REMEDIAL INVESTIGATION/ INTERIM REMEDIAL MEASURES WORK PLAN

FOR

1360 NIAGARA STREET SITE
CITY OF BUFFALO, ERIE COUNTY, NEW YORK

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ACRONYM LIST

AAR	Alternatives Analysis Report
ACM	Asbestos-containing Material
ASP	Analytical Services Protocol
BGS	Below Ground Surface
BSA	Buffalo Sewer Authority
CAMP	Community Air Monitoring Plan
CPP	Citizen Participation Plan
DER	Department of Environmental Remediation
DUSR	Data Usability and Summary Report
EDD	Electronic Data Deliverable
ELAP	Environmental Laboratory Accreditation Program
HASP	Health and Safety Plan
IRM	Interim Remedial Measures
MS/MSD	Matrix Spike / Matrix Spike Duplicate
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PAH	Polycyclic Aromatic Hydrocarbons
PID	Photo-ionization Detector
RI	Remedial Investigation
RI/AAR/RWP	Remedial Investigation / Alternative Analysis Report/ Remedial Work Plan
SCO	Soil Cleanup Objectives
Site	3.43-Acre portion of 903 Ellicott Street, Buffalo, New York
SVOC	Semi-volatile Organic Compounds
U.S. EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds

EXECUTIVE SUMMARY

This document presents the Remedial Investigation and Interim Remedial Measures Work Plan for the Brownfield Cleanup Program Site No. C915302 located on a 1.83-acre portion of Niagara Street in Buffalo, New York (the "Site"). The project details are summarized below:

Contaminant Source and Constituents

The contamination is associated with urban fill located on the Site. Constituents in the fill requiring remediation include semi-volatile organic compounds (SVOCs) and metals. Additionally, groundwater at the site contains volatile organic compounds (VOCs) the source of which is a spill at an upgradient site.

Extent of Contamination

The urban fill containing elevated concentrations of contaminants generally extends to three to four feet below grade and is present across the Site. The contaminated groundwater is located in the northern portion of the site.

Proposed Site Redevelopment

The Site's developers intend to renovate the existing 80,000-square-foot structure to accommodate approximately 50 residential apartment units with first floor retail and/or commercial space of approximately 3,200 square feet.

Remedial Investigation

To characterize site conditions and identify the appropriate remedy for the Site, a Remedial Investigation (RI) will be implemented. The RI will include the collection and analysis of urban fill, native soil, and groundwater samples.

Interim Remedial Measures

Because the contaminants are understood to exist within the urban fill at the Site, this document presents the proposed plan to address these contaminants through removal and off-site disposal. The known groundwater contamination is not the responsibility of the site owner and is being addressed by others.

1 INTRODUCTION

This Remedial Investigation/Interim Remedial Measures (RI/IRM) Work Plan provides a description of the procedures that will be implemented to characterize the nature and extent of contamination of soil at the Garrett Leather Site (the "Site") and the proposed methods to address that contamination. The Site has been assigned New York State Department of Environmental Conservation (NYSDEC) Site No. C915302. This RI/IRM Work Plan has been prepared in accordance with Division of Environmental Remediation "Technical Guidance for Site Investigation and Remediation" (DER-10). To effectively characterize the environmental conditions, this RI/IRM Work Plan discusses the following:

- Current and historic site conditions
- Contaminants of concern and the extent of the contamination
- Extent of RI activities
- Quality controls and protocols for analytical sampling
- Health and safety procedures to protect site workers and the local community
- Community participation activities
- Proposed remedial measures

On February 9, 2016, 1360 Niagara Street Owner, LLC and Ciminelli Real Estate Corporation, (collectively "Applicants") acting as BCP Volunteers, submitted a BCP Application to remediate and develop a portion of 1336, 1340, and 1360 Niagara Street in the City of Buffalo, New York. Investigative and remedial actions covered under this RI/IRM will include the entire 1.83-acre Site.

The Site is the location of the planned rehabilitation of a currently industrial building to a mixed use residential and commercial structure. An RI will be implemented to further evaluate the extent of the contaminated fill material and to aid in the preparation of an Alternatives Analysis Report (AAR). **Section 4 Remedial Investigation** describes the scope of the investigation during remediation. This document also described proposed IRM actions intended to address the contamination present at the Site.

Closure sampling will be conducted during the performance of the RI. The results of the closure sampling will determine if remedial SCOs are achieved during the subsequent IRM.

1.1 Site Description

The Garrett Leather Site is located in the City of Buffalo's West Side along Niagara Street. The Site currently consists of a four-story building with a basement and a parking area, which is a combined total of approximately 80,000-square-feet. Vacant land that was previously developed with buildings, which have since been demolished, is located on the southern portion of the Site.

Figure 1 shows the location of the Site and **Figure 2** shows the Project Area and Site Boundaries.

1.2 Site History

The land comprising the Site was first developed as multiple residential properties and a lubricating factory by 1889. According to historical Sanborn Maps, from 1889 to 1986 the Site was occupied by a planing mill. In 1919, the Mentholatum Building was constructed, which

operated as a health and wellness company that manufactured various pharmaceutical and skin care products until 1998. Garrett Leather purchased the property in 2001, with operations including treatment and warehousing of bulk leather products.

Aboveground storage tanks and underground storage tanks for the Mentholatum Building historically used for fuel at a former planing mill were all located on Site. In addition to the presence of contaminants in on-Site urban fill, groundwater contamination at the Site appears to be migrating from ChemCore (located north of the Site). Past uses of the Site, use of fill throughout the Site and groundwater effects from the ChemCore Site have all contributed to contamination.

1.3 Site Geography, Geology, and Hydrogeology

The Site generally slopes to the west at an approximate elevation of 593 feet above mean sea level. The Site contains an 80,000-square-foot, four-story building, asphalt parking lots as well as some exposed soil areas.

