February 26, 2020

New York State Department of Environmental Conservation
Region 7 Office
615 Erie Boulevard West
Syracuse, New York 13204
Attn: Mr. Michael Belveg

RE: Submission of a Pre-Design Work Plan for the Former Coyne Textile Facility located at 140 Cortland Ave., Syracuse, New York
NYSDEC BCP Site No. C734144
CHA Project No.: 059294.001

Dear Mr. Belveg:

On behalf of Ranalli/Taylor Street LLC, attached please find a copy of the Pre-Design Work Plan for the Former Coyne Textile Facility. This report has been prepared for informational purposes to further delineate the contaminant plume and collect samples for a bench scale test in preparation for the remedial design.

If you have any questions, please do not hesitate to contact me at (315) 257-7154.

Sincerely,

Samantha J. Miller

Samantha J. Miller, EIT, CPESC-IT
Assistant Project Engineer III

ecc: Mr. Harry Warner, NYSDEC: harry.warner@dec.ny.gov
Ms. Angela Martin, NYSDOH: angela.martin@health.ny.gov
Ms. Gail Cawley, JMA Wireless: gcawley@jmawireless.com
Mr. James Trasher, CHA: jtrasher@chacompanies.com

One Park Place, 300 South State Street, Suite 600, Syracuse, NY 13202-2024
T 315.471.3920 • F 315.471.3569 • www.chacompanies.com

Pre-Design Investigation Work Plan

Former Coyne Textile Facility
BCP Site #C734144
140 Cortland Avenue
Syracuse, New York

CHA Project Number:059294.001

Prepared for:
JMA Wireless d/b/a GEC Consulting
168 Brampton Road
Syracuse, New York 13205

Prepared by:

One Park Place
300 South State Street, Suite 600
Syracuse, New York 13202
Phone: (315) 471-3920

February 2020

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CERTIFICATION

I, Scott M. Smith, certify that I am currently a NYS registered professional engineer and that this Pre-Design Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, the undersigned, of CHA Consulting, Inc. have been designated by the Site owner to sign this certification for the Site.

For CHA Consulting, Inc.:

(Professional Seal)

Scott M. Smith, P.E.
Printed Name of Certifying Engineer

Signature of Certifying Engineer

February 26, 2020
Date of Certification

083885
NYS Professional Engineer Registration Number

CHA Consulting, Inc.
Company

Associate Vice President
Title

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LIST OF ACRONYMS & ABBREVIATIONS

3D	Three-dimensional
AAR	Alternatives Analysis Report
AMSL	Above Mean Sea Level
AOC	Area of Concern
ARA	Absolute Resource Associates, LLC
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BGS	Below Ground Surface
CAMP	Community Air Monitoring Plan
CASCADE	Cascade Environmental
CHA	CHA Consulting, Inc.
COC	Contaminants of Concern
DER-10	Division of Environmental Remediation Program Policy 10
DPT	Direct Push Technology
ESA	Environmental Site Assessment
ft^2	Square-feet
GZA	GZA GeoEnvironmental
ISCO	In-Situ Chemical Oxidation
MIHPT	Membrane Interface Hydraulic Profiling Tool
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PDWP	Pre-Design Work Plan
PSI	Pounds per Square-Inch
PVC	Polyvinyl Chloride
QA	Quality Assurance
QC	Quality Control
QAPP	Quality Assurance Program Plan
RD	Remedial Design
RI Report	Remedial Investigation Report
TMP	Tax Map Parcel
TOD	Total Oxidant Demand
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOC	Volatile Organic Compound
XDD	XDD Environmental

1.0 INTRODUCTION

The Former Coyne Textile Facility (Site) is located at 140 Cortland Avenue in the City of Syracuse, New York (Figure 1). The Site owner Ranalli/Taylor St., LLC entered into a Brownfield Cleanup Agreement (BCA) in September 2017 through the New York State Department of Environmental Conservation's (NYSDEC's) Brownfield Cleanup Program (BCP). The Site consists of three tax map parcels (TMP's) as shown on Figure 2 and is registered as BCP Site No. C734144. CHA Consulting, Inc. (CHA) was retained by the Site owner to provide engineering services related to the remaining aspects of the BCP.

CHA recently prepared an Alternatives Analysis Report (AAR) for NYSDEC review. As part of the AAR two areas were identified for treatment; (1) The Source Area, and (2) The Plume Area (Figure 3). In the AAR the recommended Alternative consisted of treating the Source Area via soil mixing and in-situ chemical oxidation (ISCO), and the Plume Area via ISCO and groundwater recirculation. Additionally, as part of the AAR, the following supplemental recommendations were made:

- **Plume delineation** –To more accurately define the horizontal and vertical extents of the contamination within the groundwater plume, additional investigation using a membrane interface hydraulic profiling tool (MIHPT) will be used to evaluate the geologic conditions and define the lateral and vertical distribution of contaminants in the groundwater. Delineation of the groundwater plume can potentially reduce the treatment area/volume and reduce the overall cost of the treatment and will provide CHA a better understanding of the area requiring treatment.
- **Bench testing** – Bench scale testing is performed by evaluating the interaction of the specific soil geochemistry with the remediation process chemistry to determine potential interferences and oxidant demands. CHA will collect and provide Site soil and groundwater to XDD Environmental (XDD) to perform these bench tests. During the bench testing an oxidant such as permanganate will be used to evaluate the total oxidant demand (TOD) from contaminants, reduced metals, and any additional non-target demand on the oxidant that may be present in the soils. The TOD of the oxidant in the presence of a representative contaminated soil sample can then be used to determine the oxidant loading for the full remedial design.

To prepare a remedial design for the recommended alternative, a pilot test will also be conducted on Site that evaluates the potential injection and extraction rates of the chemical oxidant.

CHA has prepared this Pre-Design Work Plan (PDWP) to be consistent with the guidance provided in the NYSDEC's Division of Environmental Remediation Program Policy 10 (DER-10) "Technical Guidance for Site Investigation and Remediation" (May 2010). The PDWP has been prepared to outline the procedures and protocols that will be utilized to conduct the recommended supplemental work. The data derived from this work will provide the information necessary to develop the Remedial Design (RD) for the Site.

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

The Site is located in an urban area at 140 Cortland Avenue in the City of Syracuse, Onondaga County, New York. The Site is currently unoccupied, contains one building with an approximately 52,000-square foot (ft^2) footprint, and is zoned for commercial use. The Site is identified as two non-contiguous areas (Figure 2) as described below:

- The former main laundry facility and offices are known as 140 Cortland Avenue (Tax Map No. 094.-05-06.0) and consist of one parcel of land totaling approximately 1.75 acres. This parcel consists of the currently vacant former laundering facility and offices (approximately 118,500 square feet), sidewalks and limited vegetation. The building is a concrete block building with a slab-on-grade foundation.
- The park and employee parking area are known as 1002-1022 South Salina Street/Cortland Avenue (Tax Map No. 094.-20-01.0) and 1024-1040 South Salina Street/Tallman Street (Tax Map No. 094.-20-02.0) and consist of two parcels totaling approximately 1.70 acres (0.57 and 1.13 acres, respectively). These parcels consist of a small park and a fenced in asphalt parking lot.

2.1.1 Neighboring Properties

The Site limits are generally bounded by commercial buildings to the north, South Salina Street to the east, Tallman Street to the south, and South Clinton Street to the west. Several rows of multi-family houses are located northwest of the Site. The parcels immediately to the east of Cortland Avenue are currently an asphalt parking lot and landscaped area deemed Coyne Park. Surrounding property uses include headquarters for Central New York Regional Transportation Authority and Centro Inc., several industrial/light manufacturing facilities, commercial retail locations and religious affiliated facilities.

2.1.2 Site Topography

The main parcel of the Site primarily consists of one building surrounded by asphalt roads and parking lot, concrete sidewalks and chain link fencing. The Site is generally flat, with a gentle slope from the east to the west across the employee parking lot and beneath the main building. The elevation of the Site is approximately 390 feet above mean sea level (AMSL).

2.1.3 Site Geology

According to the United States Department of Agriculture (USDA) Web Soil Survey, the soil beneath the Site is indicative of Urban Land, which is soil material having a non-agricultural, manmade surface layer that has been produced by mixing and filling in urban and suburban areas. Surficial geology consists mostly of lacustrine silts and clays. Bedrock at the Site is mapped by the United States Geological Survey (USGS) as the Syracuse formation, which consists of dolostone, shale, gypsum, and salts.

