staff as appropriate.

*CP Activities*

Appendix D identifies the CP activities, at a minimum, that have been and will be conducted during the site's remedial program. The flowchart in Appendix E shows how these CP activities integrate with the site remedial process. The public is informed about these CP activities through fact sheets and notices developed at significant points in the site's remedial process.

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and remediate a site.

- **Public forums, comment periods and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and remediation.

The public is encouraged to contact project staff at any time during the site's remedial process with questions, comments, or requests for information about the remedial program.

This CP Plan may be revised due to changes in major issues of public concern identified in Section 6 or in the nature and scope of remedial activities. Modifications may include additions to the site contact list and changes in planned CP activities.

## 3.0 SITE INFORMATION

### 3.1 Site Description

The 136 Fuller Road site is a 15.7 ± acre industrial property situated on the eastern side of Fuller Road. The current zoning for the property is C-M; this is a light manufacturing district zoned. Located approximately 450 feet south of the intersection of Fuller Road and Railroad Avenue, the site is situated predominantly in the City of Albany, Albany County, NY with less than 0.5 acre situated in the Town of Guilderland, Albany County, NY. A map illustrating the site location is attached as Figure 1.

The site is currently developed with a 266,000-square foot commercial/industrial, single-story building which is predominately occupied by UltrePet LLC, recyclers of plastic polyethelene (PET) bottles and manufacturer of PET plastic resins. The site is also occupied by Equal Vision Records, a T-shirt silk screening printer. The remaining portion of the site building is vacant and unused warehouse space. Crown Castle International currently leases a 0.06 ± acre portion of the northeastern site area for the location and operation of cellular telecommunications tower, antennae and associated equipment (Crown Castle Site # 806676).

The surrounding area land uses include an active commuter rail line (Conrail Railroad) and commercial/industrial uses to the north; Rensselaer Lake Park and Reservoir across Fuller Road to the west; the NYSDOT owned I-90 Exit ramp and highway corridor and a small parcel owned by National Grid to the south; and vacant land owned by the City of Albany used for utility (sewer and water easements) to the east.

### 3.2 Site History

The site was developed circa 1955 as the Mohawk Brush Company which produced brushes for the Fuller Brush Company. The Mohawk Brush Company/Fuller Brush Company owned and operated at the site for approximately 20 years until the mid-1970s. From the mid-1970s, Star Textiles activities at the site included manufacturing poly-fill material and plastic resin from recycling plastic. In 1990, wTe Recycling Corp. acquired Star Textiles and operated a plastics recycling business. In 1999, wTe Recycling Corp. entered into a partnership agreement with Tomra of North America called UltrePET LLC. UltrePET LLC continues to operate a plastics recycling business at the site.

## 3.3 Site Environmental History

The primary contaminant identified at the site is tetrachloroethylene (PCE), also called perchloroethylene. While PCE has not been documented as a chemical used in the former brush manufacturing process, it is currently unknown what the source of PCE may have been. Other identified contaminants found on the site are indicative of petroleum constituents, chlorinated solvents, and compounds that are products of PCE degradation. Contaminants in soil exist at highest concentrations from the top of the groundwater table at 8 feet below ground surface to a depth of 16-20 feet below ground and then diminish rapidly below this depth.

A summary of previous environmental investigations that have occurred at the site is as follows.

- A 1988 *Phase I Environmental Site Assessment (ESA) Report* noted that five underground storage tanks (USTs), reportedly containing No. 6 fuel oil, pine oil, soaps, and water, were removed from the northeast side of the site building in the spring of 1988. Information indicated that a small amount of pine oil leaked from one of the tanks during removal and contaminated soil was removed during the tank closure.

- A 1996 *Phase I ESA Report* identified the presence of two 16,000 gallon USTs for fuel oil located near the boiler room south of the site building. These USTs were removed in October 2003. Post-excavation soil samples did not exceed applicable NYSDEC soil quality standards.

- A 2004 *Phase I ESA Report* identified a number of potential contaminant sources on the site property, most of which were part of the former brush manufacturing operations by the Mohawk Brush Company/Fuller Brush Company. A number of petroleum based products, pine oils, alcohols and freon had been stored in both underground and above ground tanks along the northern side of the site building in a historic bulk storage "tank farm." This finding led to a site-wide subsurface investigation to identify and comprehensively evaluate site subsurface media for evidence of chemical impacts.

- An initial remedial investigation was conducted in 2007 and included soil, shallow and deep groundwater, and sub-slab soil vapor. Findings are summarized below. The 2007 investigation was conducted in response to Spill #0503855, the results of which have identified the need for a site-wide Remedial Investigation to fully characterize the nature and extent of contamination identified at the site. This Remedial Investigation will be conducted under the BCP.

    - The highest level of soil and groundwater contamination exists at a former tank farm area on the north side of the building (formerly present during the Fuller Brush Company operations). From the tank farm area and south, contamination is predominantly present in the top ten feet of saturated soil and groundwater, which is encountered between 8 and 10 feet below the ground surface.

    - Sub-slab sampling results indicate that soil vapor contamination exists beneath the building slab. The potential for soil vapor intrusion into the building exists as a result

of the continued presence of impacted soil vapor; however, sampling performed in December of 2006 did not identify migration of these chemicals into the indoor air. Venting beneath the building is currently being proposed to eliminate this potential soil vapor exposure pathway.

## 4.0 REMEDIAL PROCESS

**Note:** See Appendix E for a flowchart of the brownfield site remedial process.

*Application*

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program as a Volunteer. This means that the Applicant was not responsible for the disposal or discharge of the contaminants or whose ownership or operation of the site took place after the discharge or disposal of contaminants. The Volunteer must fully characterize the nature and extent of contamination onsite, and must conduct a "qualitative exposure assessment," a process that characterizes the actual or potential exposures of people, fish and wildlife to contaminants on the site and to contamination that has migrated from the site.

The Applicant in its Application proposes that the site will be used for restricted (commercial) purposes. To achieve this goal, the Applicant will conduct remedial activities at the site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement executed by NYSDEC and the Applicant sets forth the responsibilities of each party in conducting a remedial program at the site.

*Investigation*

The Applicant will be conducting a remedial investigation (RI) of the site, that will be performed with NYSDEC oversight. The goals of the RI are as follows:

1. Define the nature and extent of contamination in soil, groundwater, and any other impacted media;

2. Identify the source(s) of the contamination;

3. Assess the impact of the contamination on public health and/or the environment; and

4. Provide information to support the development of a Remedial Work Plan to address the contamination, or to support a conclusion that the contamination does not need to be addressed.

The Applicant will prepare an RI Report after it completes the RI. This report will summarize the results of the RI and will include the Applicant's recommendation of whether remediation is needed to address site-related contamination. The RI Report is subject to review and approval by NYSDEC. Before the RI Report is approved, a fact sheet that describes the RI Report will be sent to the site's contact list.

NYSDEC will determine if the site poses a significant threat to public health and/or the environment. If NYSDEC determines that the site is a "significant threat," a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying community group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interest of the community affected by the site, and that its members' health, economic well-being or enjoyment of the environment may be affected by a release or threatened release of contamination at the eligible site.

For more information about the TAG Program and the availability of TAGs, go online at: http://www.dec.ny.gov/regulations/2590.html.

*Remedy Selection*

After NYSDEC approves the RI Report, the Applicant will be able to develop a Remedial Work Plan if remediation is required. The Remedial Work Plan describes how the Applicant would address the contamination related to the site.

The public will have the opportunity to review and comment on the draft Remedial Work Plan. The site contact list will be sent a fact sheet that describes the draft Remedial Work Plan and announces a 45-day public comment period. NYSDEC will factor this input into its decision to approve, reject or modify the draft Remedial Work Plan.

A public meeting may be held by NYSDEC about the proposed Remedial Work Plan if requested by the affected community and if significant substantive issues are raised about the draft Remedial Work Plan. Please note that, in order to request a public meeting, the health, economic well-being or enjoyment of the environment of those requesting the public meeting must be threatened or potentially threatened by the site. In addition, the request for the public meeting should be made within the first 30 days of the 45-day public comment period for the draft Remedial Work Plan. A public meeting also may be held at the discretion of the NYSDEC project manager in consultation with other NYSDEC staff as appropriate.