Urban fill is present at the Site at depths ranging from about three to four feet below grade. Urban fill is defined as material coming from anthropogenic sources of the material re-worked to build a site to a defined grade. The urban fill material at the Site contains:

- Crushed Rock
- Sand
- Silt
- Clay
- Plastics
- Construction Debris
- Lumber Ash/Cinders
- Ceramics
- Bricks
- Metal

Native soil encountered beneath the fill consisted of Silty Clay – organic clays of medium to high plasticity and variable silt content with a reddish brown clay appearance.

Groundwater migration on site is limited due to fine-grained nature of the soil. Based on a review of NYSDEC data, the Site is not underlain by any mapped principal or primary aquifers. Groundwater at and in the vicinity of the Site is not used for public drinking water supply.

2 SUMMARY OF ENVIRONMENTAL CONDITIONS

2.1 Environmental Reports

Site characterization efforts were recently conducted to assess contaminant concentrations at the Site and the results are summarized on **Figure 3**. This site characterization was conducted as a Phase I and Phase II Environmental Site Assessment. **Appendix A** contains these previous environmental reports.

During that work, C&S conducted a preliminary sampling program to characterize soil conditions at the Site. The characterization program consisted of the advancement of 22 soil borings within the Site at depths of approximately 16 feet below grade or to the top of bedrock, including some

borings on the portion of Brace Street between 1340 and 1360 Niagara Street. The program also consisted of sampling and analysis of 23 soil/fill samples. Each soil sample was analyzed for volatile organic compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Polychlorinated biphenyls (PCBs) and Metals. Analytical results from the investigation are summarized in **Section 2.2** below.

AMD Environmental completed asbestos and lead-based paint surveys at the Site in 2015. These surevys identified both asbestos and lead-based paint in a number of areas within the building. Appendix A contains the corresponding reports.

2.2 Nature and Extent of Contamination

Site soils consist of three to four feet of urban fill material. Based on investigations conducted to date, the known contaminants of concern in the urban fill include SVOCs and metals including arsenic, copper, lead, mercury and zinc. Additionally, several chlorinated solvents and a few polychlorinated biphenyls at depths of up to four feet.

NYSDEC Restricted Residential Use SCOs were exceeded in 10 of the 18 subsurface sample locations within the Site boundaries. SVOCs at concentrations ranging from 0.34 ppm to 46 ppm significantly exceeded Restricted Residential Use SCOs in the northern and southern areas of the Site.

Metals marginally to significantly exceeded SCOs in fill throughout the entire Site. Concentrations of copper were detected above Restricted Residential Use SCOs of 270 ppm in the northern and south western portions of the Site at 490 ppm to 3800 ppm. Concentrations of arsenic were detected above Restricted Residential Use SCOs of 16 ppm in the northern and south western portions of the Site at 17 ppm to 32 ppm. Concentrations of lead were detected above Restricted Residential Use SCOs of 400 ppm in the northern portions of the Site at 520 to 2200 ppm. Mercury was detected (1.7 ppm) above Restricted Residential Use SCOs in one boring at the northern property boundary.

Other than chromium exceedance above Unrestricted Use, no other analytes exceeded SCOs. The variation in analyte concentrations across the Site indicates that the source of contamination in soil samples is the variable urban fill material and no discrete source is located on-site or off-site. Contaminated soil is expected to be limited to the top three to four feet of fill material.

Groundwater at the Site was investigated due to current remedial monitoring at the ChemCore property to the adjacent north. Groundwater contamination exists at the site at 30 to 50 feet below grade within the bedrock due to a migrating groundwater plume containing chlorinated solvents emanating from ChemCore. One of six monitoring wells located on Site exceeded NYS Ambient Water Quality Standards and Guidance Values (TOGS 1.1.1 for all four of the contaminants of concern, the following chlorinated solvents: cis-1,2-dichloroethene (DCE), tetrachloroethene (PCE), trichloroethene (TCE) and vinyl chloride (VC). Additionally, groundwater samples in five of six monitoring wells exceeded TOGS 1.1.1 for one or more of the contaminants above and one well did not contain concentrations of chlorinated solvents of TOGS 1.1.1.

3 OBJECTIVES, SCOPE AND RATIONALE

The objectives of the scope of work described in this Work Plan are to evaluate contaminant impacts to soil and identify and evaluate appropriate remedial actions necessary to redevelop the Site. The investigation work will include evaluating the magnitude and extent of contaminant

impacts, conducting a qualitative exposure assessment for actual or potential exposures to contaminants at the Site and/or emanating from the Site, and producing data that will support the development of an acceptable RI Report and subsequent Alternatives Analysis Report (AAR). The IRM portion of this document details the remedial methods proposed to address the contamination present at the Site.

The RI is based on information previously gathered regarding historical operations conducted at the Site, the results of the limited site characterization, and the project objectives. The RI will include the following:

- Soil Evaluation – This task will consist of two primary elements: urban fill and underlying native soils.
    - The urban fill will be characterized to identify the extent and magnitude of contamination within the fill. This material will also be the subject of waste characterization sampling because subsequent remedial activities would likely include the excavation and off-site disposal of the urban fill.
    - The underlying native soils will be characterized to determine the depth of impacts from the overlying urban fill and the depths at which remedial efforts may be terminated.
- Groundwater Evaluation – Subsequent to completing the above tasks, existing groundwater monitoring wells will be utilized on Site to confirm previous sampling results and evaluate if the on-Site urban soil impacts groundwater quality.

The proposed IRM is intended to address the contamination known to exist within the urban fill. The IRM tasks include excavating the urban fill and backfilling the excavation.