Field observations and stratigraphic cross sections provided in the Remedial Investigation Report (RI Report) (CHA, February 2019) confirmed the presence of urban fill to a depth of approximately 8 to 10 feet below ground surface (bgs). Generally, silts and clays are present beneath the urban fill to a depth of approximately 13 to 15 feet bgs. Alternating silts and clays, then sands and gravel, were encountered beneath the fill material to the end of each boring. At least two silt and clay layers, one below the urban fill and one at varying depths, but approximately 26 to 30 feet bgs, may act as confining layers to impede the vertical migration of groundwater and contamination.

2.1.4 Site Hydrology

Generally, the Site slope indicates groundwater flows in a westerly direction towards Onondaga Creek, located approximately 0.2 miles to the west of the Site.

Based on groundwater elevations measured on April 19, 2018, the depth to groundwater at the Site is typically less than 15 feet bgs. Beneath the building, groundwater contours are at a nearly flat gradient, apart from the northwestern portion of the building where slightly elevated groundwater indicates localized flow path from the north-western portion of the building toward the center of the building.

2.2 PREVIOUS INVESTIGATIONS

Several investigations were completed prior to the development of the AAR and this PDWP. These investigations include the following and were summarized in the AAR:

- Phase I Environmental Site Investigation (ESA) (GZA GeoEnvironmental (GZA), 2014)
- Phase II Subsurface Investigation (GZA, November 2014)
- Phase III Subsurface Investigation (GZA, March 2015)
- Vapor Intrusion Investigation (GZA, 2015)
- Remedial Investigation (CHA, 2018)

In summary, four primary areas of concern (AOCs) were identified. The four AOCs are defined as: (1) the Former UST Area (Source Area); (2) Site-wide groundwater; (3) Office vapor; and (4) Warehouse vapor. The primary contaminants of concern (COCs) for the Site include chlorinated volatile organic compounds (VOCs) in the soil, groundwater, and soil vapor beneath the former laundering facility. This PDWP does not address the office or warehouse vapor and was prepared to provide additional soil and groundwater data within the Former UST Area (Source Area) as well as Site-wide groundwater contamination. The diagnostic testing and design of vapor mitigation systems to address the office and warehouse vapor intrusion issues will be included in the remedial design.

3.0 PRE-DESIGN INVESTIGATION

The Pre-Design Investigation will be performed in accordance with this PDWP and will involve the fieldwork necessary to complete the supplemental Site characterization. The Pre-Design Investigation will consist of two parts and will provide additional information necessary to prepare the Remedial Design for the Site.

3.1 PLUME DELINEATION

In order to more accurately define the horizontal and vertical extents of the contamination within the groundwater plume additional investigation using MIHPT technology will be completed. To complete this investigation CHA will retain Cascade Environmental (Cascade) to core drill through the concrete in the assumed plume area, in the locations shown on Figure 4. At each location the membrane interface probe (MIP) will be inserted down the hole using a direct-push technology (DPT) such as a Geoprobe®.

The MIP system operates by heating the soil and groundwater adjacent to the probe to 120-degrees Celsius to volatilize VOCs in the immediate vicinity of the MIP membrane. The volatilized VOCs diffuse across the membrane into a closed, inert gas loop that carries the vapors to a series of detectors housed at the surface. Each detector produces a continuous profile (plotted with respect to depth) to indicate the presence of various VOC compounds. The system is designed to evaluate the hydraulic behavior of unconsolidated materials by injecting clean water into the subsurface and recording changes in the associated pressure. The system records these changes in pressure and calculates the associated hydraulic conductivity. The MIHPT system provides real-time information that allows users the ability to make real time field-based decisions and more accurately delineate the plume. As data is obtained from each of the points in the transect, CHA will work with Cascade to determine representative "step-out" locations to complete the delineation. Estimated locations are shown on Figure 4. Upon completion of the investigation, the data will be converted into a three-dimensional (3D) model along with vertical profiles with respect to depth.

3.2 BENCH TESTING

After the completion of the plume delineation, CHA will collect soil and groundwater samples from the Site for use in a bench test conducted by XDD (Addressed in Section 3.4). The purpose of the bench test will be to evaluate the conditions in both, the source area and the plume area, as identified in the AAR. The bench test will consist of two phases:

- Phase 1 – Permanganate Stability/TOD Test
- Phase 2 – Contaminant Treatability

The bench testing will be conducted in a series of batch reactors at approximately 20 degrees Celsius. Aqueous phase residual oxidant concentrations will be determined using iodometric titration. Residual oxidant concentrations in reactors with moist/wet soil are normalized to account for the moisture content of the soil and soil mass estimates will be adjusted for moisture content so that engineering parameters can be reported in terms of dry weight. Additional information regarding each phase of the bench scale study is provided in the subsections below.

3.2.1 Phase 1 – Permanganate Stability/TOD Test

The stability test evaluates the persistence of permanganate in the presence of Site soil and groundwater in a series of test reactors. The test will be performed using sodium permanganate at two initial concentrations and potassium permanganate at one initial target concentration only due to its solubility limit. The residual permanganate in each reactor will be evaluated at approximately 1, 7, and 14 days. Throughout the test, the soil will be periodically mixed in a manner to simulate soil mixing (for the Source Area remedy) that will occur in the field. The results from the stability test will be used to evaluate oxidant demand.

3.2.2 Phase 2 – Contaminant Treatability Test

This test will be conducted to confirm that the target COCs are fully destroyed using the oxidant dosing levels determined during the Phase 1 tests. A minimum of two concentrations of permanganate (potassium and/or sodium) will be evaluated in the presence of soil and groundwater. For each test condition, soil and groundwater samples will be submitted for VOCs analysis after 21 days from the start of the test. Soils will be analyzed in duplicate for the determination of analytical precision. In total, eight soil samples and eight groundwater samples (assuming one soil type) will be analyzed for VOCs by Absolute Resource Associates, LLC (ARA) using United States Environmental Protection Agency (USEPA) Method 8260. The ratio of oxidant required to treat the COCs under laboratory conditions will also be evaluated.

3.3 PILOT TESTING

To determine the maximum extraction and injection rates of the groundwater that can be sustained at the Site without oxidant solution surfacing or excessive groundwater draw-down a pilot test will be conducted on Site. The pilot test will consist of the installation of two wells that will be installed in two discrete areas of the Site and screened within the permeable sand and gravel soil unit between

approximately 15 to 25-feet bgs. The actual location and screened interval of the pilot test wells will be determined based on results from the MIHPT investigation. It is anticipated that the pilot test will be conducted as follows:

- Installation of the two permanent wells (to be re-used during the remedy).
    - Wells will be constructed with 2-inch diameter Schedule 40 polyvinyl chloride (PVC) and will contain 5 to 10-feet of Schedule 40 PVC 0.010-inch slotted screen within the sand and gravel unit.
- Injection of 2,500-gallons of potable water into the test wells simultaneously (1,250 gallons per well).
    - Water will be injected at low pressures (less than 5-10 pounds per square inch [psi]) to prevent the development of preferential pathways in the subsurface).
    - The injection flow rates will be increased to determine the maximum achievable injection rate that can be sustained without causing the injection solution to short-circuit to the surface.
    - If groundwater mounding is limited and injection pressures remain below 15 psi, injection flow rates will slowly be increased.
- Extraction of approximately 2,500 gallons of water from the two wells simultaneously (1,250 gallons per well).
    - To evaluate the feasibility of the recirculation strategy (simultaneous injection and extraction) and develop design parameters, the actual extraction rate tested will correspond with the maximum injection rate.
- Flow meters and totalizers will be installed in-line to measure real-time injection and extraction flow rates and record total volumes injected/extracted.
- Pressure gauges will be installed in-line and at the injection well-head to measure injection pressures. To prevent the development of preferential pathways in the subsurface, injection pressures will be maintained below 15 psi.
- Groundwater levels will be measured at nearby monitoring wells during the injection to evaluate potential groundwater mounding, and during extraction to evaluate potential groundwater draw-down.

3.4 PROPOSED SAMPLING AND ANALYSIS

As discussed in Section 3.2.2 above, Phase 2 will evaluate the ability of the oxidant dosing levels to fully destroy the COCs. Baseline soil and groundwater data and stability/TOD results will be used to select the oxidant concentrations to be tested as part of Phase 2. A minimum of two concentrations of permanganate will be evaluated in the presence of soil and groundwater. Approximately two pore volumes of reagent will be applied to the soil in order ot obtain the necessary volume required for laboratory analysis. Control reactors will consist of soil and groundwater and no oxidant to test for any potential losses due to volatilization.

