



January 5, 2011

Michael MacCabe
Division of Environmental Remediation
NYS Department of Environmental Conservation
625 Broadway
Albany, New York 12233

**Re: Interim Remedial Measure Work Plan and Approach for the 67 Howard Street Site
in Albany, New York
Site #401061
CHA Project No. 21645**

Dear Mr. MacCabe:

CHA, on behalf of Columbia Eagle, LLC (Columbia Eagle), has prepared the following Interim Remedial Measure Work Plan at your request for the 67 Howard Street Site, which consists of the properties located at 67 Howard Street, 138 State Street, and 140 State Street. Prior to 2009, the Site was the southern portion of a courtyard created by adjacent buildings. These buildings have been demolished to make way for new development.

Several investigations have been completed at the site to determine the full nature and extent of contamination at the site. Results of the most recent investigation, completed in May 2010, indicated the following:

- VOC contamination was defined and limited to the southern portion of the former courtyard and the northwest portion of the 138 State Street parcel. The contamination was generally encountered at a depth of 6-8 feet below ground surface and extends to 10-16 feet below ground surface. It is anticipated that some of the impacted soil may be considered hazardous waste, based on the previous TCLP sample results collected during the last excavation effort and the fact that similar VOC total concentrations and PID screening concentrations were encountered during this boring program.
- Mercury and SVOC contamination is present in the fill material in the area of the 138 State Street parcel. CHA believes the contamination is related to the historic urban fill materials rather than specific source related releases. Two excavations were completed in

2008 which removed a total of three feet of soil. The material removed during the excavation was an urban fill material and when comparing the results of the clearance soil samples, the locations of mercury and SVOCs detected were variable across the site. Similarly, the soil sample collected from the fill material during the most recent investigation contained concentrations of mercury and SVOCs. The fill material consisted of sand, gravel, and occasionally brick and concrete and soil boring logs presented in the *Site Characterization Report*, dated July 2010, indicated that this fill material was present from 0 to 2-3 feet below grade. The site is located in an urban area and historically fill material was brought in to build up a property for development. Below this material was clay (up to a depth of 50 feet), believed to be native to the area. Multiple soil samples collected from the clay did not contain detections of mercury or SVOCs, confirming that these analytes are attributed to the fill material.

- Volatile organic compounds were detected in soil vapor samples collected at the site at concentrations greater than the Air Guideline Values listed in Table 3.1 of the *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*.
- Groundwater was not encountered at the site during drilling activities and the vertical extent of soil contamination was identified. Therefore, there does not appear to be any impacts to groundwater from the contamination located at the Site.

Due to the nature and concentrations of the compounds detected, the site has entered the New York State Department of Environmental Conservation (NYSDEC) Superfund Program to perform remedial cleanup activities. Under the oversight of the Superfund program, an Interim Remedial Measure (IRM) is being initiated to remove the volatile organic compound (VOC) contaminated soil via excavation.

Upon approval of this Work Plan, Columbia Eagle is prepared to initiate remedial work necessary to remove the VOC contaminated soil present on the site. It is intended that the contaminated soil will be directly loaded onto permitted trucks for transportation to an approved off-site location for proper disposal and/or treatment. Clean soil taken from above the contaminated zone and in the previously excavated area will be stockpiled on site and used as backfill following final confirmatory sampling.

1.0 SITE CONTROLS

The site controls implemented will minimize the potential for detrimental impacts to the environment and human health associated with the proposed excavations and any handling of impacted soils. Appropriate site controls must be in place prior to conducting any intrusive activities at the Site.

1.1 Soil Erosion/Disturbance Controls

Soil erosion runoff controls will be put into place to minimize impact to areas off-site. Such controls may include berming or silt fence to control/direct runoff. The soil erosion control measures shall be constructed prior to clearing or grading of any portion of the project and maintained throughout the duration of the project.



Stabilized construction entrances shall be installed and maintained as necessary to help reduce vehicular tracking of soil erosion. To prevent soil erosion and debris from leaving the site via vehicular tracking, a truck wash will be established to remove the contaminated soil and debris from the vehicle prior to leaving the site.

To prevent run-off, stockpiled materials will be placed on 20 mil minimum polyethylene sheeting and covered with 6 mil minimum polyethylene sheeting in a predetermined staging area. Additionally, hay bales or other alternatives will be put in place to minimize runoff should the sheeting come off the soil piles.