The RI and IRM activities will be completed in accordance with NYSDEC Division of Environmental Remediation: Technical Guidance for Site Investigation and Remediation dated May 2010 (DER-10).

4 REMEDIAL INVESTIGATION

A previous soil investigation encountered fill material at the Site that is impacted by VOCs, SVOCs, and metals at concentrations above NYSDEC Soil Cleanup Objectives (SCOs). This part of the RI/IRM Work Plan describes the scope of investigative work necessary to collect sufficient data to determine the extent of contaminated fill material which will support a subsequent remedial actions. This section of the RI/IRM Work Plan includes:

- Field Investigation
- Sampling Program
- Laboratory Analysis

4.1 Field Investigation

The RI intends to supplement the previous site characterization information by the advancement of soil borings, utilization of existing monitoring wells, and collecting and analyzing soil and groundwater samples.

4.1.1 Soil Boring Program

The advancement of soil borings across the Site will facilitate sampling of native material and fill material. To ensure complete coverage of the Site, a 50-foot by 50-foot grid will be established across the Site, as shown on **Figure 4**, resulting in 26 grid locations. From the borings, fill and native soil samples will be collected to document Site conditions.

A direct push soil boring study will be implemented at the site. Each soil boring should be advanced into native material, up to 16 feet (ft) below the ground surface (bgs) or to the top of bedrock, or at the discretion of the project geologist and with consultation from NYSDEC. Investigative locations will be chosen to target those areas known or suspected to be the locations of structures of concern. Exploration locations will be located with a global positioning system or tape measured from existing site features**.**

Soils from the borings will be continuously assessed for visible or olfactory indications of impairment, and/or indication of detectable volatile organic compounds (VOCs) with a photo ionization detector (PID). Positive indications from any of these screening methods are collectively referred to as "evidence of impairment."

Soils from the split-spoons will be screened in the field for visible impairment, olfactory indications of impairment, evidence of NAPLs, and/or indication of detectable VOCs with a PID, collectively referred to as "evidence of impairment" and the results will be recorded on boring logs.

Soil boring logs will be completed and include soil description, PID readings, etc. The boring logs will be included in the RI Report.

Fill Sampling

Fill samples will be collected from the borings based on evidence of impairment and to provide characterization across the Site. In 15 of the 26 grids, one urban fill sample will be collected and analyzed for the following:

- Target Compound List (TCL) volatile organic compounds (VOCs)
- TCL semivolatile organic compounds (SVOCs)
- TCL pesticides
- Polychlorinated biphenyls (PCBs)
- Target Analyte List (TAL) metals
- Total mercury
- Total cyanide
- Hexavalent chromium (from 4 of 10 samples only)

Additionally, four samples will be collected from the urban fill for waste disposal characteristics. The waste characterization analysis will include:

- Toxicity Characteristic Leaching Procedure (TCLP) VOCs
- TCLP SVOCs
- TCLP pesticides/herbicides
- PCBs
- TCLP metals
- Reactivity

- Corrosivity
- Ignitability

Fill samples will be collected from the perimeter of the Site in order to characterize offsite conditions. A total of 16 permeter fill samples will be collected and analyzed for the following:

- TCL semivolatile organic compounds (SVOCs)
- Target Analyte List (TAL) metals

Native Soil Sampling

Native soil will be visually assessed and sampled in each of the 26 grid locations. In order to assess the impact of fill on the underlying native soil, a soil sample will be collected from the top two feet of native material in each grid location. In 9 grid locations, an additional native soil sample will be taken at a depth of 15 feet below grade. The 35 native soil samples will be collected and analyzed for:

- TCL VOCs
- TCL SVOCs
- TCL pesticides
- PCBs
- TAL metals
- Total mercury
- Total cyanide
- Hexavalent chromium (from 12 of 35 samples only)

Based on the results, the 35 native soil samples will also serve as the final confirmatory samples during the subsequent remedial activities.

In addition to collecting samples at the top of the native material, three additional samples will be collected at one-foot intervals below the first native soil sample. These deeper samples will be submitted to the laboratory but held until the uppermost native soil sample is analyzed. If any analytes exceed the respective SCOs, the next deeper sample will be analyzed for only those compounds that exceed the SCO. If the concentrations in that sample also exceeds the SCOs, the next lower sample will be analyzed and the results will be compared to the SCOs. The process will be repeated for the third sample, if necessary. The intent of this sampling scheme is to identify the depth of remedial investigation and use the sampling results as the confirmatory sample results for the IRMs.

4.1.2 Groundwater Monitoring

To characterize groundwater conditions at the Site, five existing monitoring wells will be utilized. The existing wells are located throughout the Site for monitoring evaluated by ChemCore, as shown in **Figure 5**.

The monitoring wells will be developed through the removal of up to ten well volumes using dedicated bailers or a peristaltic or submersible pump.

Groundwater sampling will be conducted using low-flow purging and sampling techniques. Before purging the well, water levels will be measured using an electric water level sounder capable of measuring to the 0.01 foot accuracy. Peristaltic or bladder pumps using manufacturer-

specified tubing will be used for purging and sampling groundwater. Calibration, purging and sampling procedures will be performed as specified by the USEPA[1] for low-flow sampling. Decontamination will be conducted after each well is sampled to reduce the likelihood of cross contamination. Calibration times, purging volumes, water levels and field measurements will be recorded in a field log and will be provided in the RI Report.

The groundwater samples will be analyzed for the following analyte list:

- TCL VOCs
- TCL SVOCs
- TCL pesticides
- PCBs
- TAL metals
- Total mercury
- Total cyanide
- Hexavalent chromium

Drilling decontamination, development, and purge fluids will be stored in 55 gallon steel drums and sampled prior to disposal or being allowed to infiltrate the ground surface of the Site. Excess soil will be placed in a drum for subsequent removal.