For each test condition, soil and groundwater samples will be submitted for VOC analysis after 21 days from the start of the test. Soils will be analyzed in duplicate for the determination of analytical precision. In total, eight soil samples and eight groundwater samples will be analyzed for VOCs. Table 1 on the following page presents a summary of the proposed sampling and analysis for the samples to be sent to XDD for the bench test. Samples for additional laboratory analysis will not be collected as part of this investigation. Quality Assurance/Quality Control (QA/QC) samples will not be collected as part of this PDWP.

Table 1. Soil and Groundwater Sample Collection

Test Condition	Soil Analyses (VOCs)	Groundwater Analyses (VOCs)
Baseline	2	1
Control	2	1
Low Oxidant	2	1
High Oxidant	2	1
Total	**8**	**4**

A total of four pounds of soil (approximately three 16-ounce jars) and one liter of groundwater will be collected for analysis. A new pair of disposable latex gloves will be used for soil and groundwater samples. Additional glove changes will be undertaken as conditions warrant. Sample containers will be new prior to collection of Site soil/groundwater. The sample containers will be placed on ice in rigid coolers after collection and labeling. Remaining space will be filled with packing material to cushion the containers during transportation and shipment. Samples will be shipped directly to XDD following collection.

3.5 EQUIPMENT DECONTAMINATION

Prior to mobilization, the drill rig shall be thoroughly cleaned to remove oil, grease, mud, and other foreign matter. Subsequently, before initiating drilling at each boring location, samplers, drill steel, and associated equipment will be cleaned to prevent cross-contamination. All cleaning will be conducted at a predetermined on-Site location. Cleaning will be accomplished using the procedures outlined in the following sections.

3.5.1 Small Equipment

For all activities, dedicated sampling equipment is preferred. However, if non-dedicated equipment is used (i.e. Macrocore barrel), the required decontamination procedure will include:

1. Disassemble equipment, as required.

2. Remove gross contamination from the equipment by brushing and then rinsing with tap water.
3. Wash with Alconox and tap water.
4. Rinse with tap water.
5. Rinse with distilled water.
6. Air dry equipment.

Decontaminated equipment will be placed on polyethylene sheeting in order to avoid contacting a contaminated surface. Field personnel will use a new pair of outer gloves before handling sample equipment after it is cleaned.

3.5.2 Large Equipment

The permanent components of the drill rig (body, tracks, etc.) are not expected to come into contact with contaminated soils since the work will be performed primarily in an area covered by a concrete slab, and therefore, will not require decontamination. Additionally, because DPT will be used, limited soil cuttings coming to the surface are anticipated.

3.6 INVESTIGATION DERIVED WASTE

All soil removed from intrusive activities that is not collected for the bench test will be placed into drums for characterization and off-Site disposal at a later date, at a permitted disposal facility.

Additionally, all purged water from groundwater collection and from the pilot test will be containerized and disposed of during the remedy implementation. Samples for waste characterization purposes will not be collected as part of this work.

Gloves, personal protection equipment, sampling materials, etc., will be collected daily and disposed of as a solid waste.

3.7 REPORTING

As the purpose of this investigation is to gather the necessary data to complete the Remedial Design, the data obtained as part of the PDWP will be included as part of the design. Submission of a separate report to the NYSDEC is not anticipated.

4.0 QUALITY ASSURANCE PROJECT PLAN

Given the limited number of samples, and the type of sampling to be conducted, a Quality Assurance Project plan (QAPP) was not prepared for this PDWP. The data collected from this investigation is solely for the purposes of providing additional information the remedial design and is not intended to be directly used for developing the conceptual Site model or Site characterization.

5.0 HEALTH AND SAFETY PROTOCOLS

A Site-specific Health and Safety Plan (HASP) was prepared following an assessment of known physical and chemical hazards present at the Site, and an evaluation of the risks associated with the PDWP. Available Site information was examined and adequate warnings and safeguards for field personnel were selected and implemented. All CHA field personnel are required to review and sign the HASP before entering the field. Subcontractors to CHA are required to develop and implement their own HASP. A copy of the Site-specific HASP is provided in Appendix A.

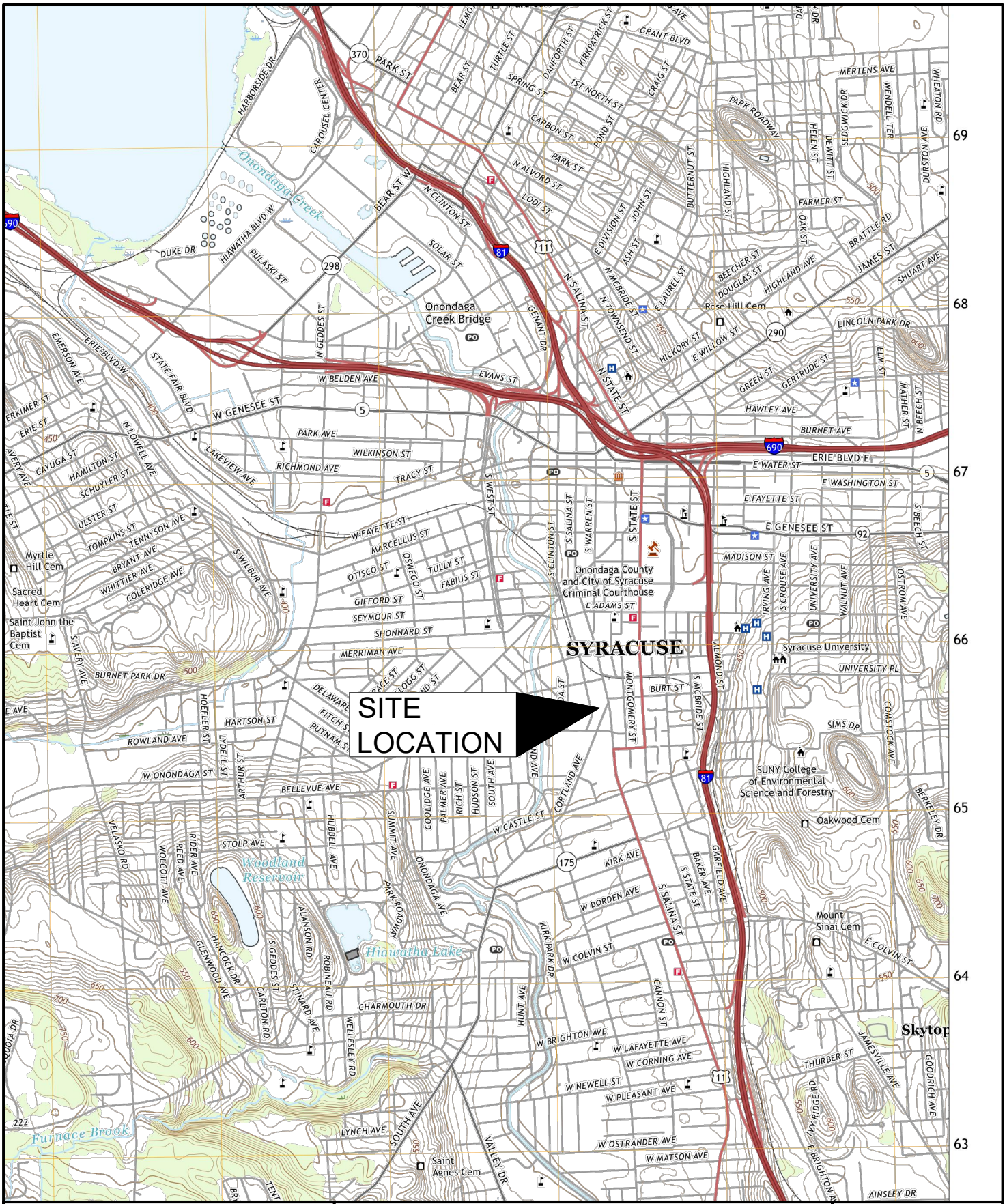
6.0 COMMUNITY AIR MONITORING PROGRAM

A Community Air Monitoring Plan (CAMP) has been prepared 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 the proposed activities. Air monitoring will be conducted in general accordance with the New York State Department of Health (NYSDOH) requirements. A copy of the Site-specific CAMP is provided in Appendix B.

7.0 SCHEDULE

CHA and Cascade anticipate mobilization to the Site for the MIHPT and Bench Test soil/groundwater collection to begin the week of March 2, 2020. This investigation is anticipated to require five days of field work. Upon conclusion of the field work the samples will be sent to XDD for analysis and bench scale testing. The Pilot Test has not been scheduled at this time. CHA will advise the NYSDEC of this date as it is determined.