When construction activity is complete, areas will be permanently stabilized with pavement, concrete, gravel, building structures, or vegetation.

1.2 Site Access and Safety Controls

Access to the site by the general public is restricted and the site is fenced along to Howard Street and on the southeast perimeter. An eleven story brick building is located on the northwest Site boundary and access is restricted from State Street because the fronts of the former buildings are still standing. Access to the work areas will be restricted by safety fence surrounding the restricted areas and all excavations within the work areas will be properly sloped or benched.

1.3 Decontamination Area

Equipment will be decontaminated at the conclusion of the excavation/demolition activities and prior to demobilizing equipment from the project site. If appropriate precautions are taken throughout the excavation process, the only equipment requiring decontamination should be limited to the bucket and track or tires on the excavators and tires of trucks entering the site to load soil and debris. Efforts will be made to minimize the amount of equipment and machinery that comes into contact with the impacted soils.

A temporary equipment decontamination pad will be constructed for the heavy equipment, which will be decontaminated before leaving the site. The excavator, other excavation equipment, and trucks exiting the site will be decontaminated by first removing gross contamination from the equipment by brushing or wiping. The equipment will then be thoroughly washing using a high-pressure steam cleaner.

The water generated from decontaminating equipment will be collected by placing 10-mil polyethylene sheeting over an approximately twenty-foot by twenty-foot area with raised sides and one low spot to direct the water to one corner of the pad. Decontamination water will be placed in 55-gallon DOT-approved drums and stored on-site for future disposal/treatment in accordance with DER-10.

2.0 CONTAMINATED SOIL REMOVAL



During the Site Investigation activities, the extent of soil contamination was identified. The area of soil contamination is presented on Figure 1. These soils shall be removed and disposed of in accordance with the plan outlined below.

During all on-site excavation activities CHA's representative will field screen the excavated soil, which will consist of visual and olfactory observation and organic vapor monitoring by a PID meter. The excavation will proceed horizontally until the limits of contamination are observed based on field screening and confirmed based on post-excavation clearance sampling. The soil excavation will extend north to the eleven story brick and stone building (142 State Street) residing on the northern property line; however, the soil excavation will not proceed vertically below the elevation of this structure's footing within 20 feet of the building's east wall.

Based on field screening the soil will be segregated as contaminated and non-contaminated soil in accordance with the following steps:

1. Soil exhibiting PID values greater than 500 ppm above background will be considered highly contaminated with the potential to be hazardous waste. This soil will be stockpiled on site or loaded for transportation to an approved off-site location for proper disposal or treatment. Prior to removal a soil sample/s will be collected by the Remedial Contractor and analyzed for hazardous waste parameters following a Toxicity Characteristic Leaching Procedure (TCLP) extraction. The sample must meet the requirements of the disposal facility.
2. Soil exhibiting either visual contamination, olfactory evidence of contamination, or PID values between 10-500 ppm above background will be considered contaminated and be stockpiled on site or loaded for transportation to an approved off-site location for proper disposal or treatment. Prior to removal a soil sample/s will be collected by the Remedial Contractor and analyzed for hazardous waste parameters following a Toxicity Characteristic Leaching Procedure (TCLP) extraction. The sample must meet the requirements of the disposal facility.
3. Soils with no visual or olfactory evidence of contamination and PID readings less than 10 ppm will be stockpiled on-site as uncontaminated soil and used as backfill upon completion of the excavation.

All stockpiled material will be stored at an approved location on the project site. Stockpiles will be placed on 20 mil polyethylene sheeting and covered using 6 mil polyethylene secured in such a manner that no precipitation can enter or leave the stockpile.

A TCLP sample must be collected by the Remedial Contractor from the contaminated soil to determine the proper disposal facility. It is anticipated that approximately 121 tons of soil will be classified as hazardous waste and approximately 477 tons of soil will be classified as non-hazardous waste. Therefore, TCLP samples must be collected at a frequency specified by the disposal facility to properly characterize the waste leaving the Site. The estimated extent of soil contamination is depicted on Figure 1. A cross-section depicting the approximate vertical extent of soil contamination is included as Figure 2.



It should also be noted that due to the historical sensitivity of this project site the owner's archeologist will be on-site during all excavation activities to document and provide guidance if any historically significant items are encountered during construction.