A second round of groundwater sampling will be performed approximately four weeks after the first round. The second round of groundwater samples will be analyzed for the same analytes as in the first round.

4.2 Sampling Plan and Laboratory Analysis

Table 1 summarizes the sampling program described in the sections above. Additionally, Quality Assurance/Quality Control (QA/QC) samples will be collected, and the following describes the minimum number of samples per media type.

- Soil samples (excluding waste characteristic samples)
  - Blind duplicate – 5%
  - Matrix Spike/Matrix Spike Duplicate (MS/MSD) – 5%
- Groundwater samples
  - Trip blank – 1 per shipment
  - Blind Duplicate – 5%
  - Matrix Spike/Matrix Spike Duplicate (MS/MSD) – 5%

C&S will utilize the services of an NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory for analytical testing. The laboratory results for the samples will be reported in a Category B deliverables package to facilitate validation of the data, and a third party validator will review the laboratory data and prepare a Data Usability Summary Report (DUSR). The validator will evaluate the analytical results for the field samples and quality assurance/quality control samples and compare the findings to USEPA guidance to determine the accuracy and validity of the results.

[1] U.S. EPA Region 1 Low Stress (low-flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, January 19, 2010.

Summaries of the RI activities will be submitted to the NYSDEC as monthly progress reports and will be included in the RI Report. All data submitted to the NYSDEC will be in approved electronic data deliverable (EDD) format.

5 QUALITY ASSURANCE AND QUALITY CONTROL PROTOCOLS

To ensure that suitable and verifiable data results are obtained from the information collected at the Site, quality assurance procedures are detailed in this section.

5.1 Sampling Methods, Analytical Procedures and Documentation

5.1.1 Sampling Methods

Sampling procedures will be conducted in accordance with the NYSDEC *Sampling Guidelines and Protocols Manual*. Collection of representative samples will include the following procedures:

- Ensuring that the sample taken is representative of the material being sampled;
- Using proper sampling, handling and preservation techniques;
- Properly identifying the collected samples and documenting their collection in field records;
- Maintaining chain-of-custody; and
- Properly preserving samples after collection.

Soil Sampling

Soil sampling will be performed using two methods: (1) field screening using a PID; and (2) grab samples. Whether soil samples are collected from the excavator bucket, direct-push rig sleeves, or split-spoons, they will be collected as grab samples that are split and placed into jars supplied by the laboratory as well as into individual zip-lock bags for screening. Screening soil samples will be allowed to sit in sealed zip-lock bag for a short period of time (minimum of five minutes). Head space measurements will then be taken from each zip-lock bag. To prevent cross contamination, zip-lock bags will not be reused and will be properly disposed. Calibration of all electronic field screening equipment will be completed daily and will be done to manufacturer's specifications.

As detailed in the *Sampling Guidelines and Protocols Manual*, grab samples will be placed in 4-ounce and 8-ounce, wide-mouth, glass jars. Sample jars will immediately be placed on ice in a cooler.

Perimeter fill sampling will be conducted during the RI and consists of 16 fill material samples collected from the BCP Site boundary. As discussed with the DEC, if contaminated urban fill exists at depths along the building in which excavation of all contaminated urban fill becomes unfeasible, then sidewall samples will be collected as outlined in DER-10.

Closure sampling will be conducted during the RI and consist of 35 native soil samples across the Site.

Water Sampling

Groundwater sampling will be conducted in accordance with USEPA guidance for low-flow purging and sampling, as described in **Section 4**.

Water samples will be collected in 40 ml and 1-liter glass jars and immediately placed on ice. The water will be analyzed for VOC, SVOC, PCBs, pesticides and metals on a standard turnaround time.

QA/QC Sampling

Duplicate samples will be collected from a minimum of 5% of the locations, and will be selected randomly. Based on an estimate of 15 urban fill samples, 35 native soil samples, 16 perimeter samples (As outlined in DER-10, additional perimeter sidewall samples may be collected based on the extent of the excavation along the building foundation) and 8 groundwater samples; four duplicate soil and two water samples will be collected. Matrix Spike /Matrix Spike Duplicates (MS/MSD) will also be collected on a 5% allocation.

Quality Assurance/Quality Control samples will not be collected and analyzed for the waste characterization sampling.

Table 6-1: Summary of Estimated Sampling

Sample Type	***Matrix***	***Est. #***	***Purpose***
Urban Fill - Site	Soil	15	Characterization
Urban Fill - Permiter	Soil	16	Characterization
Native Soil	Soil	35	Confirmatory
Groundwater	Water	8	Characterization
Duplicate Soil	Soil	4	QA/QC
Duplicate Groundwater	Water	2	QA/QC
MS/MSD –So.	Soil	4/4	QA/QC
MS/MSD –Aq.	Water	2/2	QA/QC
	Total	**92**	

5.1.2 Analytical Procedures

Laboratory Analysis

Laboratory analysis will be conducted by a third-party laboratory that is accredited by the NYSDOH Environmental Laboratory Accreditation Program (ELAP). Laboratory analytical methods will include the most current NYSDEC Analytical Services Protocol (ASP).

Soil and groundwater samples sent to a certified laboratory will be analyzed in accordance with EPA SW-846 methodology for the following contaminants:

- Target Compound List for Volatile Organic Compounds (EPA Method 5035);
- Target Compound List for Semi-volatile Compounds (EPA Method 8270);

- TCL Pesticides (USEPA 8081);
- PCBs (USEPA 8082); and
- Target Analytes List for Metals (EPA Method 6010).

Category B deliverable will be requested to be used in a third-party data validation.

Data Usability

Data Usability Summary Report (DUSR) will be performed by a third-party data consultant using the most recent methods and criteria from the U.S. EPA. The DUSR will assess all sample analytical data, blanks, duplicates and laboratory control samples and evaluate the completeness of the data package. The waste characterization samples will not be validated.