*Construction*

Approval of the Remedial Work Plan by NYSDEC will allow the Applicant to design and construct the alternative selected to remediate the site. The site contact list will receive notification before the start of site remediation. When the Applicant completes remedial activities, it will prepare a final engineering report that certifies that remediation requirements have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the remediation is protective of public health and the environment for the intended use of the site. The site contact list will receive a fact sheet that announces the completion of remedial activities and the review of the final engineering report.

*Certificate of Completion and Site Management*

Once NYSDEC approves the final engineering report, it will issue the Applicant a Certificate of Completion. This Certificate states that remediation goals have been achieved, and relieves the Applicant from future remedial liability, subject to statutory conditions. The Certificate also includes a description of any institutional and engineering controls or monitoring required by the approved Remedial Work Plan. If the Applicant uses institutional controls or engineering controls to achieve remedial objectives, the site contact list will receive a fact sheet that discusses such controls.

An institutional control is a non-physical restriction on use of the brownfield site, such as a deed restriction that would prevent or restrict certain uses of the remediated property. An institutional control may be used when the remedial action leaves some contamination that makes the site suitable for some, but not all uses.

An engineering control is a physical barrier or method to manage contamination, such as a cap or vapor barrier.

Site management will be conducted by the Applicant as required. NYSDEC will provide appropriate oversight. Site management involves the institutional and engineering controls required for the brownfield site. Examples include: operation of a water treatment plant, maintenance of a cap or cover, and monitoring of groundwater quality.

## 5.0 CITIZEN PARTICIPATION ACTIVITIES

CP activities that have already occurred and are planned during the investigation and remediation of the site under the BCP are identified in Appendix D: Identification of Citizen Participation Activities. These activities also are identified in the flowchart of the BCP process in Appendix E. NYSDEC will ensure that these CP activities are conducted, with appropriate assistance from the Applicant.

All CP activities are conducted to provide the public with significant information about site findings and planned remedial activities, and some activities announce comment periods and request public input about important draft documents such as the Remedial Work Plan.

All written materials developed for the public will be reviewed and approved by NYSDEC for clarity and accuracy before they are distributed. Notices and fact sheets can be combined at the discretion, and with the approval of, NYSDEC.

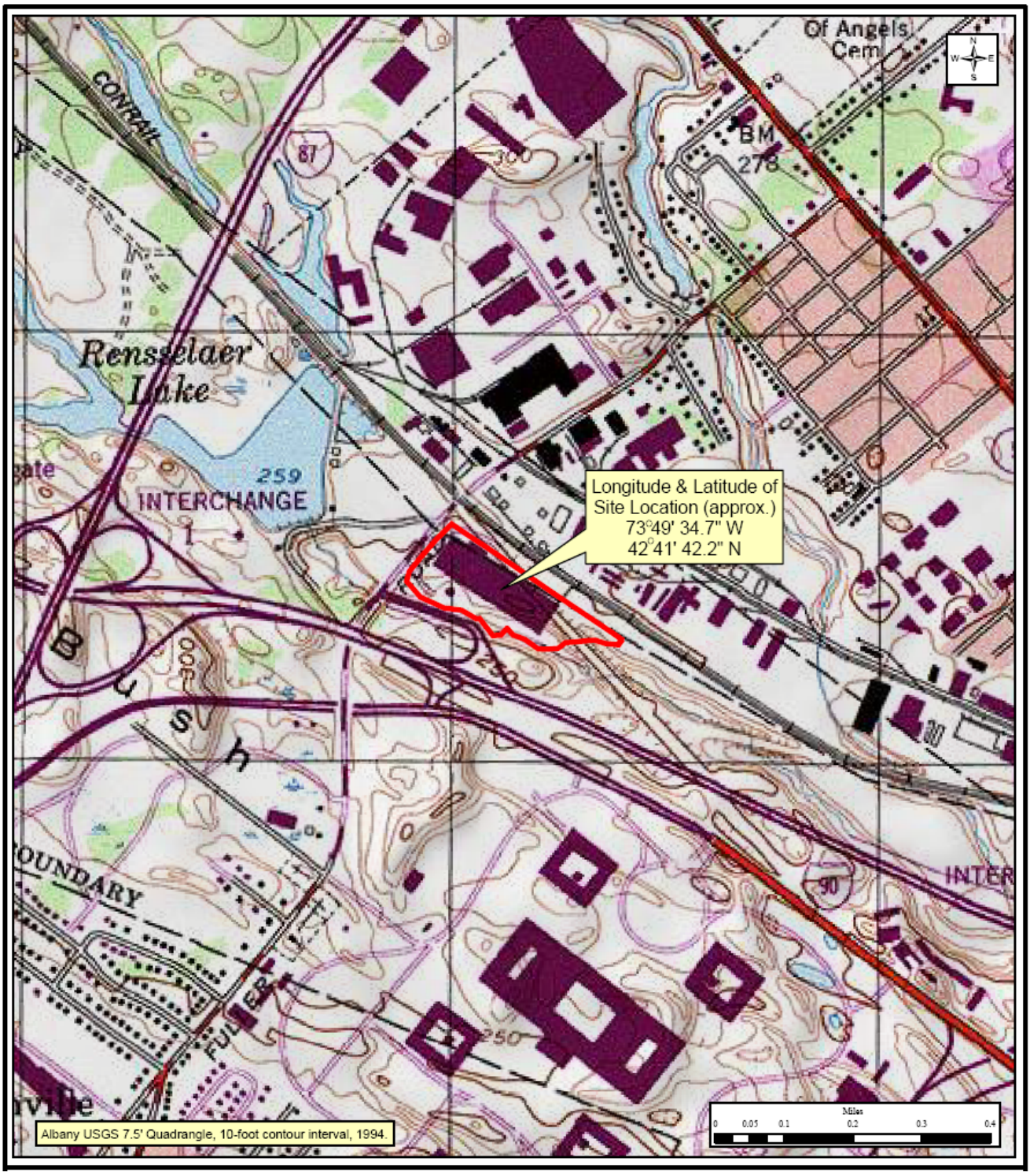
## 6.0 MAJOR ISSUES OF PUBLIC CONCERN

This section of the CP Plan identifies major issues of public concern, if any, that relate to the site. Additional major issues of public concern may be identified during the site's remedial process.

1) The main contaminant of concern at the site is PCE in soil and shallow groundwater and the intent of the focused RI will be to define the nature and extent of site impacts. Drinking water resources are not impacted as the site and surrounding area are served by the City of Albany municipal water supply and there is no record of drinking wells being present in the area surrounding the site.

2) The RI Work Plan will include an Interim Remedial Measure (IRM) Work Plan to install a subslab depressurization system at the site building as one of the first activities. This system will serve to ensure that volatile compounds present in soil and groundwater do not enter the site building by creating active ventilation beneath the building.