FIGURES



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CHA
300 South State Street - Suite 600
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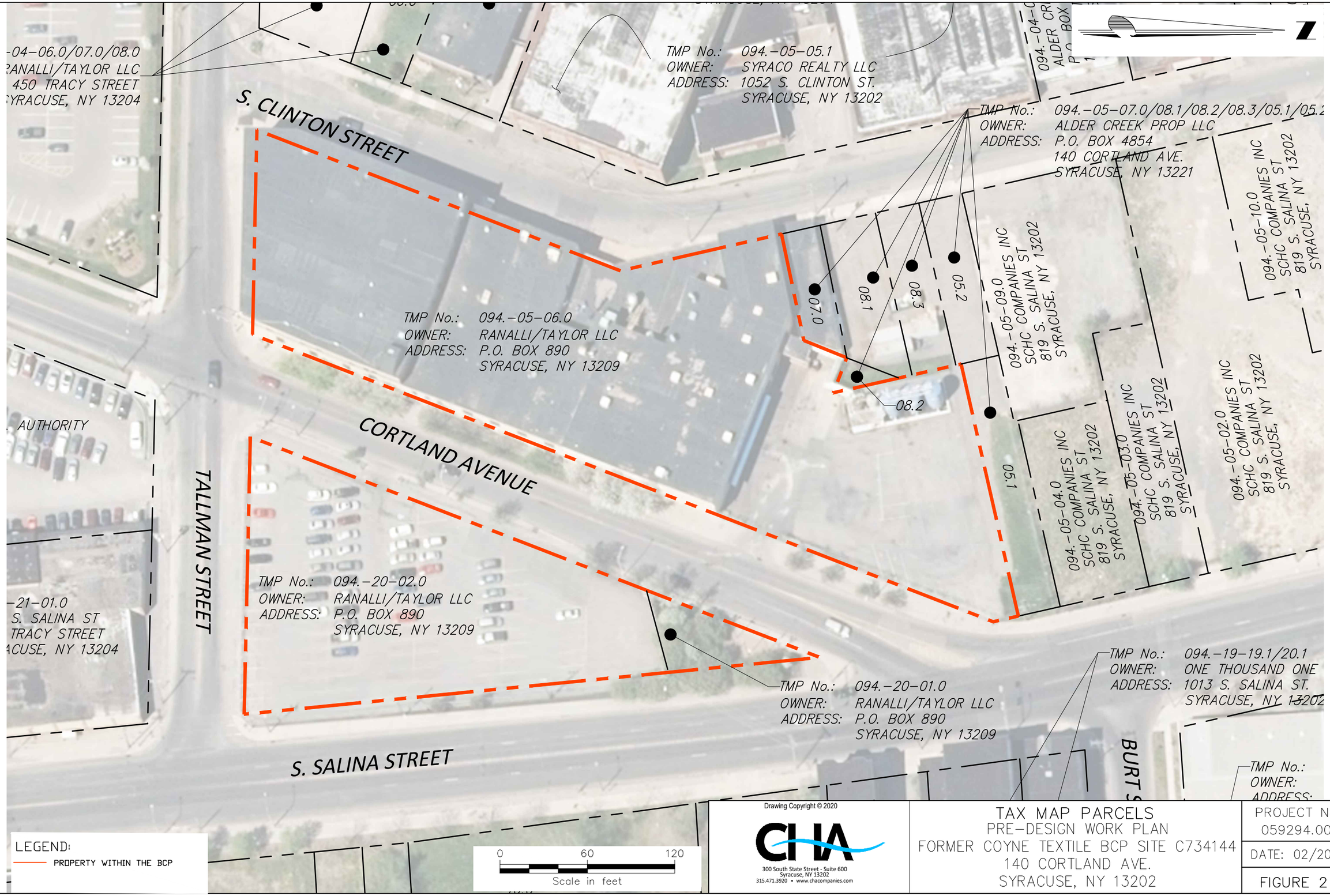
SITE LOCATION MAP

PRE-DESIGN WORK PLAN
FORMER COYNE TEXTILE BCP SITE C734144
140 CORTLAND AVE.
SYRACUSE, NEW YORK

PROJECT NO. 059294.001

DATE: 02/2020

FIGURE 1



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TAX MAP PARCELS
PRE-DESIGN WORK PLAN
FORMER COYNE TEXTILE BCP SITE C734144
140 CORTLAND AVE.
SYRACUSE, NY 13202

PROJECT NO. 059294.001

DATE: 02/2020

FIGURE 2

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LEGEND:

- APPROXIMATE SOURCE AREA
- APPROXIMATE PLUME AREA

0 60 120

Scale in feet

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APPROXIMATE SOURCE AND PLUME AREAS
PRE-DESIGN WORK PLAN
FORMER COYNE TEXTILE BCP SITE C734144
140 CORTLAND AVE.
SYRACUSE, NY 13202

PROJECT NO. 059294.001

DATE: 02/2020

FIGURE 3

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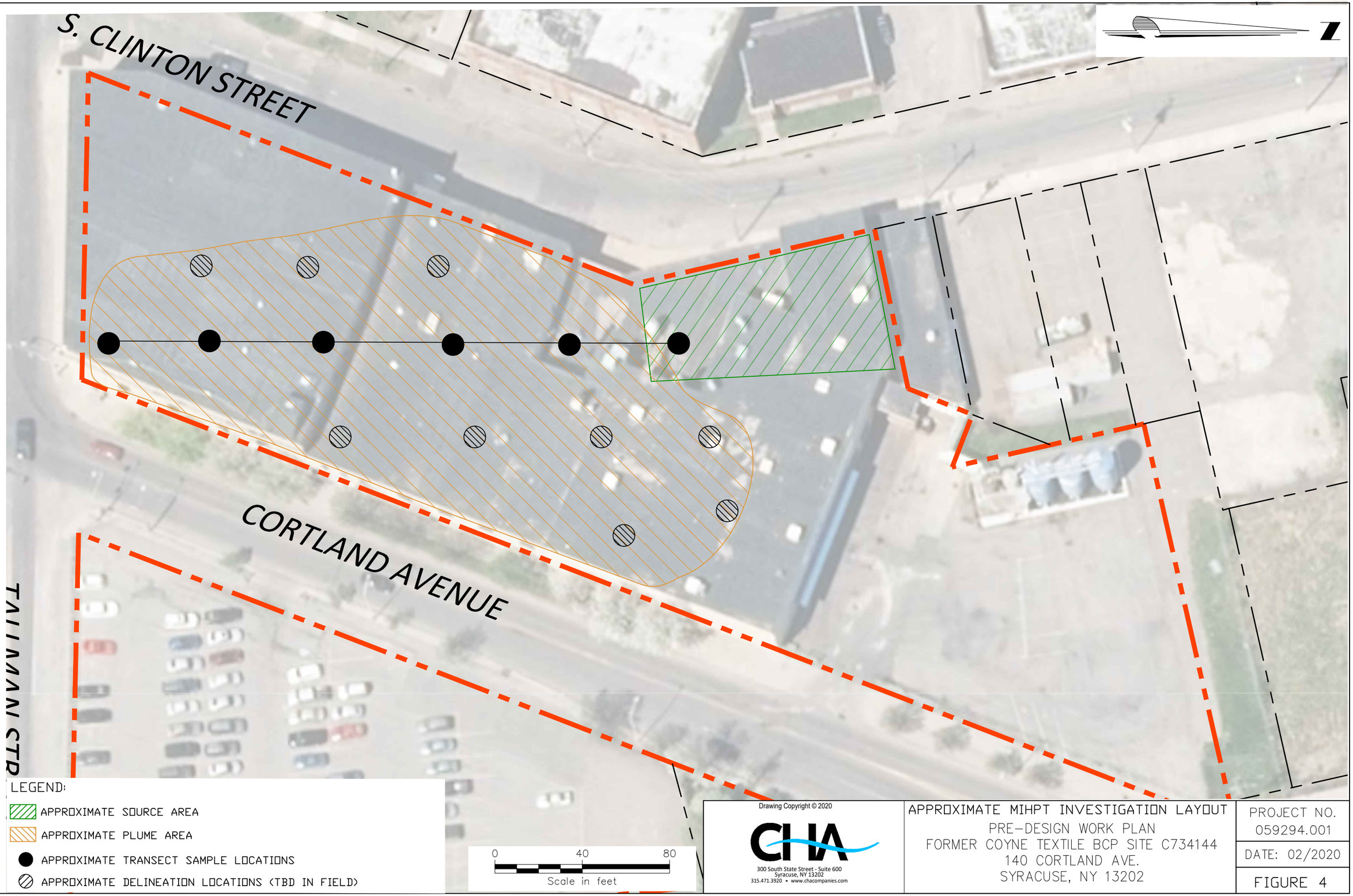