5.1.3 Documentation

Custody Procedures

As outlined in NYSDEC *Sampling Guidelines and Protocols*, a sample is in custody under the following conditions:

- It is in your actual possession;
- It is in your view after being in your physical possession;
- It was in your possession and then you locked or sealed it up to prevent tampering; or
- It is in a secure area.

The environmental professional will maintain all chain-of-custody documents that will be completed for all samples that will leave the Site to be tested in the laboratory.

Air Monitoring

Air monitoring will be conducted to verify no impacts to ambient air. Air monitoring will be conducted during the soil boring program on northern and eastern BCP Site boundaries. The monitoring will include periodic screening for VOCs. All records will be kept on-site during the investigation and will be made available for regulatory inspection. A daily air monitoring log will be maintained through the end of remedial investigation field activities. The specifics of the air monitoring procedures and criteria are detailed in the CAMP.

6 HEALTH AND SAFETY

To verify the safety of the workers and the local community during the performance of the work, monitoring practices of the work environment will be in place during all phases of RI activities. A Health and Safety Plan (HASP) was prepared that details procedures for maintaining safe working conditions and minimizing the potential for exposure to hazardous material. The HASP is provided in **Appendix D**.

Air monitoring during RI activities will be conducted using PID. Details on air monitoring are provided in the Community Air Monitoring Plan (CAMP). The CAMP is provided in **Appendix C**.

7 INTERIM REMEDIAL MEASURES

The following steps will be implemented to address the known contamination within the urban fill at the Site:

- Removal of approximately 4,000 cubic yards of urban fill for off-site disposal or treatment at a regulated facility.
- If necessary, dewatering of the excavation area and the treatment of captured water.
- Use of confirmatory soil sample results generated during the RI to show compliance with the Restricted Residential Use Soil Cleanup Objective.
- As discussed with the DEC, if contaminated urban fill exists at depths along the building in which excavation of all contaminated urban fill becomes unfeasible, then this portion of the property will be covered with clean backfill and capped with concrete.
- Mitigation of asbestos containing materials and addressing lead-based paint within the building.

This section of the report will identify the steps to be taken to remediate the Site.

7.1 Site Control

Site control is an important aspect of this remedial program. In order to safeguard the health and safety of site workers and the general public, access to all remedial work areas will be restricted. Perimeter fencing will be installed to facilitate site control. Additionally, temporary construction fencing will be erected around accessible excavations and staging areas to prevent unauthorized personnel from entering these areas as appropriate.

7.2 Site Preparation

Site preparation activities will include the following:

7.2.1 Water Collection and Treatment System

Contingent plans will be created to address stormwater, if any, in the excavation. These plans include the potential for pumping the excavation water using temporary sumps or a vacuum truck into steel holding tanks. Stored water will either be shipped for off-site treatment at a licensed treatment facility or will be characterized and treated, if necessary, on-site and discharged to the sanitary sewer under a Buffalo Sewer Authority permit.

7.3 Excavation

Excavation is planned to occur across the Site and will include the removal and off-site disposal of all fill material. Fill excavated from the Site will not be reused at other sites.

The depth of the excavation will be based on the sampling completed and is estimated to be approximately three to four feet. The RI sampling will include one native soil sample from each 50-foot by 50-foot grid location. These native soil samples will be used as confirmation samples for the IRM.

Although petroleum or other similar impacts are not anticipated, a C&S scientist or engineer will screen the removed fill for visual and olfactory observations and for total volatile compounds using a photoionization detector (PID). All grossly contaminated material will be removed, the impacted material will be evaluated and may be handled separately from the remaining fill at the Site.

Excavated fill may be direct-loaded onto trucks for off-site disposal or stockpiled and loaded onto trucks for off-site disposal. Excavated fill to be stockpiled on-site will be placed on and covered by a minimum of double 6-mil polyethylene sheeting which is sufficiently anchored to prevent any wind and water erosion. The cover will be inspected at least once per day with corrective action taken as needed. The inspections and any corrective actions will be documented in logs and will occur until the fill materials have been properly removed and disposed off-site.

Good housekeeping practices will be followed during excavation activities to prevent leaving contaminated material on the ground surface and from being tracked onto the road during transporation (e.g., precautions will be taken to prevent impacts to the ground surface due to material spilled from the excavator bucket).

Transportation of all wastes will be completed by properly permitted vehicles. To the extent practicable, trucks will travel along routes that avoid residential areas.

7.4 Soil Cover and Cap

As discussed with the DEC, in locations were the excavation of urban fill cannot feasibly achieve a Restricted Residential Use cleanup due to access restictions or structural integrity concerns due to excavating along the building foundation, urban fill will be removed to the deepest possible depth followed by the placement of at least 2 feet of clean backfill and capped with concrete or asphalt.

7.5 Backfilling

The excavation at the Site will be backfilled to grade with material such as clean soil, crushed stone, and/or concrete as per below. For each source of backfill that is imported to the Site, one of the following will be completed prior to importing the backfill.

a. Documentation will be provided to NYSDEC as to the source of the material and the consistency of the material in accordance with the exemption for no chemical testing listed in DER-10 Section 5.4(e)(5); **OR**

b. Chemical testing will be completed in direct accordance with Table 5.4(e)10 from DER-10. This table is provided below :

Recommended Number of Soil Samples for Soil Imported To or Exported From a Site			
Contaminant	**VOCs**	**SVOCs, Inorganics & PCBs/Pesticides**	
Soil Quantity (cubic yards)	**Discrete Samples**	**Composite**	**Discrete Samples/Composite**
0-50	1	1	3-5 discrete samples from different locations in the fill being provided will comprise a composite sample for analysis
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1000	7	2	
1000	Add an additional 2 VOC and 1 composite for each additional 1000 Cubic yards or consult with DER		

Taken from DER-10 - Table 5.4(e)10

In the event that laboratory analytical testing is conducted, the results for each new source of fill must meet the values provided in Appendix 5 of DER-10 (provided as Appendix C in this Work Plan) for Unrestricted Use and must receive approval by the NYSDEC.