# APPENDIX A
## Site Location Map



# APPENDIX B
## Project Contacts and Document Repositories

For information about the site's remedial program, the public may contact any of the following project staff:

**Table 1: Project Contacts and Document Repositories**

| | | |
|---|---|---|
| **NYS Department of Environmental Conservation** | | |
| Mr. Bradley Brown<br>Project Manager | Division of Environmental Remediation - Region 4<br>1130 North Wescott Road<br>Schenectady, NY 12306 | (518) 357-2145 |
| Mr. Rick Georgeson<br>Citizen Participation Specialist<br>NYSDEC Region 4 | 1130 North Wescott Road<br>Schenectady, NY 12306 | (518) 357-2075 |
| **New York State Department of Health** | | |
| Bridgett Callaghan<br>Public Health Specialist | 547 River Street, Room 300<br>Troy, NY 12180 | (800) 458-1158 ext. 27880 |
| **Document Repositories** | | |
| Ms. Toni Mauceri<br>NYSDEC Region 4<br>FOIL Coordinator | 1130 North Westcott Road<br>Schenectady, NY 12306 | (518) 357-2046<br>Hours: 9:00 a.m. -4:30 p.m.<br>Please call ahead for an appointment |
| Albany Public Library<br>(Main Branch)<br>Attn: Ellen Gamache | 161 Washington Avenue<br>Albany, NY 12210 | (518) 427-4300<br><br>Hours:<br>M-Th 9a.m. - 9 p.m.<br>Friday 9 a.m. to 6 p.m.<br>Saturday 9 a.m. to 5 p.m.<br>Sunday 1 p.m. to 5 p.m.<br>(closed Sundays July & August) |
| Albany County Clerk<br>Attn: Thomas Clignan | 32 North Russell Road<br>Albany, NY 12206 | (518) 487-5110<br>Hours: M-F 9:00am-4:45pm |

# APPENDIX C
## Site Contact List

**Table 2: Elected Officials/Representatives**

| | |
|---|---|
| **Albany County Contacts** | |
| Albany County Economic Development, Conservation and Planning<br>112 State Street<br>Room 720<br>Albany, NY 12207<br>Phone: (518) 447-5660<br>Fax: (518) 447-5662 | Albany County Executive: Mr. Mike Breslin<br>County Executive Albany County Office Building<br>112 State Street<br>Room 200<br>Albany, NY 12207<br>Phone: (518)-447-7040<br>Fax: 518-447-5589 |
| Chair, Albany County Legislature<br>112 State Street<br>Room 1114<br>Albany, NY 12207 | |
| **City of Albany Contacts** | |
| Mayor Mr. Gerald D. Jennings<br>City Hall-24 Eagle Street<br>Room 102<br>Albany, NY 12207<br>Phone: (518) 434-5100<br>Fax: (518) 434-5013 | Department of Development & Planning, Division of Planning: Director of Planning<br>21 Lodge Street<br>Albany, NY 12207<br>Phone: (518) 434-2532<br>Fax: (518) 434-9846 |
| Chair, Albany City Council<br>Albany City Hall<br>Albany, NY 12207 | |
| **Town of Guilderland Contacts** | |
| Town Supervisor: Ken Runion<br>Guilderland Town Hall<br>2nd Floor, P.O. Box 339<br>Guilderland, NY 12084<br>Phone: (518)-356-1980 | Town Planner: Jan Weston, AICP<br>Guilderland Town Hall<br>2nd Floor, P.O. Box 339<br>Guilderland, NY 12084<br>Phone: (518)-356-1980 |

The Applicant and the NYSDEC will make every reasonable effort to ensure that upcoming public meetings are announced in several media, for the purpose of encouraging public participation and comment. Announcements will be initially submitted to visual and sound media for broadcast as "Public Service Announcements" at least 14 calendar days prior to the day of the public meeting.

## Table 3: Media

| | |
|---|---|
| Television | Capital News 9 (Time Warner Cable), 104 Watervliet Avenue Extension<br>Albany, NY 12206,<br>Phone: 518-459-9999 Fax: 518-641-7023<br><br>WRGB (CBS), 1400 Balltown Road, Schenectady, NY 12309<br>Phone: 518-346-6666, Fax: 518-381-3721<br><br>Channel 10 WTEN (ABC) 341 Northern Boulevard<br>Albany, NY 12204<br>Phone: 518-436-4822, Fax 518-426-4792<br><br>Channel 13 WNYT (NBC) P.O. Box 4035<br>Albany, NY 12204<br>Phone: 1-800-999-WNYT, Fax: 518-434-0659<br><br>Channel 23 WXXA (Fox) 28 Corporate Circle<br>Albany, NY 12203<br>Phone: 518-862-0995, Fax: 518-862-0930 |
| Radio | WYJB 95.5 FM<br>WPYX 106.5 FM<br>WKLI 100.9 FM WAMC<br>1400 AM Northeast Public Radio |
| Publications | Albany Times Union<br>45 Albany-Shaker Road, Albany NY<br>12211 Phone (518) 454-5619<br><br>Metroland Magazine<br>419 Madison Avenue, Albany, NY 12210 |

## Table 4: Property Owner and Tenants

| Owner/Occupant | Address and Contact Numbers |
|---|---|
| Fuller Realty (owner) | 136 Fuller Rd<br>Albany, NY 12205<br>Phone: (518) 459-1081 |
| wTe Corporation (Tenant)<br>Leigh Peritz PE -VP Engineering and Product Development | 7 Alfred Circle<br>Bedford, MA 01730<br>Phone (781) 275-6400 |
| Equal Vision Records (Tenant)<br>Steve Raddy | PO Box 38202<br>Albany, NY 12203-8202<br>Phone: (518) 458-8250 |

## Table 5: Residents, owners and occupants of the site and adjacent properties

| Owner/Occupant | Address and Contact Numbers |
|---|---|
| City of Albany<br>Director of Albany Community Development Agency<br>Mr. Tom Griner | 200 Henry Johnson Blvd.<br>Albany, NY 12210<br>Phone: (518) 434-5240<br>Fax: (518) 434-5242 |
| New York State Department of Transportation<br>Mr. Joseph Nolan | 328 State Street<br>Schenectady, NY 12305<br>Phone: (518) 388-0123<br>Fax: (518) 388-0150 |
| National Grid Power Company<br>Ms. Barb Scheurer | 1125 Broadway<br>Albany, NY 12204<br>Phone: (518) 433-3696<br>Fax: (518) 433-3892 |
| Consolidated Rail Corporation<br>CSX Real Property Inc.<br>Mr. Ragu Chatrathi | 301 West Bay Street<br>Suite 800<br>Jacksonville, FL 32202<br>Phone: (904) 633-4858 |

## Table 6: Public Water Supply Which Serves the Site and Surrounding Area

| Name | Address and Contact Numbers |
|---|---|
| Albany Water<br>Department of Water and Water Supply | 35 Erie Boulevard<br>Albany, NY 12204<br>Phone: 518-434-5305, Fax: (518) 434-5332<br>Email: water@ci.albany.ny.us |