3.0 CONFIRMATORY SAMPLING

Following the removal of contaminated soils, confirmatory clearance samples will be collected by CHA from the excavation. Samples will be collected as per NYSDEC DER-10 *Technical Guidance for Site Investigation and Remediation* Section 5.4(b)5ii. One sample will be collected from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area. Sampling will be biased to the suspected location of greatest contamination. The clearance soil samples will be analyzed for total VOCs using EPA Analytical Method 8260 and results will be compared to 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives.

Disposable latex gloves will be worn at all times when soils are being handled and new gloves will be donned prior to the collection of each sample. Samples will be collected using dedicated, disposable polyethylene scoops. Immediately following sample collection the soils will be transferred to the appropriate laboratory supplied container.

Sample containers will be labeled, using an indelible ink marker, with sample identification, date, and time at the time a sample is collected to prevent accidental mix-up of samples that may occur when containers are pre-labeled prior to a sampling event. Other information (project name and number, analysis type, preservation type, and sampler's name) may be completed on the sample label prior to sample collection. Once the samples have been collected, properly labeled and tagged the samples will be placed on ice and shipped to the Contract Laboratory at 4°C ($\pm 2^\circ\text{C}$) in sealed coolers. A custody seal will be affixed to the sealed cooler to ensure the package has not been tampered with.

A Chain-of-Custody form will be filled out as the samples are collected. Samples are entered onto the form in the order in which they are collected. All data recorded on the sample container label will be copied onto the Chain-of-Custody form. A copy of the Chain-of-Custody form will be maintained within the project files.

Upon receipt of the cooler at the laboratory, it will be inspected by the designated sample custodian. The condition of the cooler and sample containers will be noted on the Chain-of-Custody record sheet by the sample custodian. The sample custodian will also document the date and time of receipt of the container and sign the form.

3.1 Quality Assurance/Quality Control

The Contract Laboratory will perform analytical data reduction and validation in-house under the direction of the laboratory QA Officer. The laboratory's QA Officer will be responsible for assessing data quality and advising of any data which were rated "preliminary" or "unacceptable" or other qualifications based on the QC criteria outlined in the methods, which would caution the data user of possible unreliability.



An independent evaluation of data reduction and reporting by the laboratory will be conducted via third-party data validation. A Data Usability Summary Report (DUSR) will be developed by reviewing and evaluating the Category B analytical data package. Data validation will be performed in accordance with the following documents: "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA 540/R-94-012, February 1994; and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA 540/R-013, February 1994. Data analyzed using methods not covered in these documents will be validated using the general principles used in these documents, and the analytical requirements specified in the methods pertaining to USEPA Region 2 Data Validation.

4.0 GROUNDWATER MANAGEMENT

Groundwater was not encountered during Site Investigation activities in which a borehole was advanced to 50 feet below ground surface (bgs) and the vertical extent of soil contamination was identified to approximately 15 feet bgs. Therefore, it is not anticipated that groundwater will be encountered at the Site during the remedial excavation activities.

5.0 AIR MONITORING

Air monitoring will be performed by the Remedial Contractor at the perimeter of the site to provide a measure of protection for the surrounding community. VOCs and particulate levels will be monitored to ensure concentrations do not exceed the levels specified in the New York State Department of Health Generic Community Air Monitoring Plan, as described below.

Two air monitoring stations will be set up surrounding the site. VOCs and particulate levels will be monitored at the downwind perimeter of the site and upwind of the site. Continuous monitoring will be performed by the air monitors capable of calculating 15-minute running average concentrations for comparison to the levels specified below.

5.1 Total Organic Vapors

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the Site exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases below 5 ppm over background, work activities may resume.
2. If total organic vapor levels at the downwind perimeter of the site persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted and corrective measures will be taken to abate emissions. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the site, the excavation activities will halt and all contaminated soil from the remedial soil excavation will be direct loaded and transported to a permitted facility for treatment or disposal.