7.6 Air Monitoring

Continuous air monitoring will be conducted at upwind and downwind locations during all ground intrusive activities as per DOH Generic CAMP (CAMP) included in **Appendix C**. A particulate monitor will be used at a downwind location on the perimeter of the Site. Another handheld detector was used in the excavation to ensure that the worker area was safe.

The action threshold for VOCs established in the CAMP is 5 ppm above background. If this value is exceeded for the 15-minute average work will be halted and work may resume once instantaneous readings fall below 5 ppm work. The action level for dust is 100 micrograms per cubic meter over background during a 15-minute average. If this limit is exceeded, dust suppression techniques will be employed, including using water to wet the area.

Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.

If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m^3, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m^3 or less at the monitoring point.

7.7 Erosion and Dust Controls

As part of the remedial actions to be performed at the Site, measures will be needed to limit erosion and dust generation. Erosion control and dust suppression techniques will be employed as necessary to limit erosion and fugitive dust generated in disturbed areas during remediation and redevelopment activities. Such techniques may be employed even if the community air monitoring results indicate that particulate levels are below action levels. Techniques may include but are not limited to:

- Using silt fencing, hay bales, and/or mulching
- Applying water on haul roads
- Wetting equipment and excavation surfaces
- Hauling materials in properly tarped or watertight containers
- Limiting vehicle speed on the Site
- Limiting the size of excavations
- Covering excavated areas and materials following excavation

Effectiveness of the dust suppression measures will be evaluated based on the results of the air monitoring that will be conducted under the Site-Specific Community Air Monitoring Plan provided in **Appendix C**.

7.8 Confirmatory Sampling

The RI will determine the depth of impacts from the overlying urban soil. The Interim Remedial Measure includes excavation to uncontaminated native material. Excavation depths will be determined from the RI results; additional confirmatory sampling will not be necessary. The NYSDEC will inspect and approve excavations prior to backfilling.

7.9 Asbestos and Lead-Based Paint

The IRMs will also include the mitigation of asbestos and lead-based paint within the building. The mitigation activities will follow all appropriate local, state, and federal guidance and laws pertaining to such materials, including NYSDOL Code Rule 56.

7.10 Discussion of Interim Remedial Measures

The IRM as described above will be effective in remediating the Site.

All contaminated urban fill will be properly excavated and disposed off-site, and the remaining native soil will be analyzed to ensure compliance with applicable SCOs.

Backfill materials will meet NYSDEC requirements for backfill at BCP sites. The asbestos containing materials and lead-base paint within the building will be mitigated. Although groundwater contamination from the adjacent property will remain, the City of Buffalo prohibits that use of groundwater. Additionally, the placement of an easement on the Site will ensure that future Site uses and activities will remain as restricted residential, commercial or industrial. The implementation of a site management plan will also provide guidance on the site handling of any contaminated material during future work, should such a situation arise.

8 REPORTING

Based on the results of the work described above, one report will be prepared to describe the methodologies and results of the RI and IRM. The report will also identify and evaluate additional remedial activities for the Site, if any. The RI and IRM portions of the Report will describe:

- Investigative methods;
- Observations and findings;
- Inspection/Monitoring observations of the remedial measures;
- Results of the community air monitoring program; and
- Analytical results.

The Alternatives Analysis Report (AAR) portion of the Report will include the following elements:

- An Alternatives Analysis
  - Description of remaining contamination, if any
  - Identification of potential, additional remedial measures
  - Evaluation of potential, additional remedial measures, including no action following the remediation
  - Identification of recommended additional remedy

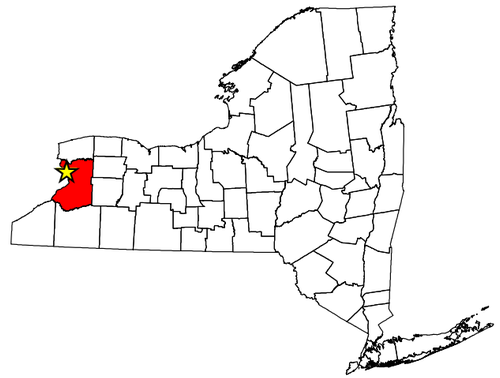
The documents will be submitted to the NYSDEC for review and approval.

9 SCHEDULE

It is assumed that NYSDEC will promptly review this RI/IRM Work Plan followed by a 30-day comment period. Below is an anticipated schedule of milestones for the remediation of the Site.

Anticipated Date	**Milestone**
December 2016:	Prepare/Execute of Brownfield Cleanup Agreement
February 2017:	Implement Remedial Investigation
March 2017:	Analysis and Evaluation of Remedial Investigation
April – May 2017:	Implement Interim Remedial Measures
June 2017:	Completion of Remediation
July 2017:	Submit Remedial Investigation/Interim Remedial Measures/Alternatives Analysis Report
September 2017:	Submit Final Engineering Report and other Brownfield Cleanup Program Requirements as needed (e.g. Environmental Easement, Site Management Plan)
November 2017:	Receive Certificate of Completion

FIGURES



Legend

BCP BOUNDARY

0 200 400 800

Feet

SITE LOCATION

FIGURE 1

Document Path: F:\Project\E67 - Ciminelli Development\E67.018.001 - Garrett Leather BCP Application\Planning-Study\Reports\RI-IRM Work Plan\GIS\Maps\FIGURE 1_SITE_LOCATION.mxd