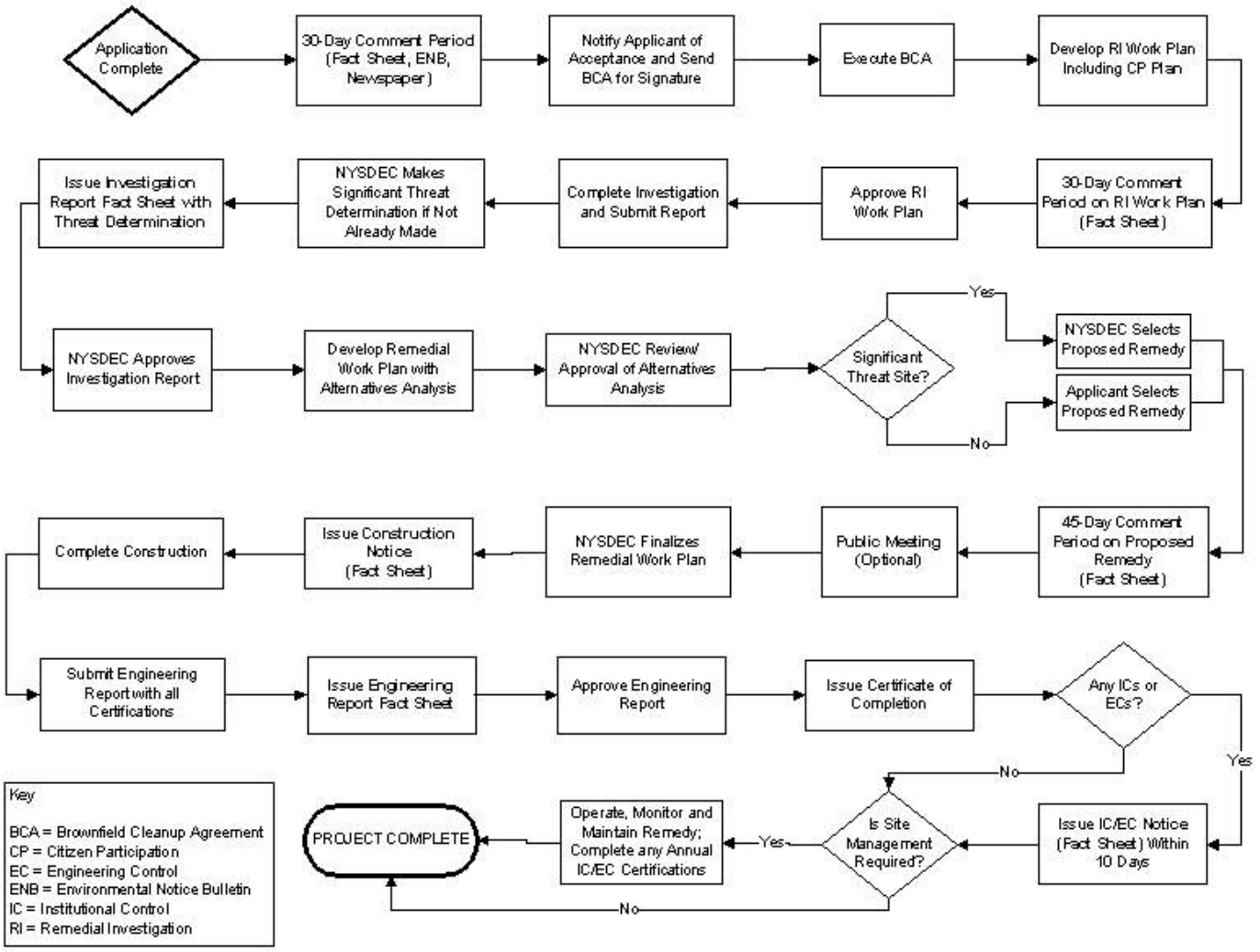
## Table 7: Environmental Groups

| Environmental Group | Address and Contact Numbers |
|---|---|
| Citizens Environmental Coalition | 33 Central Avenue<br>Albany, NY 12210 |
| Aaron Mair<br>Arbor Hill Environmental Justice Corp. | 596 Manning Boulevard<br>Albany, NY 12210 |
| Save The Pine Bush | 33 Central Avenue<br>Albany, NY 12210 |

# APPENDIX D
## Identification of Citizen Participation Activities

| Required Citizen Participation Activities | CP Activity(ies) Occur at this Point |
|---|---|
| **Application Process:**<br>• Prepare site contact list<br>• Establish Document Repositories | At time of preparation of application o participate in BCP |
| • Publish notice of Environmental Bulletin (ENB) announcing receipt of application and 30-day comment period<br>• Publish above ENB content in local newspaper<br>• Mail above ENB content to site contact list | When NYSDEC determines that BCP application is complete. The 30-day comment period begins on date of publication of notice in ENB. End date of comment periods as stated in ENB notice. Therefore, ENB notice, newspaper notice and notice to the site contact list should be provided to the public at the same time. |
| **After Execution of Brownfield Site Cleanup Agreement:**<br>• Prepare Citizen Participation (CP) Plan | Draft CP Plan must be submitted with 20 days of entering BCP Agreement. CP Plan must be approved by NYSDEC before distribution |
| **After Remedial Investigation (RI) Work Plan Received:**<br>• Mail fact sheet to site contact list about proposed RI activities and announcing 30-day public comment period on draft RI Work Plan | Before NYSDEC approved RI Work Plan. If RI Work Plan is submitted with application, comment periods will be combined and public notice will include fact sheet. 30-day comment period begins/ends as per dates identified in fact sheet. |
| **After RI Completion:**<br>• Mail Fact Sheet to site contact list describing results of RI | Before NYSDEC approves RI report |
| **After Remedial Work Plan (RWP) Received:**<br>• Mail Fact Sheet to site contact list about proposed RWP and announcing 45-day comment period<br>• Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager in consultation with other NYSDEC staff, as appropriate) | Before NYSDEC approved RWP. 45-day comment period begins/ends as per dates identified in the fact sheet. Public meeting would be held within 45-day comment period. |
| **After Approval of RWP:**<br>• Mail fact sheet to site contact list summarizing upcoming remedial action | Before the start of remedial action. |
| **After Remedial Action Completed:**<br>• Mail fact sheet to site contact list announcing that remedial action has been completed<br>• Mail fact sheet to site contact list announcing issuance of Certificate of Completion (COC) | At this time NYSDEC approves final Engineering report. These two fact sheets should be combined when possible if there is not a delay in issuance of COC. |

# APPENDIX E
## Brownfield Cleanup Program Process



# APPENDIX F
## Brownfield Cleanup Program
## Glossary, Abbreviations, and Acronyms

This glossary defines terms associated with New York's citizen participation program and important elements of the Brownfield program.

**Administrative Record** - Part of a site's Record of Decision which lists and defines documents used in the development of NYSDEC's decision about selection of a remedial action.

**Availability Session** - A scheduled gathering of program staff and members of the public in a casual setting, without a formal presentation or agenda but usually focusing on a specific aspect of a site's remedial process.

**Citizen Participation** - A program of planning and activities to encourage communication among people affected by or interested in Brownfield sites and the government agencies responsible for investigating and remediating them.

**Citizen Participation Plan** - A document which must be developed at a site's Site Investigation stage. A CP Plan describes the citizen participation activities that will be conducted during a site's remedial process.

**Citizen Participation Specialist** - A staff member from an NYSDEC central office or regional office who has specialized training and experience to assist a project manager and other staff to plan, conduct and evaluate a site-specific citizen participation program.

**Comment Period** - A time period for the public to review and comment about various documents and DER actions. For example, a 45-day comment period is provided when DER issues a Proposed Remedial Action Plan (PRAP).

**Contact List** - Names, addresses and/or telephone numbers of individuals, groups, organizations, government officials and media affected by or interested in a particular Brownfield site. The size of a contact list and the categories included are influenced by population density, degree of interest in a site, the stage of the remedial process and other factors. It is an important tool needed to conduct outreach activities.

**Division of Environmental Remediation** - A major program unit within the New York State Department of Environmental Conservation created to manage the hazardous waste site remedial program, the Brownfield program, and the Voluntary Cleanup program. Staff include: engineers, geologists, chemists, attorneys, citizen participation specialists, environmental program specialists and support staff.

**Document Repository** - A file of documents pertaining to a site's remedial and citizen participation programs which is made available for public review. The file generally is maintained in a public building near the Brownfield site to provide access at times and a location convenient to the public.

**Fact Sheet** - A written discussion about part or all of a site's remedial process prepared and provided by DER to the public. A fact sheet may focus on: a particular element of the site's remedial program; opportunities for public involvement; availability of a report or other information, or announcement of a public meeting or comment period. A fact sheet may be mailed to all or part of a site's contact list, distributed at meetings, placed in a document repository and/or sent on an "as requested" basis.

**Interim Remedial Measure (IRM)** - A discrete action which can be conducted at a site relatively quickly to reduce the risk to people's health and the environment from a well-defined contamination problem. An IRM can

involve removing contaminated soil and drums, providing alternative water supplies or securing a site to prevent access.

**New York State Department of Health** - Agency within the executive branch of New York State government which: performs health-related inspections at suspected contaminated sites; conducts health assessments to determine potential risk from environmental exposure; reviews Exposure Assessments prepared during the Site Investigation/Remedial Alternatives Report; conducts health-related community outreach around sites; and reviews remedial actions to assure that public health concerns are adequately addressed.

**Operable Unit** - A discrete part of an entire site that produces a release, threat of release, or pathway of exposure. An Operable Unit can receive specific investigation, and a particular remedy may be proposed. A Record of Decision is prepared for each Operable Unit.

**Operation and Maintenance** - A period in which remedial action may be conducted following construction at a site (for example, operation of a "pump and treat" system), or which is performed after a remedial action to assure its continued effectiveness and protection of people's health and the environment. Activities can include site inspections, well monitoring and other sampling.

**Project Manager** - An NYSDEC staff member within the Division of Environmental Remediation (usually an engineer, geologist or hydro geologist) responsible for the day-to-day administration of remedial activities at, and ultimate disposition of, an Environmental Restoration site. The Project Manager works with legal, health, citizen participation and other staff to accomplish site-related goals and objectives.