LEGEND:

- APPROXIMATE SOURCE AREA
- APPROXIMATE PLUME AREA
- APPROXIMATE TRANSECT SAMPLE LOCATIONS
- APPROXIMATE DELINEATION LOCATIONS (TBD IN FIELD)

0 40 80

Scale in feet

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300 South State Street - Suite 600
Syracuse, NY 13202
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APPROXIMATE MIHPT INVESTIGATION LAYOUT

PRE-DESIGN WORK PLAN
FORMER COYNE TEXTILE BCP SITE C734144
140 CORTLAND AVE.
SYRACUSE, NY 13202

PROJECT NO. 059294.001

DATE: 02/2020

FIGURE 4

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APPENDIX A

Health and Safety Plan

SITE HEALTH AND SAFETY PLAN

PROJECT INFORMATION

Project Name: Pre-Design Investigation - Former Coyne Textile Facility	**CHA Project No.** 059294.001
Project Start Date: 3/2/20 **Completion Date:** 3/7/20	**Weather:** °F
Project Location: Salina, New York	**Project Task:** Contaminant plume delineation, groundwater/soil sampling *Complete a Site Health & Safety Plan per Task*

Description of Work:
Be Specific: CHA staff will oversee and assist with contaminant plume delineation facilitated by Cascade Drilling. A drill rig with Membrane Interface Hydraulic Profiling (MiHPT) will be used at multiple locations within the building. Cascade will core through the concrete prior to using a drill rig at the proposed locations. CHA staff will not operate any equipment owned by Cascade. CHA staff will assist with determining locations and collecting data.
Soil samples will be collected using the Geoprobe and 2-inch macrocore acetate liners. Approximately four pounds of soil will be collected. Groundwater samples will be collected using low-flow sampling equipment. The groundwater monitoring well will be purged to stability prior to sampling. Approximately one liter of groundwater will be collected.

Key Personnel:	Samantha Miller	Karyn Ehmann	Karyn Ehmann
Responsibilities:	*Project Manager*	*Field Team Leader*	*Site Safety Officer*

Description of Hazards:
Proximity to heavy equipment, such as the drill rig. Slips, trips, and falls.
Contaminated soil and groundwater. Contaminants of concern include tetrachloroethene, trichloroethene, dichloroethene, vinyl chloride, benzene, isopropylbenezene, toluene, and xylene.

TASK HAZARDS			TASK SAFETY MEASURES & PPE	
Eye	Chemical Exposure	Yes ☒ No ☐	☒ Safety Glasses	
	High Heat/Cold	Yes ☐ No ☒	☐ Safety Goggles	
	Dust/Flying Debris	Yes ☒ No ☐	☐ Face Shield	
	Impact	Yes ☒ No ☐	☐ Shaded Lenses	
	Light/Radiation	Yes ☐ No ☒		
Head	Impact	Yes ☒ No ☐	☒ Hard Hat: ☐ Orange or ☐ White or ☐ Blue	
	Electrical Shock	Yes ☐ No ☒	☐ Reflector Tape (Required for night operations)	
	Lack of Visibility	Yes ☐ No ☒		
Foot	Chemical Exposure	Yes ☒ No ☐	☒ Work Boots	☒ Steel Toed Boots
	High Heat/Cold	Yes ☒ No ☐	☐ Ankle Protection	☐ I/75 C/75 (Impact/Compression)
	Impact/Compression	Yes ☐ No ☒	☐ Rubber Boots	☐ Cd Type 1 or 2 (Conductive)
	Slips/Trips	Yes ☒ No ☐	☐ Insulated Boots	☐ PR (Puncture Resistant)
	Puncture	Yes ☐ No ☒	☐ Non-slip Soles	☐ Mt/70 or 50 or 30 (Metatarsal)
	Slippery/Wet Surface	Yes ☒ No ☐	☐ Chemical resistant	☐ EH (Electrical Hazard)
	Explosive/Flammable Atmospheres	Yes ☐ No ☒		☐ SD Type I or II (Static Dissipative)
	Electrical	Yes ☐ No ☒		
Hand	Chemical Exposure	Yes ☒ No ☐	☒ Work Gloves	☐ Rubber Gloves
	High Heat or Cold	Yes ☒ No ☐	☐ Leather Gloves	☐ Nitrile Gloves
	Cuts/Abrasion	Yes ☒ No ☐	☒ Latex Gloves	☐ Insulated Gloves
	Puncture	Yes ☐ No ☒	☐ Vinyl Gloves	☐ Metal Mesh Gloves
	Electrical Shock	Yes ☐ No ☒	☐ Neoprene Gloves	
	Bloodborne Pathogen	Yes ☐ No ☒	☐ Butyl Gloves	
Body/Torso	Chemical Exposure	Yes ☐ No ☒	☐ Tyvek Suits: ☐ White or ☐ Yellow	
	Extreme Heat/Cold	Yes ☐ No ☒	☐ UV Protection	☐ Cooling/Heating Vests
	Abrasion	Yes ☐ No ☒	☐ Coveralls	
	Lack of Visibility	Yes ☐ No ☒	☐ Reflective Vest	

	Impact Electrical Arc	Yes ☐ No ☒ Yes ☐ No ☒	☐ Electrical Safety PPE
Fall	Fall Hazard	Yes ☐ No ☒	☐ Harness ☐ Fall Protection Lanyard
Noise	Noise Hazard	Yes ☒ No ☐	☒ Ear Plugs ☒ Ear Muffs
Respiratory	Chemical Exposure Confined Spaces Particulate Exposure	Yes ☐ No ☒ Yes ☐ No ☒ Yes ☐ No ☒	☐ Respirator: ☐ ½ Face or ☐ Full Face ☐ Cartridge: ☐ P or ☐ OV or ☐ C ☐ PA/PR
Biohazards	Poisonous Plants Ticks Bee Stings Poisonous Snakes Pigeon Guano Large Mammals Dry Weather (e.g. wildfires)	Yes ☐ No ☒ Yes ☐ No ☒ Yes ☒ No ☐ Yes ☐ No ☒ Yes ☐ No ☒ Yes ☐ No ☒ Yes ☐ No ☒	☐ SOPs ☐ Long Pants/Sleeves ☐ Ivy Block ☐ Tick Removal Kit ☐ Insect Repellent ☒ Epipen ☒ Allergy Kits ☒ Be Alert/Observant ☐ Chaps ☐ Dust/Nuisance Respirator ☐ PPE
Additional Equipment	As Needed		☐ Traffic Cones ☐ Signage ☐ Flags ☐ 2- Way Radios ☐ Flashlight/Floodlights ☒ First Aid Kit ☐ Hand/Power Tools ☐ Beacon Light ☐ Ladders

SITE CONTROL

Site Control/Site Security[1]: ***Describe Measures***	Enter through the locked gate to drive to the Treatment Plant side of the landfill.	M & PT: ☐ Y ☒ N *If yes, sketch information on separate sheet*
Confined Space Entry: *If Yes, Attach Permit*	☐ Y ☒ N	
Decontamination: *If Yes, Describe Procedures*	☒ Y ☐ N Equipment will be decontaminated after each sample using an alconox and DI water	
Site Monitoring[2]: *If Yes, Describe Procedures*	☐ Y ☒ N **Use a PID to monitor volatiles a minimum of once per hour.**	

CONTINGENCY PLAN

Emergency Contacts: *Provide Telephone Numbers*	Police: 911 Ambulance: 911 Fire: 911 Hospital: Crouse Hospital	Client Contact: Gail Cawley Client Phone #: 315-431-7248 CHA PM Phone #: 915-329-9898 Poison Control: 1-800-222-1222

Route to Hospital:
(Directions attached to the end of this HASP)

Communication: ☒ Cell Phone ☐ Nearest Pay Phone ☐ Pager

Comments:
Large equipment decontamination the responsibility of Cascade Drilling; small sampling equipment decontamination the responsibility of CHA staff.
Cuttings from drilling activities and any wastewater produced during groundwater sampling will be containerized in 55-gallon drums to be sampled and disposed of at a later time.
Site contaminants of concern generally cause skin or eye irritation and headache if exposed.