6.2 Particulates

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) greater than the upwind perimeter for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Dust suppression techniques include applying water on the haul road and in the soil stockpile area. Work will continue with dust suppression techniques, provided that downwind PM-10 particulate levels do not exceed $150 \mu\text{g}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.
2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \mu\text{g}/\text{m}^3$ above the upwind level, work will be stopped and the dust suppression techniques will be re-evaluated. Work will resume when dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \mu\text{g}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

6.0 HEALTH AND SAFETY

CHA, the remedial consultant, will prepare a site-specific HASP and will be responsible for all site-related health and safety matters. The Remedial Contractor will also be required to prepare a site-specific and activity-specific Health and Safety Plan (HASP) to ensure the health and safety of their staff and subcontractors. The Remedial Contractor will not be permitted to commence with construction until the HASP has been reviewed by the Engineer. Safety is of prime importance in performing work under this Contract. Acceptance of the Plan does not waive any responsibility of the Remedial Contractor to ensure the HASP is adequate to comply with all regulations or compliance by personnel. The Remedial Contractor shall maintain the following items on the site at a minimum:

- A copy of the HASP
- First aid kit
- Fire extinguisher(s)
- Personal protective equipment (PPE)
- Air monitoring equipment and calibration equipment
- Spill containment equipment and cleanup materials

On-site workers must comply with the requirements of the HASP. The Remedial Contractor's HASP must comply with all applicable federal and state regulations protecting human health and the environment from the hazards posed by activities during this site redevelopment. The general health and safety responsibilities are summarized below.



7.1 Responsibilities

The Remedial Contractor shall:

1. Be responsible and liable for the health and safety of all on-site personnel and off-site community impacted by the site construction activities.
2. Ensure all OSHA health and safety requirements are met (29 CFR 1910 – General Industry Safety and Health Standards and 29 CFR 1926 – Construction Industry Safety and Health Standards) and be responsible for compliance with all federal and state regulations.
3. Ensure that all project personnel have been trained in accordance with 29 CFR 1910.120.
4. Perform all work in a safe and environmentally acceptable manner. The Contractor will provide for the safety of all project personnel and make all reasonable efforts to protect the environment and community during the construction activities. Barricades, warning lights, roped-off areas, and proper signs shall be furnished in sufficient amounts and locations to safeguard the project personnel and public at all times.
5. Have sole and complete responsibility for safety conditions for the project, including safety of all persons (including employees).
6. Hold safety meetings, including routine on-site safety meetings.

7.2 Elements of the Health and Safety Plan

A site-specific HASP will be prepared in accordance with OSHA regulations and 29 CFR 1910.120. The HASP will contain the following elements at a minimum:

- All items identified in OSHA regulations 29 CFR 1910.120(b)(4).
- Organization and responsibilities of the project/health and safety team along with emergency phone numbers.
- Characterization of the chemical, biological, and physical hazards present at the site.
- Identification and evaluation of all site hazards/risks (task specific).
- A description of the medical monitoring program for on-site personnel.
- A summary of the real-time air-monitoring program (including fugitive dust and VOC emissions) to be conducted during excavation activities.



- Site control measures
- Instructions on the selection and use of PPE and action levels for upgrading or downgrading PPE.
- Proper delineation of work zones.
- Decontamination procedures for both equipment and on-site personnel.
- An accident prevention and contingency plan.
- Other applicable procedures relative to Hazard Communication (Right-to-Know) Program, first aid procedures, cold/heat stress, confined space entry, hot work permits, lockout/tagout, spill containment program, etc. and material safety data sheets for all chemicals brought onto the project site.

7.3 Compliance

The completed HASP will become part of the contract documents. Consistent disregard for the provision of the HASP by the Remedial Contractor and/or his subcontractors or employees shall be deemed just and sufficient to cause for stoppage of work by the Owner or Engineer. However, such stoppage shall not be the subject of a claim for extension of time or for additional costs or damages incurred by the Remedial Contractor. Furthermore, compliance with the minimum requirements in this document does not relieve the Remedial Contractor from the responsibility for implementing proper health and safety procedures during unanticipated conditions throughout the duration of the remedial contract.

Following completion of the remedial soil excavation activities a Construction Completion Report will be prepared and submitted detailing the soil removal activities and confirmatory sampling completed as part of this IRM. If soil contamination remains at the site after completing the IRM it will be addressed during the Remedial Investigation/Feasibility Study phase of the project. Similarly, if the remaining concentration levels are low and do not require further remediation, a Site Management Plan will be recommended.

Should you have any questions or require additional information, please do not hesitate to contact me at (518) 453-4547.

Sincerely,



Seth H. Fowler, CHMM
Associate



Figures

Figure 1: Approximate Areas of Soil Contamination

Figure 2: 'A-A' Cross-Section

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FIGURES