**Proposed Remedial Action Plan (PRAP)** - An analysis by DER of each alternative considered for the remediation of an Environmental Restoration site and a rationale for selection of the alternative it recommends. The PRAP is created based on information developed during the Site Investigation/Remedial Alternatives Report. The PRAP is reviewed by the public and other state agencies.

**Public Meeting** - A scheduled gathering of Division of Environmental Remediation staff with the affected/interested public to give and receive information, ask questions and discuss concerns about a site's remedial program. Staff from other NYSDEC divisions, legal and health staff, and staff from consultants and a responsible party often also attend. A public meeting, unlike an availability session, generally features a formal presentation and a detailed agenda.

**Record of Decision (ROD)** - A document which provides definitive record of the cleanup alternative that will be used to remediate an Environmental Restoration site. The ROD is based on information and analyses developed during the Site Investigation/Remedial Alternatives Report and public comment.

**Remedial Construction** - The physical development, assembly and implementation of the remedial alternative selected to remediate a site. Construction follows the Remedial Design stage of a site's remedial program.

**Remedial Design** - The process following finalization of a Record of Decision in which plans and specifications are developed for the Remedial Construction of the alternative selected to remediate a site.

**Site Investigation/Remedial Alternatives Report (SI/RAR)** - The SI fully defines and characterizes the type and extent of contamination at the site. The RAR, which may be conducted during or after the SI, uses information developed during the SI to develop alternative remedial actions to eliminate or reduce the threat of contamination to public health and the environment.

**Responsiveness Summary** - A written summary of major oral and written comments received by DER during a comment period about key elements of a site's remedial program, such as a Proposed Remedial Action Plan, and DER's response to those comments.

# APPENDIX E
# Community Air Monitoring Plan

# *Community Air Monitoring Plan*
# 136 Fuller Road Site
# Brownfield Cleanup Program
# NYSDEC Site No. C401055

City of Albany and Town of Guilderland
Albany County, New York

April 2010

THE Chazen COMPANIES®
Engineers
Environmental Professionals
Land Surveyors
Landscape Architects
Planners

**Prepared for:**

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## 1.0 COMMUNITY AIR MONITORING PLAN

The Community Air Monitoring Plan (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. Safety measures have been developed to protect site workers during site activities as well as to ensure the health and safety of the community in the vicinity of the subject site.

As part of community health and safety, a community air monitoring program, described herein, will be implemented on the site. The New York State Department of Health (NYSDOH) has established an air monitoring plan for volatile organic compounds (VOCs) and particulate levels at the perimeter of a work area involving ground-intrusive activities. The CAMP for Ground Intrusive Activities, established by the NYSDOH, requires certain monitoring activities to be undertaken on a work site involving ground-intrusive activities that have the potential to generate dust (e.g., installation of soil borings, monitoring wells, and test pits, waste excavation and handling).

To satisfy these requirements, TCC will conduct continuous air monitoring for total VOCs using a PID and particulate levels using a respirable dust meter during all outdoor ground-intrusive activities at the site. These tasks have the potential to present a concern for VOC releases and the generation of particulates. Periodic monitoring will be performed during all non-intrusive activities such as the collection of soil and groundwater samples.

VOC Monitoring Locations

Continuous VOC air monitoring will be conducted at the downwind perimeter of the work zone and may be expanded to perimeter areas, if warranted. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. All 15-minute readings will be recorded and available for State (NYSDEC and NYSDOH) personnel to review.

VOC Response Levels and Actions

If VOC concentrations of 5 ppm above background are observed, work activities will be halted and monitoring continued. If 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 will 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.

If organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial structure, then air quality will be monitored within 20 feet of the perimeter of the nearest residential or commercial structure. If efforts to abate the emission are unsuccessful and if the levels in the 20 foot

zone are approaching 5 ppm above background for more than 30 minutes or are greater than 10 ppm, then the following Major Vapor Emission Response Plan shall be placed into effect:

1) The emergency response contacts listed in the Health and Safety Plan will be contacted (including the local police) and advised of the situation.

2) Air monitoring will continue to be conducted at 30 minute intervals within the 20 foot zone. If two successive readings below action levels are measured, air monitoring will be halted or modified by the Safety Officer.

Particulate Monitoring Locations

In accordance with the CAMP, particulate concentrations will be continuously monitored upwind, downwind and within the work area at temporary monitoring stations during building demolition and ground-intrusive activities. Particulate monitoring will utilize 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 action levels. All 15-minute readings will be recorded and available for State (NYSDEC and NYSDOH) personnel to review. Particulate monitoring will not be performed during non-intrusive site activities (i.e. sample collection).

Particulate Response Levels and Actions

If the downwind PM-10 particulate level is 100 microgram per cubic meter ($ug/mg^3$) greater than background (upwind perimeter) for the 15-minute period or if visible airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 $ug/mg^3$ above the upwind level and provided that no visible dust is migrating from the work area.

If the downwind particulate level is 150 $ug/mg^3$ greater than the upwind particulate level after implementing dust suppression techniques, then work will be stopped and activities will be re-evaluated. Work may resume provided that dust suppression controls are successful in reducing the downwind PM-10 particulate concentration to within 150 $ug/mg^3$ of the upwind level and in preventing visible dust migration

Other pertinent health and safety conditions are presented in the Health and Safety Plan. Should conditions be encountered during the site investigation that warrant further consideration, field activities will be stopped and the situation will be evaluated. Should field conditions warrant health and safety level upgrades, appropriate actions will be undertaken to protect the health of site workers and the nearby residents.

# APPENDIX F
# Interim Remedial Measures Work Plan

# *Interim Remedial Measures Work Plan*
# 136 Fuller Road Site
# Brownfields Cleanup Program
# NYSDEC Site No. C401055

## City of Albany and Town of Guilderland
## Albany County, New York

June 2010

THE Chazen COMPANIES®
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**Figure 1 – Site Map Indicating Proposed Pilot Study Areas**
**Figure 2 – Proposed Vapor Extraction Point Detail**

## 1.0 PROPOSED INTERIM REMEDIAL MEASURE

To reduce and/or prevent potential contaminant exposures and to protect public health and safety, one interim remedial measure (IRM) is presently planned for the 136 Fuller Road Site (site) during the Remedial Investigation (RI) phase of the project. A soil and groundwater contaminant plume has been identified on the site and is known to extend beneath portions of the main site building. The contaminants of concern at the site primarily consist of volatile organic compounds (VOCs). While indoor air quality testing showed no evidence that VOCs have migrated through the building slab at concentrations that adversely affected air quality in the building, the presence of VOCs beneath the building constitutes a threat of vapor intrusion. A sub-slab depressurization system (SSDS) will be implemented at the site as an IRM to mitigate the potential for contaminant vapors to enter the occupied space within the building and to vent additional volatile compounds that may be created during proposed remedial actions. This IRM Work Plan will be implemented in four stages: the system design pilot study, system design, system installation, and system operation.

An IRM is defined by the New York State Department of Environmental Conservation (NYSDEC) as a discrete set of planned actions for both emergency and non-emergency situations that can be conducted without the extensive investigation and evaluation of a remedial investigation and feasibility study (RI/FS). IRMs are designed to be a permanent part of the final remedy. Additional IRMs may be proposed if field or analytical evidence of defined areas or quantities of contamination are revealed during the course of the remedial investigation.

Because IRMs are performed as a component of remedial investigation activities, they will be conducted in accordance with the HASP and QAPP prepared for the site Remedial Investigation Work Plan.

## 2.0 SUMMARY OF HISTORICAL DATA - SUB-SLAB AND INDOOR AIR SAMPLING

Soil and groundwater investigations at the site have resulted in the identification of a VOC plume beneath approximately 50 percent of the 266,000± sq. ft. building. The approximate boundaries of the groundwater plume are depicted in Figure 1. The VOC plume in the overburden aquifer is known to be primarily comprised of chlorinated compounds (PCE and degradation products) and some petroleum-related compounds.

Sub-slab soil gas samples were collected from three locations in April 2006. Indoor air samples were collected from 9 locations within the building on December 26, 2006. Air samples were analyzed for VOCs according to EPA method TO-15. These sample locations are depicted on Figure 1.