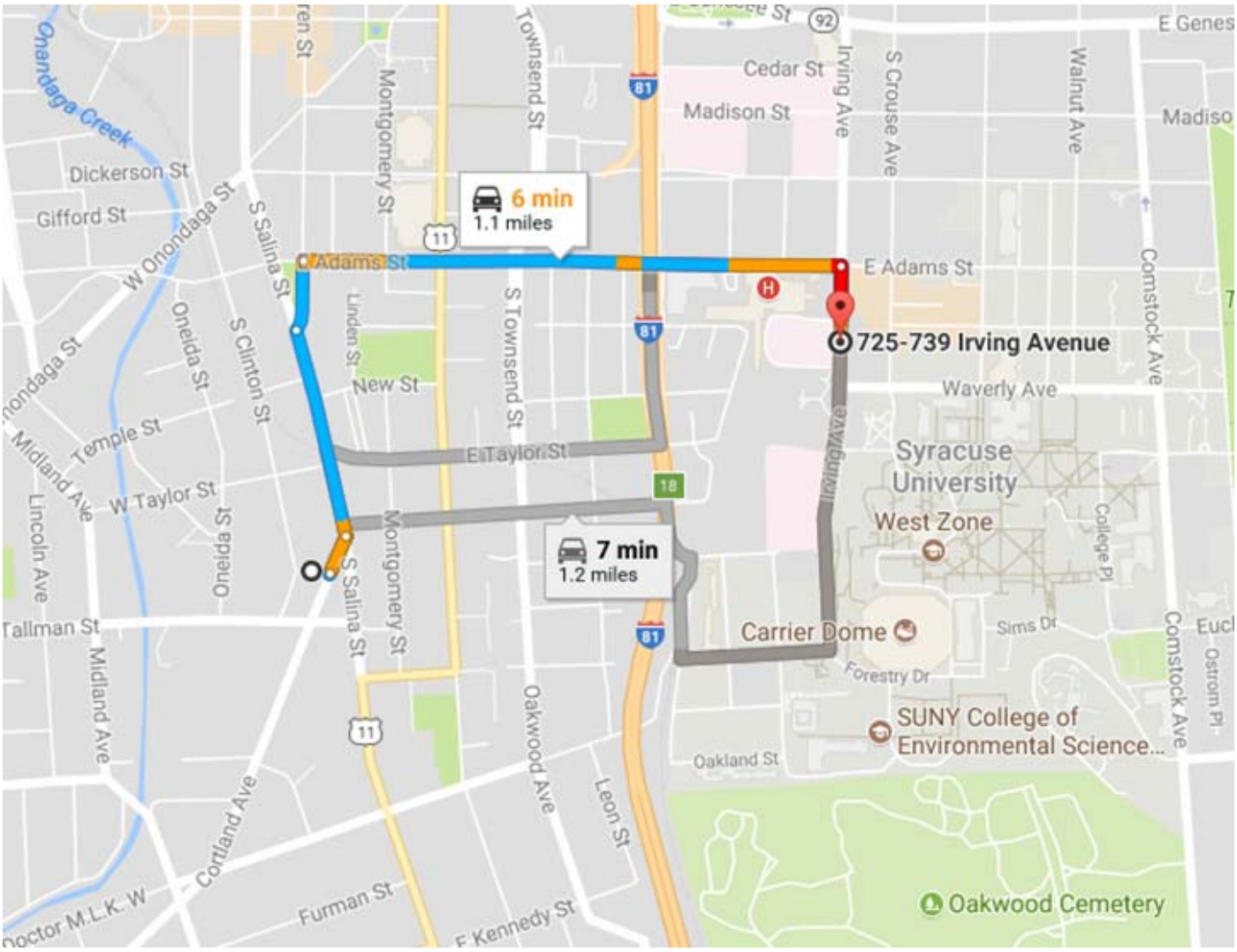
PLAN SIGN-OFF

Name:	Name:	Name:	Name:
X:	X:	X:	X:
Date:	Date:	Date:	Date:

Name:	Name:	Name:	Name:
X:	X:	X:	X:
Date:	Date:	Date:	Date:
SAFETY TRAINING/MEDICAL MONITORING			
Type:	Type:	Type:	Type:
Date:	Date:	Date:	Date:
Type:	Type:	Type:	Type:
Date:	Date:	Date:	Date:

1. Who is providing site control/site security, if any, for this task? Examples of Site Control/Site Security include police, client representative(s), owner(s), CHA or client supervisors
2. What are you monitoring on site, if any, for this task? Examples of Site Monitoring include air monitoring, like carbon monoxide or oxygen levels or wet bulb temperatures

SOURCE: Google Maps



Directions from site:

1. Head north on Cortland Ave toward South Salina Street
2. Use any lane to turn left onto South Salina Street
3. Continue approximately 2.5 blocks to South Warren Street
4. Turn right onto South Warren Street
5. Turn right at the first cross street onto East Adams Street
6. Continue straight
7. Continue under the I-81 overpass
8. Turn right onto Irving Ave
9. Follow signs to the Emergency Department

N

CHA ©2020
300 South State Street, Suite 600
Syracuse, New York 13202

NOT TO SCALE | DATE: February 2020

FIGURE 1
DIRECTIONS TO NEAREST HOSPITAL
140 CORTLAND AVE
SYRACUSE,
ONONDAGA COUNTY, NEW YORK

V:\Projects\ANY\K2\23278\Reports\Coyne Textile\Remedial Investigation Work Plan\Draft\HASP\Draft\HASP Figures\Figure 2 - Hospital Route.doc

CHA (Your Location) Office

- What to do for Accidents, Incidents, Safety Hazards & Near Misses

1) **<u>If any injury occurs, no matter how minor:</u>**

    a. Get it treated immediately as required. Notify supervisor.
    b. Contact Megan Robertson as soon as possible. Contact Margaret Rudzinski if Megan cannot be reached.
    c. Complete a CHA incident report form and return to Megan Robertson within 24 hours. (V:\Public\ANY\Health_&_Safety\Incident Reporting)

'Contact' means phone until you talk to the person directly. Voicemails and emails do not count.

<u>(Employees should not provide their personal medical insurance information to the medical facility for work-related incidents. Please contact HR for further direction on how your work-related medical claim will be paid.)</u>

2) **<u>For any accident, incident, safety hazard or near miss (no injury occurs)</u>**

    a. Use your 'Stop Work' Authority as required. EVERYONE has the authority to stop work if they see a significant safety issue.
    b. For all – Report to your supervisor within 24 hours.

'Report' means phone, leave voicemail or email as appropriate.

Megan Robertson (Director of HR Operations)	1-518-453-8750 – Office phone 1-518-453-2889 – Fax <u>mrobertson@chacompanies.com</u>	For all Project accidents and incident and/or potential workmen's compensation claims
Margaret Rudzinski (Sr. VP, Corporate Environmental Health & Safety)	1-518-453-2830 – Office phone 1-518-469-9259 – Cell phone <u>mrudzinski@chacompanies.com</u>	Report all safety hazards/issues to Margaret Rudzinski

Recommendations for additional contacts:

- Office Leader
- Safety Coordinator

Incident Report

Please note: This form must be completed within (24) hours of an employee's injury or illness during the workday. This form can be completed by the employee or supervisor (or a witness if his/her supervisor is unavailable).

Employee Information

Employee's Name	Title	Group	Supervisor

Incident Details

Date of Incident	Time of Incident	Location of Incident *(provide address, if available)*

List the Nature of the Employee's Injury & Body Parts Affected (Indicate whether a similar work-related injury has occurred in the past)**:**

Explain What the Employee Was Doing When the Incident Occurred:

Describe How the Incident Occurred:

List any Applicable Objects That Were Directly Involved in the Injury *(i.e. motor vehicle, etc):*

Did the Employee Stop Work Due to the Injury?	If Yes, Has the Employee Returned to Work?

Medical Treatment *(if known)*

Did the Employee Seek Medical Treatment?	Date of First Medical Treatment	Location of Treatment *(provide address, if available)*	Type of Facility *(i.e. emergency room, hospital, urgent care, doctor's office)*	What Type of Treatment

Acknowledgment

Employee Signature:	Date:

Supervisor (or Witness) Name (Printed):	Supervisor (or Witness) Signature:

RETURN COMPLETED FORM TO MEGAN ROBERTSON IN HUMAN RESOURCES

PHONE NUMBER - (518) 453-8750

FAX NUMBER – (518) 453-2889

E-MAIL ADDRESS – MROBERTSON@CHACOMPANIES.COM

cc: Health & Safety
M. Platt

CHA Consulting, Inc.

Job Hazard Analysis

Environmental Sampling/Outdoor Hazards

Task	Hazard Type and Description	Hazard Control
Working in hot environments	Heat disorders including heat cramps, heat exhaustion, and heat stroke	Employers can control this hazard by providing heat stress training to exposed employees, providing access to shade, and allowing employees to gradually get used to hot environments. Employees working in hot environments are advised to take breaks in cool rest areas, rotate physically demanding tasks, save most demanding work for cooler times of day, and utilize the heat index chart to determine exposure risk. Be sure that every employee working in the hot environments is drinking one cup of water ever fifteen minutes. Recognize the signs such as above normal body temperature, headaches, nausea, cramping, fainting, increased heart rate, and pale as well as clammy skin
	Sunburn	The risk of sunburn is higher when working at high elevations, or when working around water (from reflection). In these conditions, you can be burned even in overcast conditions; therefore, wear protective clothing and use sunscreen
High wind events	Severe wind events can create	Employees should avoid areas

	"wind throws" where strong winds can blow down trees	during high wind occurrences that exhibit previous wind damage
Working at high altitudes	Altitude sickness	Recognize signs of acute mountain sickness including headaches, light-headedness, inability to catch one's breath, nausea, and vomiting. Practice prevention by acclimating slowly to high elevations and staying hydrated. If the following symptoms progress, immediately descend to lower elevations and seek medical attention: difficulty breathing, chest pain, confusion, decreased consciousness, and loss of balance
Electrical storms	Being struck by lightning	While working outside, watch the sky for thunderstorms and seek shelter before the weather deteriorates. Stop working in streams and lakes. Someone at the job site must be able to begin revival techniques (i.e. CPR) if someone is struck by lightning. Do not use telephones. If caught in electrical storms, seek shelter inside a vehicle or building. When in a building, keep away from doors, windows, plugged in appliances, and metal. When in a vehicle, avoid contact with metal objects inside. If outside with no shelter, obey the following procedures: do not congregate, do not use metal objects, avoid standing near isolated trees, seek lower elevations such as valleys or canyons, and avoid being on peaks as well as trees. If you feel your hairs standing on end and your skin tingling, this is a sign that lightening might be about to strike so crouch immediately (feet together, hands on knees). Wait a minimum of 20-30 minutes after the last lightning flash to return to the field or outside area.

Being outdoors in cold weather for extended periods of time	Hypothermia	Recognize the signs including shivering, numbness, drowsiness, muscle weakness, dizziness, nausea, unconsciousness, low/weak pulse, and large pupils. Exercise practice prevention such as staying dry, wearing the appropriate clothing (layers), listen to the weather forecast to plan accordingly, stay hydrated, cover head with warm clothing, and stay active. Be aware of the role that wind-chill can play in hypothermia; under certain conditions, hypothermia can occur without any rain or being wet.
	Frostbite	Dress for the weather- layers are best, and mittens are better than gloves (keeps your warm fingers together while warming each other). Wear two pairs of socks with the inner layer made of synthetic fiber, such as polypropylene, to wick water away from the skin and the outer layer made of wool for increased insulation. Shoes should be waterproof. Keep your head, face, nose, and ears covered at all times. Clothes should fit loosely to avoid a decrease in blood flow to the arms and legs. Always travel with a friend in case help is needed. Be especially wary of wet and windy conditions; the "feels like" temperature (wind chill) is actually much lower than the stated air temperature. The very old, those who are not in good physical condition, and people with diabetes and anyone with vessel disease should take extra precautions.
Working in areas with	Giardia	Treat, filter, or boil drinking water.

limited access to clean drinking water		Do not drink untreated water from streams, lakes or springs.
Working outdoors	Rattlesnakes	Be alert and do not put your feet or hands where you cannot see what is on the ground (for example if you are stepping over a log and you cannot see what's on the other side). If you encounter a rattle snake do not pick it up- give it a wide berth and walk around it. If bitten, seek immediate professional medical attention and remove jewelry. If bitten on an extremity lower than the heart, cover wound with a sterile band while seeking medical attention.
	Bears	If you encounter a bear, be alert but stay calm, and give it as much room as possible. Try to leave the area, but DO NOT RUN. Back away slowly. If the bear follows, stop and hold your ground: wave your arms to make yourself look big and talk in a normal voice. Work in teams of two to deter bear attacks. If the bear makes contact, surrender: fall to the ground and play dead (a bear will break off an attack once it feels the threat has been eliminated). If the bear continues to bite after you assume a defensive posture. Their attack is predatory and you should fight back vigorously
	Mountain Lions	Be alert, calm, and do not panic. If you see a mountain lion, do not run as it may stimulate its predatory nature. Instead, shout and wave arms to let it know that you are not prey: fight back

	Tick bites	Use DEET based repellants on exposed skin and/or permethrin on clothes. Check for ticks during and after field work. If you find a tick remove it with tweezers within 24 hours, preferably immediately: do not leave the head embedded or extract the tick with matches, petroleum jelly, or other coatings (e.g. motor oil)
	Roughskin Newts	Avoiding handling them as their skin contains a potent neurotoxin. If necessary for the protocol, handle only when wearing gloves. Do not "lick" for "killer buzz" as people have died from attempting to eat roughskin newts
	Bee stings	If you know or suspect you are allergic to bee stings, carry appropriate allergy kits prescribed by a doctor for treating anaphylactic shock. Carry and take diphenhydramine (Benadryl). Follow the label instructions for allergy control. Inform your supervisor if you suspect you are allergic. Watch for ground nests
Travel movement or work in area with poison oak or poison ivy	Allergic reaction to poison oak/poison ivy plants	Learn to recognize poison oak. Avoid contact by using ivy block and wearing long pants and long-sleeve shirts if traveling in dense areas. If skin contact is made, flush the area with cold water as soon as possible. Do not flush your skin with warm water or soap as it can open your pores and increase the reaction. To wash and rinse use

		Tecnu or similar product with cold water to remove oils
Encountering irrigation pipes, marijuana plantation, or grow operations	Unfriendly encounters with criminal elements	Do not wear uniforms and carry a radio backpack that is not visible. Do not confront strangers and act like a tourist if you must speak. Work in pairs or groups. If working in areas likely to contain operations, check in with park staff when leaving vehicle and returning to vehicle. Watch for black piping or other signs. If you find a definite grow operation, leave immediately, note the location, and report it to the authorities

CHA Consulting, Inc.

Job Hazard Analysis

Heavy Equipment

Task	Hazard Type and Description	Hazard Control
Heavy equipment	Pinch points Struck-by/Caught between	Never work or walk under loads, and only one person is to act as the signal person. Avoid working near swing radius's. Maintain eye contact with operators when approaching equipment. Rigger s and Operators must possess additional safety training for competency. (Competent/Qualified Training)
Road grading and material cleanup	Potential for personnel to be run over with equipment Struck-by/Caught between	Ensure equipment is operated by qualified operator, and all personnel working on or near roadway wear reflective vests. Be sure that equipment back-up alarms are working properly. Always make eye contact with equipment operators prior to approaching
Personnel working near heavy equipment	Slips and falls Struck-by/Caught between	Make sure there is a good working surface. Cover or barricade excavations as soon as practical. Wear a hard hat, safety glasses, ear plugs, a Class II ANSI safety vest as well as steel toed boots when necessary
Operation	Strains and sprains	Think about your body position; avoid over- reaching, hyper-extending, location/ position of extremities, and think if you are in the best position for leverage

OSHA QUICK CARD™

Protect Yourself

Construction Personal Protective Equipment (PPE)

Eye and Face Protection

- Safety glasses or face shields are worn any time work operations can cause foreign objects to get in the eye. For example, during welding, cutting, grinding, nailing (or when working with concrete and/or harmful chemicals or when exposed to flying particles). Wear when exposed to any electrical hazards, including working on energized electrical systems.
- Eye and face protectors – select based on anticipated hazards.

Foot Protection

- Construction workers should wear work shoes or boots with slip-resistant and puncture-resistant soles.
- Safety-toed footwear is worn to prevent crushed toes when working around heavy equipment or falling objects.

Hand Protection

- Gloves should fit snugly.
- Workers should wear the right gloves for the job (examples: heavy-duty rubber gloves for concrete work; welding gloves for welding; insulated gloves and sleeves when exposed to electrical hazards).

Head Protection

- Wear hard hats where there is a potential for objects falling from above, bumps to the head from fixed objects, or of accidental head contact with electrical hazards.
- Hard hats – routinely inspect them for dents, cracks or deterioration; replace after a heavy blow or electrical shock; maintain in good condition.

Hearing Protection

- Use earplugs/earmuffs in high noise work areas where chainsaws or heavy equipment are used; clean or replace earplugs regularly.