Sub-slab samples identified concentrations of New York State Department of Health (NYSDOH) Matrix 2 compounds greater than 1,000 $ug/m^3$ at location SSG-2, which triggered the requirement to mitigate sub-slab vapors. This mitigation is being completed as a precautionary measure to ensure that a vapor migration pathway to the building interior is eliminated and to ensure that vapor migration does not occur as a result of the proposed plume

remediation. No VOCswere present in the indoor air samples collected for the indoor air quality study.

## 3.0 PURPOSE

This Work Plan addresses the NYSDOH's current requirement for mitigation of vapor-phase chlorinated solvents trapped beneath the concrete slab of the building. The system design pilot study will consist of installing and conducting a pilot test on eight vapor extraction points throughout building areas (Figure 1). Data collected during system design pilot study are needed to design an effective SSDS. It is particularly important to determine the radius of influence (ROI) of each vapor extraction point and operational vacuum pressures to determine the frequency of extraction points and size vacuum pumping equipment needed in the final design to depressurize the entire impacted area.

## 4.0 BUILDING CONSTRUCTION

Limited information is available regarding the details of foundations beneath the building. However, based on a review of available drawings and information provided from the current building owner, the building was constructed as one contiguous unit in 1955, with no internal foundations or footers other than for structural columns. Additions were built in 1962 and 1964 (First Addition and Second Addition, respectively on Figure 1). Therefore, the main building and each addition area may be considered separate spaces for purposes of vapor mitigation.

## 5.0 INSTALLATION OF EIGHT TEST VAPOR EXTRACTION POINTS

Eight test SSDS vapor extraction points will be installed throughout the building in locations shown on Figure 1. At each location, an 18-inch square of concrete floor will be removed and a hole will be hand dug to a depth of 1.5 feet. The vapor extraction points will be constructed using a 12- to 18-inch long, 4-inch diameter PVC screen (see typical vapor extraction point detail on Figure 2). The slotted, or screened, portion of the extraction point will extend from the underside of the slab to a maximum depth of approximately 1.5 feet below the finished floor. The space around the PVC screen will be filled with a highly permeable backfill material (i.e. coarse gravel) to create and preserve a high degree of connectivity (i.e., air flow) between the existing soil and the proposed vapor extraction point. The top of the screen will contain a reducing coupling (four inch to two inch) and continue through the slab as two-inch diameter galvanized steel piping. The steel piping will extend above the slab along an existing structural column, extend at least 36 inches above the finished floor elevation and capped pending pilot testing. The concrete slab will be restored around the SSDS piping to pre-existing conditions.

## 6.0 PROPOSED SUB-SLAB DESIGN PILOT STUDY

The sub-slab design pilot study will consist of individual pilot tests of each of the eight vapor extraction points to estimate the typical capture area for SSDS points in various portions of the building. The proposed pilot study vapor extraction point locations are shown in Figure 1. Data collected during the pilot study will be used to determine the number of SSDS vapor extraction points and selection of appropriately sized blower units needed for a comprehensive SSDS.

A network of temporary, sub-slab, pressure monitoring points will be installed around each vapor extraction point. A vacuum will be created at each vapor extraction point and the radius of influence (ROI) for the vapor extraction point will be determined by measuring the vacuum response at temporary monitoring points. The following pilot test activities will be conducted at each of the eight vapor extractions points.

- A hammer drill will be used to install a ½-inch diameter hole through the concrete slab at each monitoring point. The borehole will be drilled six-inches below the bottom of the slab, and a ¼-inch diameter polyethylene tube will be installed to within one-inch of the borehole bottom. Glass beads will be used to backfill the void around each length of tubing to allow proper connectivity with the air-gap beneath the slab. A temporary clay seal (e.g. bentonite clay or modeling clay) will be used to seal the tubing to each borehole's sidewall, which will ensure that the tubing end is properly isolated from the building interior. Monitoring points will be installed according to guidelines recommended in the *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH, February, 2005) and referenced appendices, including *Radon Mitigation Standards* (USEPA 402-R-93-078, revised April 1994).

- Pilot testing will be completed using a combination air-compressor and Vaccon Air-flow ST Series silencer to apply a constant vacuum to the vapor extraction point. The vacuum response will be measured at each monitoring point to determine the ROI of the vapor extraction point.

- In general, the monitoring points will be installed at multiple distances from the vapor extraction point. Test distances will begin close to the vapor extraction point, and will increase in distance in two opposing directions until the ROI is determined.

- The limits of ROI will be determined when a pressure differential equal to or exceeding 0.004 inches water column (IWC) can no longer be measured.

- An initial vacuum rate of approximately 10 IWC will be applied to each vapor extraction point, and the resultant air flow will be measured using a vane anemometer. Higher vacuum rates may be applied to specific vapor extraction points if little to no pressure response is recorded in monitoring points during the 10 IWC test.

- Vacuum measurements collected from the monitoring points will be recorded as either positive pressure, representing higher pressure beneath the slab, or negative pressure, representing lower pressure beneath the slab as a result of the vacuum placed on the SSDS vapor extraction point.

- Sub-slab and indoor air pressure conditions will be recorded at each monitoring point prior to the start of the test to identify any unusual pressure gradients that may exist under normal (i.e. non-vacuum) conditions. Vacuum measurements will be collected immediately after the vacuum source is energized. Typically, vacuum responses in monitoring points are reasonably instantaneous (e.g. within 5 to 10 seconds) if good connectivity exists beneath the slab; however, each vacuum/air-flow combination test will be run for a period of at least one hour to allow time for the ROI to expand to the maximum pneumatic boundary around each vapor extraction point. The vacuum and air flow rates may be increased during the test interval depending on the response time observed in each monitoring point and the observed ROI. The pilot test will end once each vapor extraction point ROI is determined under the starting 10 IWC vacuum level and potentially secondary higher vacuum scenarios.

- After testing, each vapor extraction point will be capped using a rubber Fernco cap (or similar) for later use in the SSDS. TCC will restore all monitoring points after testing is completed. Monitoring points will be backfilled with an appropriate base material, and the concrete slab will be patched to pre-test conditions using hydraulic cement.

## 7.0 SSDS DESIGN AND INSTALLATION

Results of the sub-slab design pilot study will be utilized to design an SSDS that covers the extent of the groundwater plume area. The proposed SSDS design will be submitted to NYSDEC for comments and approval. Vapor extraction points will be added as necessary to create overlapping coverage. All points will be manifolded to one or more vacuum blowers with exhaust discharged to the building exterior just below the roof line (approximately 20 feet above surrounding ground level).