For more complete information:

OSHA Occupational Safety and Health Administration
U.S. Department of Labor
www.osha.gov (800) 321-OSHA

OSHA 3260-09N-05

OSHA QUICK CARD™

Protect Yourself

Silicosis

Silicosis is caused by exposure to respirable crystalline silica dust. Crystalline silica is a basic component of soil, sand, granite, and most other types of rock, and it is used as an abrasive blasting agent. **Silicosis** is a progressive, disabling, and often fatal lung disease. Cigarette smoking adds to the lung damage caused by silica.

Effects of Silicosis

- Lung cancer – Silica has been classified as a human lung carcinogen.
- Bronchitis/Chronic Obstructive Pulmonary Disorder.
- Tuberculosis – Silicosis makes an individual more susceptible to TB.
- Scleroderma – a disease affecting skin, blood vessels, joints and skeletal muscles.
- Possible renal disease.

Symptoms of Silicosis

- Shortness of breath; possible fever.
- Fatigue; loss of appetite.
- Chest pain; dry, nonproductive cough.
- Respiratory failure, which may eventually lead to death.

Sources of Exposure

- Sandblasting for surface preparation.
- Crushing and drilling rock and concrete.
- Masonry and concrete work (e.g., building and road construction and repair).
- Mining/tunneling; demolition work.
- Cement and asphalt pavement manufacturing.

Preventing Silicosis

- Use all available engineering controls such as blasting cabinets and local exhaust ventilation. Avoid using compressed air for cleaning surfaces.
- Use water sprays, wet methods for cutting, chipping, drilling, sawing, grinding, etc.
- Substitute non-crystalline silica blasting material.
- Use respirators approved for protection against silica; if sandblasting, use abrasive blasting respirators.
- Do not eat, drink or smoke near crystalline silica dust.
- Wash hands and face before eating, drinking or smoking away from exposure area.

For more complete information:

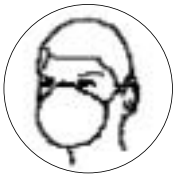
OSHA Occupational Safety and Health Administration
U.S. Department of Labor
www.osha.gov (800) 321-OSHA

OSHA 3266-09N-05

OSHA QUICK CARD™

Protect Yourself
Respirators

Respiratory protection must be worn whenever you are working in a hazardous atmosphere. The appropriate respirator will depend on the contaminant(s) to which you are exposed and the protection factor (PF) required. Required respirators must be NIOSH-approved and medical evaluation and training must be provided before use.

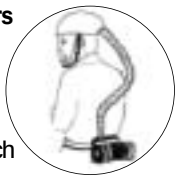


Single-strap dust masks are usually not NIOSH-approved. They must not be used to protect from hazardous atmospheres. However, they may be useful in providing comfort from pollen or other allergens.

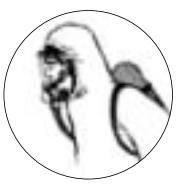
Approved filtering facepieces (dust masks) can be used for dust, mists, welding fumes, etc. They do not provide protection from gases or vapors. DO NOT USE FOR ASBESTOS OR LEAD; instead, select from the respirators below.

Half-face respirators can be used for protection against most vapors, acid gases, dust or welding fumes. Cartridges/filters must match contaminant(s) and be changed periodically.

Full-face respirators are more protective than half-face respirators. They can also be used for protection against most vapors, acid gases, dust or welding fumes. The face-shield protects face and eyes from irritants and contaminants. Cartridges/filters must match contaminant(s) and be changed periodically.



Loose-fitting powered-air-purifying respirators (PAPR) offer breathing comfort from a battery-powered fan which pulls air through filters and circulates air throughout helmet/hood. They can be worn by most workers who have beards. Cartridges/filters must match contaminant(s) and be changed periodically.



A Self-Contained Breathing Apparatus (SCBA) is used for entry and escape from atmospheres that are considered immediately dangerous to life and health (IDLH) or oxygen deficient. They use their own air tank.

For more complete information:

OSHA Occupational Safety and Health Administration

U.S. Department of Labor

www.osha.gov (800) 321-OSHA

OSHA 3280-10N-05

CHA Consulting, Inc.

Job Hazard Analysis

Slips/Trips/Falls

Common hazards

- Slippery surfaces (e.g., wet, oily or greasy)
- Seasonal trip hazards (snow and ice)
- Spills of wet or dry substances
- Changes in walkway levels and slopes
- Unsecured mats
- Poor lighting
- Debris and items stored in walkways
- Trailing cables in pedestrian walkways
- Smoke, steam or dust obscuring view
- Unsuitable footwear

Controlling hazards

When establishing safe work practices, consider:

- Characteristics of physical work area
- Weather conditions (snow, ice, rain)
- Tasks performed
- Workers' work practices
- Equipment

Hazard Control/Engineering Controls

- Type of flooring
- Slope of surface (ramps, handrails)
- Surface free of obstructions/holes
- Drainage
- Lighting levels, non-glare, contrast
- Equipment to be used/not carrying too much at once
- Signage
- Sufficient space
- Minimizing environmental influences, e.g., blocking wind to prevent wet surfaces icing at entrances

Hazard Control/Administrative Controls

- Training workers/awareness
- Safe practices such as a procedure for cleaning spills or requirement for two workers to transport a large equipment that one worker cannot see around or can’t handle
- Reporting hazards
- Prompt maintenance
- Job design (identifying tasks requiring excessive pushing/pulling, line-of-sight obstruction)
- Equipment readily available
- Addressing poor work practices
- Inspections
- Review slips, trips and same-level fall hazards

Hazard Control/Housekeeping

- Clean spills
- Remove debris, snow and ice
- Keep equipment clean
- Keep wires, etc. controlled, taped, etc.

Hazard Control/Personal Protective Equipment

- Appropriate footwear for task, which may include appropriate heels, soles and anti-slip boots

APPENDIX B

Community Air Monitoring Plan

Community Air Monitoring Plan (CAMP)

Remedial Investigation
Former Coyne Textile Facility
BCP Site #C734144

The following Community Air Monitoring Plan (CAMP) will be implemented for the Pre-Design Investigation activities to be performed at the Former Coyne Textile Facility (Site) Brownfield Cleanup Program (BCP) Site #C734144. Air monitoring will be conducted in general accordance with the New York State Department of Health (NYSDOH) *Generic Community Air Monitoring Plan (CAMP).* Air monitoring will be conducted on a real-time basis using hand-held field instruments and readings will be recorded in a logbook and made available for review.

This CAMP is not intended for use in establishing action levels for worker respiratory protection which is described in the Site-specific Health and Safety Plan (HASP) included as Appendix B to the Pre-Design Work Plan (PDWP) 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 the proposed Pre-Design Investigation activities. Reliance on this CAMP should not preclude simple, common-sense measures to keep volatile organic compounds (VOCs) at a minimum around the work areas. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown.

Fugitive Dust Monitoring and Control

No significant air monitoring is anticipated to be necessary to implement the PDWP. Soil disturbance during the subsurface investigation will be minimal and will be contained within the building footprint. Borings advanced as part of the investigation are small in diameter and do not constitute significant ground intrusive activities. Therefore, no significant migration of fugitive dust is expected and no fugitive dust monitoring will be conducted. However, fugitive dust migration will be visually assessed during all investigation activities. Should there be visible evidence of fugitive dust leaving the Site, CHA will implement one or more techniques to control dust, in accordance with the New York State Department of Health's (NYSDOH's) *Generic Community Air Monitoring Plan (CAMP).*

Organic Vapor Monitoring and Control

Based on the nature of the Site contaminants, it is anticipated that organic vapors may be emitted during the Site activities. As a result, organic vapors will be monitored periodically. VOCs will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone). Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions.

Periodic monitoring for VOCs consists of taking a reading upon arrival at a sample location, monitoring while opening a well cap or advancing a boring, monitoring during well bailing/purging, and taking a reading prior to leaving a sample location.

The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) over a 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but are less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but is no case less than 20 feet, is below 5 ppm over background for a 15-minute average.

- If the organic vapor level in the downwind work area perimeter exceeds the upwind perimeter concentration by more than 25 ppm, the following actions will be taken:

    1. All work will be halted.
    2. Air monitoring will be conducted at 15 minute intervals at a 20-foot offset from the exclusion zone. If two successive readings below 5 ppm are measured by the field instrument and documented, the work may resume following the previously described monitoring plan.

All fifteen minute readings will be recorded and will be available onsite for Agency (i.e., New York State Department of Environmental Conservation and New York State Department of Health) personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.