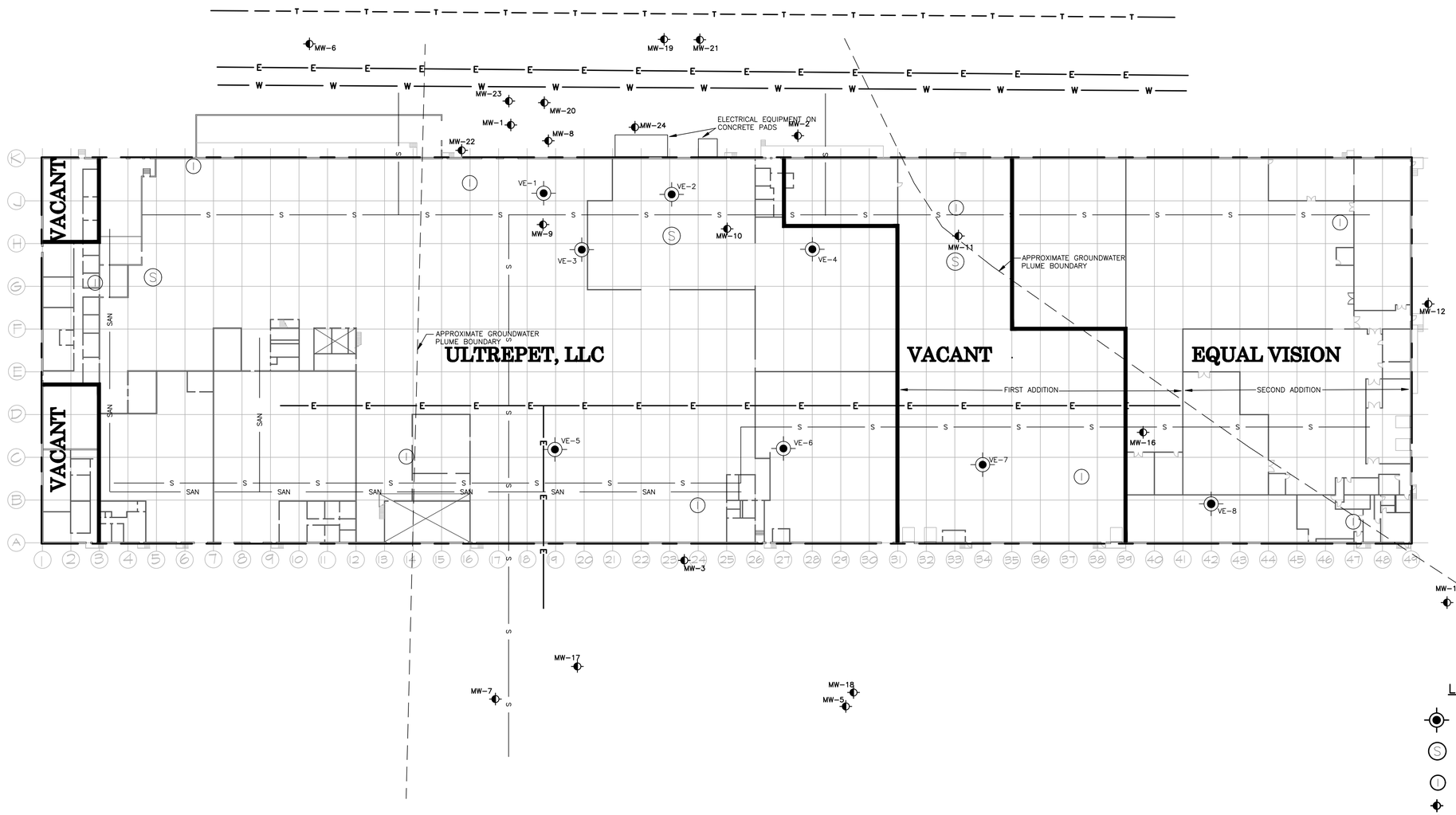
An Operation and Maintenance Manual will be created for the installed SSDS, a copy of which will be kept on site and a copy to be provided to NYSDEC. TCC proposes that monthly operational checks of the system be completed through the first year of operation. Less frequent system checks may be appropriate after the first year.

## 8.0 SUB-SLAB SAMPLING

Following SSDS installation over the identified groundwater plume footprint, sub-slab soil vapor samples will be collected incrementally outward from the plume area to document horizontal extent and determine if the SSDS needs to be expanded.

## 9.0 SCHEDULE

The installation of eight pilot vapor extraction wells will begin upon receipt of NYSDEC approval, and may take up to 4 weeks to complete. Pilot testing will take place within 1-2 weeks after vapor extraction point installations are completed. A final pilot test summary and SSDS design can be submitted to NYSDEC approximately 8 to 10 weeks after receipt of agency approval of this plan. The SSDS design pilot study report and SSDS design will include a discussion of vapor extraction point and monitoring point installation, field testing procedures, and field test data supporting design of an SSDS to achieve depressurization beneath the building above the plume area. Upon approval of the SSDS design document, TCC will proceed with installation and operation of the SSDS within the building.




## LEGEND

- PROPOSED PILOT STUDY VAPOR EXTRACTION WELL LOCATION
- SUB-SLAB SOIL GAS SAMPLE LOCATION (APRIL 2006)
- INDOOR AIR SAMPLE LOCATION (DECEMBER 2006)
- EXISTING MONITORING WELL
- T — UNDERGROUND TELECOM UTILITIES
- E — UNDERGROUND ELECTRIC UTILITIES
- W — UNDERGROUND WATER UTILITIES
- SAN — SUB-SLAB SANITARY UTILITIES
- S — UNDERGROUND STORM SEWER UTILITIES

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THE Chazen COMPANIES
Engineers/Surveyors
Planners
Environmental Scientists
Landscape Architects

CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., P.C.

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Glens Falls, New York 12801
Phone: (518) 812-0513

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914 Hartford Turnpike
Waterford, CT. 06385
Phone:(860) 440-2690

| rev. | date | description |
|---|---|---|

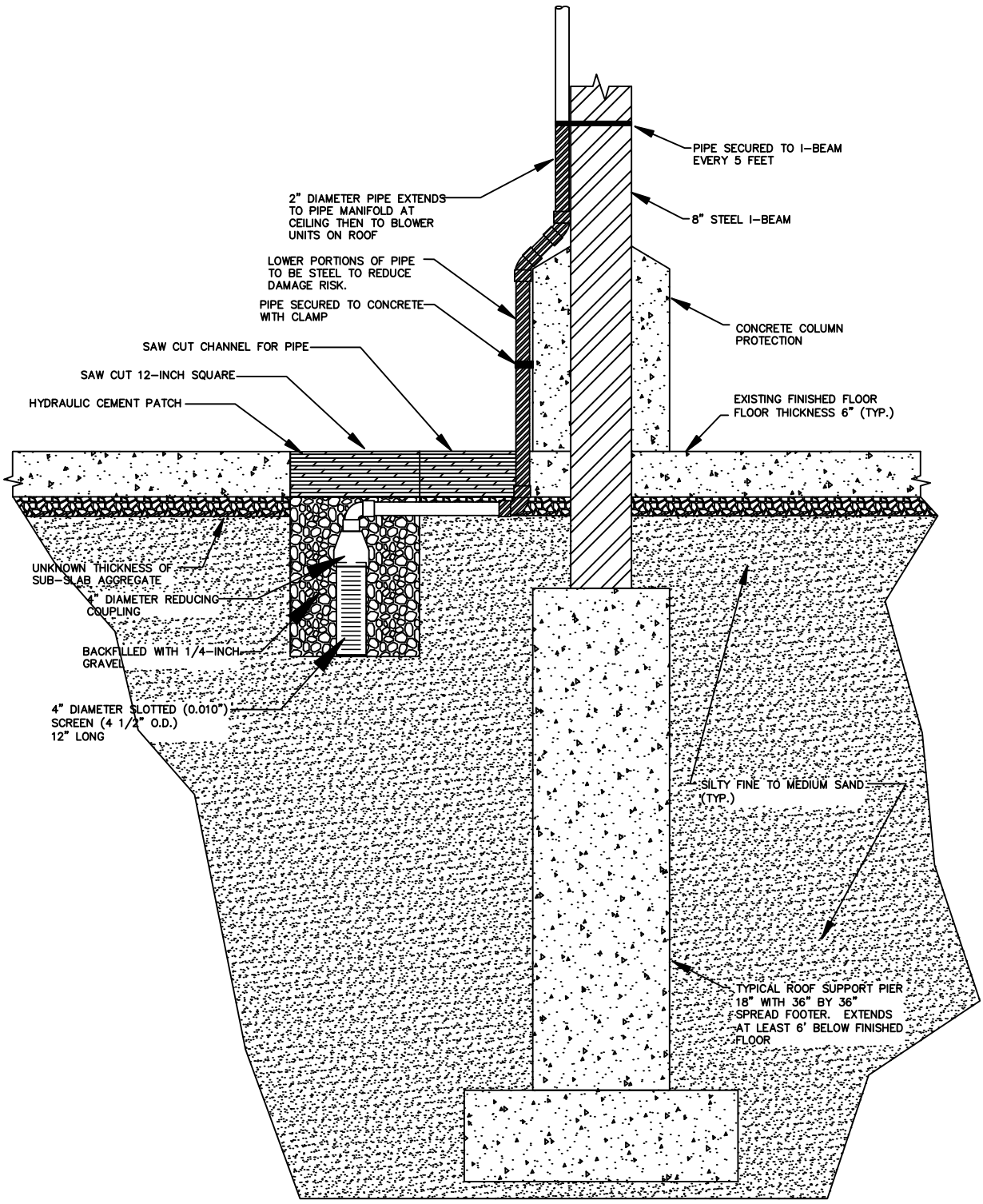
**FORMER FULLER BRUSH FACILITY**

# SITE MAP INDICATING PROPOSED PILOT STUDY AREAS 136 FULLER ROAD

CITY OF ALBANY, ALBANY CO., NEW YORK

| drawn | checked |
|---|---|
| date 8/28/09 | scale 1" = 40' |
| project no. 90618.00 | |
| sheet no. FIG. 1 | |

Drawing Name: S:\9\90600-90699\90618_00\ENG\DWG\RM_FIG1_90618-00.DWG
Xref's Attached: XLAYOUT_90618-00; XBASE_90618-00_ARCHITECT; XIMAGE_90618-00_SURVEY; IRM_XTB_90618-00; 3TB-24X36
Date Printed: Mar 26, 2010, 9:46am




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100 Glen Street Glens Falls, NY 12801
Phone: (518) 812-0513

136 FULLER ROAD PROPERTY

# PROPOSED VAPOR EXTRACTION POINT CONSTRUCTION DETAIL

CITY OF ALBANY, ALBANY COUNTY, NEW YORK

| drawn | checked |
|---|---|
| ST | KB |
| date | scale |
| 8/10/09 | N.T.S. |
| project no. | |
| 90618.00 | |
| sheet no. | |
| **FIGURE 2** | |

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Drawing Name: S:\9\90600-90699\90618_00\ENV\RI Work Plan\Draft RI AAR Work Plan\IRM Plan\FIG02-VAPOR WELL DETAIL.dwg Date Printed: Aug 10, 2009, 10:13am

# APPENDIX G
# Personnel Resumes

# Daniel W. Stone, PE

**SENIOR PRINCIPAL – CHAZEN TITLE**
**PROJECT PRINCIAPL AND PROFESSIONAL ENGINEER – PROJECT TITLE**

## EDUCATION

- MS, Environmental Engineering,  University of Vermont, 1976
- BS, Civil Engineering,  University of Vermont, 1970

## REGISTRATION

Professional Engineer
MA 37611
NY 52135-1
VT 018-0003251

## EXPERIENCE

- The Chazen Companies, New York. Senior Principal. 1980 to present.

Mr. Stone has over 39 years of experience in civil and environmental engineering. His career experience ranges from project design and management to administrative and executive responsibilities in all phases of environmental site assessments, water, wastewater, and industrial and municipal programs. Mr. Stone is in charge of all Chazen environmental programs, including groundwater resource development, groundwater containment investigations, water, wastewater and industrial waste treatment facility design, landfill design, chemical engineering, environmental data management, remedial action work plans, and regulatory interface. Mr. Stone's role will include providing PE certification of documents, as required under DER-10.

## AFFILIATIONS

Water Environment Federation
American Water Works Association

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# Kim Baines. LEP

**NEW YORK REGIONAL MANAGER – CEA TITLE**
**PROJECT MANAGER AND TECHNICAL LEAD – PROJECT TITTLE**

## EDUCATION

BS, Environmental Biology/Chemistry, Connecticut State University

## LICENSES and CERTIFICATIONS

CT Licensed Environmental Professional License #493
NYSDEC Qualified Environmental Professional

## TRAINING

- OSHA Hazardous Waste Operations 40-Hour Technician Initial Course and yearly refreshers
- A/E/C Project Management Bootcamp® (PSMJ), 2010

## EXPERIENCE

- Corporate Environmental Advisors (CEA) March 2010 - Present
- The Chazen Companies, New York - Director of Environmental Services/Brownfields Services. January 1996 to April 2009.
- CT Male Associates, PC, NY - Manager, Environmental Assessments May 1989 to January 1996
- HRP Associates, Farmington, CT 1987 - 1989

As Manager of New York Operations, Mr. Baines oversees all environmental services for CEA in New York with a principal focus on environmental investigation and remediation. He oversees environmental professionals who perform specialized environmental field investigations related to the quality of air, soil and groundwater; and oversees projects that include the design and implementation phases for the mitigation of environmental impacts for private development projects, municipalities, industries, institutions and others.

Mr. Baines has also specialized in the assessment and re-development of environmentally impacted properties and has managed a number of re-development and remediation projects in the NYS Brownfields Programs, including municipally funded ERP projects and privately funded BCP projects.

## AFFILIATIONS

Environmental Professionals of Connecticut (EPOC)
Air and Waste Management Association, NY Hudson Valley Chapter

# Arlette St. Romain Meader

**SENIOR ENVIRONMENTAL SCIENTIST – CHAZEN TITLE**
**ASSISTANT PROJECT MANAGER – PROJECT ROLE**

## EDUCATION

Bachelor of Science, Crop and Soil Environmental Sciences, Virginia Polytechnic Institute & State University, 1995

## TRAINING

- OSHA Hazardous Waste Operations 40-Hour Technician Initial Course and refreshers
- CPR & First Aid
- A/E/C Project Management Bootcamp® (PSMJ), 2010
- Environmental Sampling Theory, 2009
- Sampling for Defensible Environmental Decisions, 2005
- ASTM Phase II Environmental Site Assessment Process, 2004
- US Dept of Energy Systematic Planning and Managing Uncertainty for Environmental Decision Making, 2002

## EXPERIENCE

- The Chazen Companies, New York. Senior Environmental Scientist. August 2007 to present.
- Belt Collins, Hawaii. Senior Environmental Scientist. March 2000 to August 2007.
- Masa Fujioka & Associates, Hawaii. Environmental Scientist. October 1995 to March 2000.

With over 14 years as a professional environmental scientist, Ms. Meader has extensive experience conducting: site investigations and remediation, including brownfields projects, Phase I and Phase II Environmental Site Assessments; data collection and field inspections; soil sampling; groundwater well installation and monitoring; site remediation; and asbestos and lead paint surveys. She has primarily focused on brownfields investigation and remediation projects in recent years. Ms. Meader also has extensive experience with the preparation of environmental assessments/environmental impact statements under the Federal National Environmental Policy Act (NEPA). Her experience includes managing projects for military, municipal, commercial, resort, and private developer clients.

## AFFILIATIONS

- National Association of Environmental Professionals. Member since 1995.
- National Ground Water Association. Member since 2005.
- Air and Waste Management Association. Member since 2002.

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# Christopher Scott Dietzel

**GEOLOGIST – CHAZEN TITLE**
**FIELD TEAM LEADER - PROJECT TITLE**

## EDUCATION

- MS, Internet Information Systems, Robert Morris University, 2003
- MS, Hydrogeology, Wright State University, 1997
- BA, Geology, The College of Wooster, 1994

## TRAINING

- OSHA Hazardous Waste Operations 40-Hour Technician Initial Course and refreshers
- OSHA Confined Space Entry Certification
- OSHA Fall Protection Awareness Certification
- 29 CFR 1910.134 Respiratory Protection Training
- Geophysical Survey Systems Utility Scan Ground-penetrating radar training
- Geophysical Survey Systems Profiler/Electromagnetic Induction survey training
- First Aid and CPR

## EXPERIENCE

- The Chazen Companies, New York, Geologist, Nov. 2003 to present.
- Civil and Environmental Consultants, Cincinnati, Ohio and Pittsburgh, Pennsylvania, May 1998 to Jan. 2001.

Mr. Dietzel is a Geologist with approximately 10 years of environmental consulting experience. He has extensive experience supervising contractors for the purpose of installing soil borings and monitoring wells and conducting remediation activities. He has extensive experience collecting soil samples, groundwater samples, sediment samples, surface water samples and soil vapor samples. As a team leader, he has performed Phase II preliminary contamination assessments, geologic and hydrogeologic investigations, and geophysical investigations. Mr. Dietzel oversees the ground-penetrating radar services provided from the Capital District office and provides portable gas chromatography services for the company. He has completed considerable environmental research and technical report preparation for simple to very complex projects.

## AFFILIATIONS

Hudson-Mohawk Professional Geologist's Association
NYS Counsel of Professional Geologists

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