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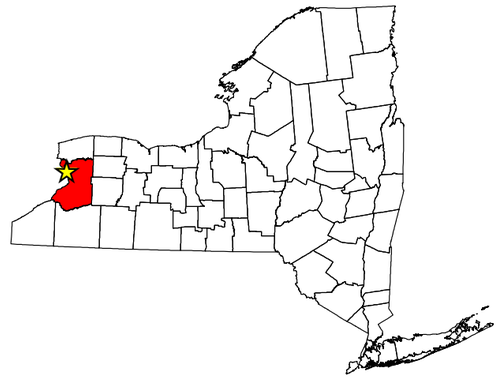
GARRETT LEATHER
REMEDIAL INVESTIGATION-
INTERIM REMEDIAL MEASURES
WORK PLAN
BUFFALO, NEW YORK
APRIL 2016

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: E67.018.001
DATE: APRIL 2016
DRAWN BY: S. HERBERGER
DESIGNED BY: S. HERBERGER
CHECKED BY:



Legend

BCP BOUNDARY

0 50 100 200 Feet

Document Path: F:\Project\E67 - Ciminelli Development\E67.018.001 - Garrett Leather BCP Application\Planning-Study\Reports\RI-IRM Work Plan\GIS\Maps\FIGURE 2_SITE_DETAIL.mxd

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GARRETT LEATHER
REMEDIAL INVESTIGATION-
INTERIM REMEDIAL MEASURES
WORK PLAN
BUFFALO, NEW YORK
APRIL 2016

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO: E67.018.001
DATE: APRIL 2016
DRAWN BY: S. HERBERGER
DESIGNED BY: S. HERBERGER
CHECKED BY:

SITE DETAIL

FIGURE 2

Legend

- BCP Boundary
- PROPERTY BOUNDARIES
- NOT SAMPLED
- SAMPLE EXCEEDED UNRESTRICTED USE CRITERIA FOR AT LEAST ONE COMPOUND
- SAMPLE EXCEEDED RESIDENTIAL USE CRITERIA FOR AT LEAST ONE COMPOUND
- SAMPLE EXCEEDED RESTRICTED RESIDENTIAL USE CRITERIA FOR AT LEAST ONE COMPOUND
- SAMPLE EXCEEDED COMMERCIAL USE CRITERIA FOR AT LEAST ONE COMPOUND
- SAMPLE EXCEEDED INDUSTRIAL USE CRITERIA FOR AT LEAST ONE COMPOUND

0 50 100 200 Feet

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1336, 1340 AND 1360 NIAGARA STREET
REMEDIAL INVESTIGATON-INTERIM REMEDIAL MEASURES
BUFFALO, NEW YORK

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	E67.018.001
DATE:	SEPT. 15, 2015
DRAWN BY:	C. MARTIN
DESIGNED BY:	C. MARTIN
CHECKED BY:	

2015 SITE CHARACTERIZATION MAP

FIGURE 3

Legend

- BCP Boundary
- Proposed Transformer PCB Samples
- Proposed Fill Sampling
- Proposed Perimeter Sample Location
- Native Sampling at 15 feet or above top of bedrock
- Native Sampling

0 30 60 120 Feet

Document Path: F:\Project\E67 - Ciminelli Development\E67.018.002 - Garrett Leather BCP Project\Planning-Study\Reports\RI-IRM Work Plan\GIS\Maps\FIGURE 4_PROPOSED SAMPLES.mxd

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GARRETT LEATHER REMEDIAL INVESTIGATION-INTERIM REMEDIAL MEASURES WORK PLAN BUFFALO, NEW YORK APRIL 2016

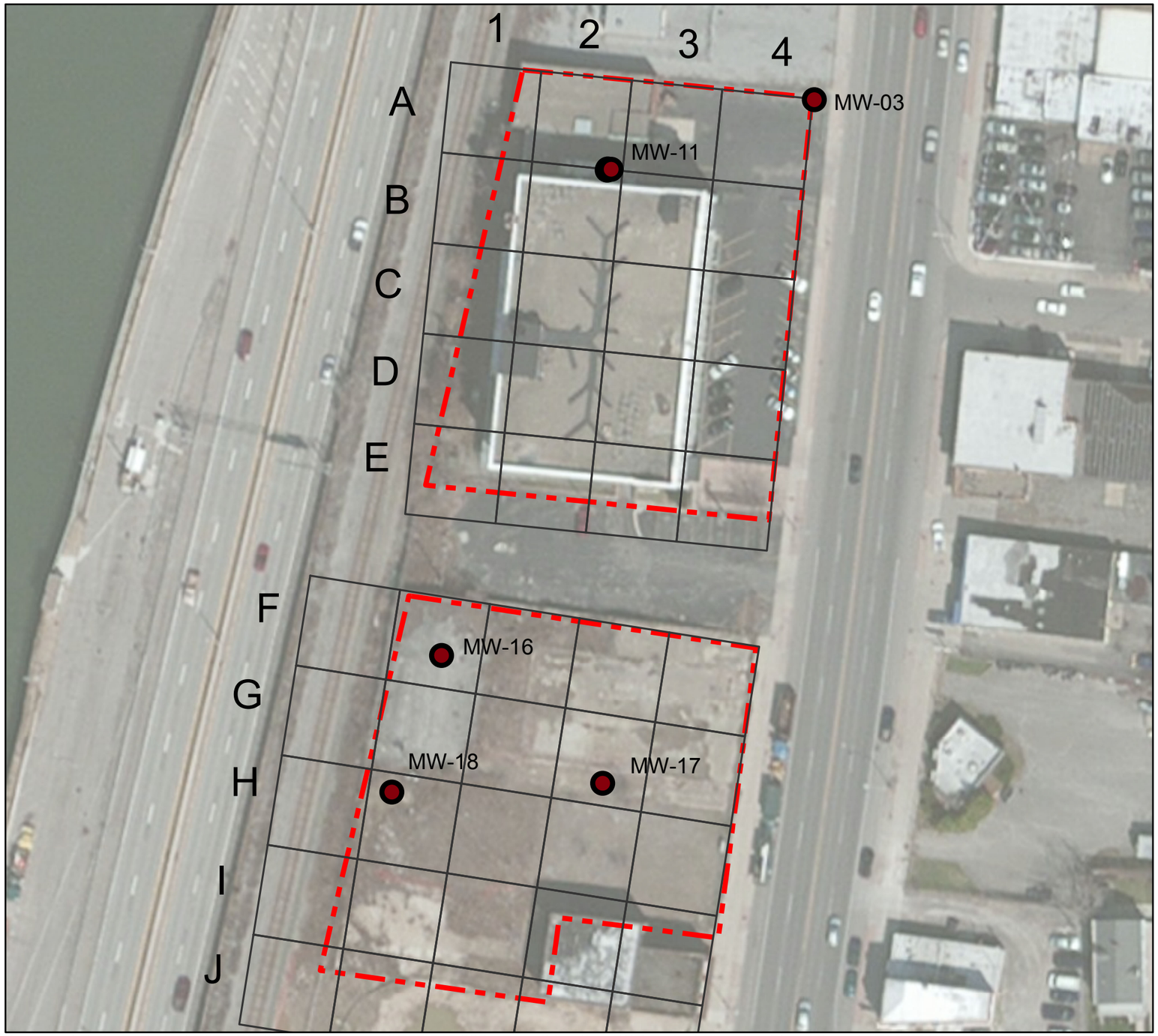
MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO: E67.018.001
DATE: APRIL 2016
DRAWN BY: S. HERBERGER
DESIGNED BY: S. HERBERGER
CHECKED BY:

PROPOSED SOIL SAMPLE LOCATIONS

FIGURE 4



Legend

- GW Wells
- BCP Boundary

0 30 60 120 Feet

Document Path: F:\Project\E67 - Ciminelli Development\E67.018.002 - Garrett Leather BCP Project\Planning-Study\Reports\RI-IRM Work Plan\GIS\Maps\FIGURE 5_GW WELLS.mxd

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GARRETT LEATHER
REMEDIAL INVESTIGATION-
INTERIM REMEDIAL MEASURES
WORK PLAN
BUFFALO, NEW YORK
APRIL 2016

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	E67.018.001
DATE:	APRIL 2016
DRAWN BY:	S. HERBERGER
DESIGNED BY:	S. HERBERGER
CHECKED BY:	

GROUNDWATER WELL LOCATIONS

FIGURE 5

TABLES

Table 1 – Proposed Remedial Investigation Sampling Program

Task	Location	Number of Samples	Lab Analysis
Urban Fill Samples	50-foot by 50-foot grid	15	TCL VOCs, SVOCs and pesticides, PCBs, TAL Metals, Cyanide, Hex Chromium
	Perimeter	16	TCL SVOC and TAL metals
	Site-wide	4	TCLP VOCs, SVOCs, pesticides, herbicides, and metals, PCBs, reactivity, corrosivity, ignitability
Native Soil Samples	Site-wide	27	TCL VOCs, SVOCs and pesticides, PCBs, TAL Metals, Cyanide, Hex Chromium
Native Soil Samples at 15 Feet or Top of Bedrock	Site-wide	8	TCL VOCs, SVOCs and pesticides, PCBs, TAL Metals, Cyanide, Hex Chromium
Groundwater Samples	Site-wide	8 (Two Events total)	TCL VOCs, SVOCs and pesticides, PCBs, TAL Metals, Cyanide, Hex Chromium

APPENDICES

APPENDIX A
PREVIOUSLY COMPLETED ENVIRONMENTAL INVESTIGATIONS

Pre-Renovation Asbestos Sampling Report

Project Location:

1360 Niagara St.
Buffalo, NY 14213
AMD Project ID: 15-0819JWA

Prepared for:

Amber Holycross
Ciminelli Real Estate Corporation
350 Essjay Road
Williamsville, NY 14221

Prepared by:

AMD Environmental Consultants
4248 Ridge Lea Road
Amherst, NY 14226

Conditions as of: August 24th, 2015

September 2nd, 2015

Amber Holycross
Ciminelli Real Estate Corporation
350 Essjay Road
Williamsville, NY 14221

Re: Pre-Renovation Asbestos Sampling Report
1360 Niagara St.
Buffalo, NY 14213
AMD Project ID: 15-0819JWA

Ms. Holycross;

I am pleased to present this summary of asbestos survey services at the above referenced address.

AMD Environmental conducted pre-renovation asbestos bulk sampling at the above referenced address from August 19th-August 24th, 2015 for suspect materials to be affected by planned renovations. Asbestos containing materials (ACM) were identified above 1% in materials that were sampled by AMD Environmental. For more detail refer to the summary on page 5.

New York State asbestos regulations (12 NYCRR 56-5) require that asbestos surveys are conducted in order to determine whether or not the building or structure, or portion(s) thereof to be demolished, renovated, remodeled, contains ACM, PACM or asbestos materials. These regulations also require that a copy of the pre-renovation survey be forwarded to the local New York State Department of Labor (NYSDOL) Asbestos Control Bureau immediately upon completion of the survey (NYSDOL contact info. at end of report). **If requested in writing, a copy of the survey will be submitted on your behalf to the NYSDOL, otherwise a copy must be submitted by the owner.**

AMD Environmental Consultants, Inc. surveys are intended to determine, to a reasonable extent, the presence, location, quantity, and condition of accessible asbestos containing materials (surfacing, thermal systems insulation, and miscellaneous materials). The information contained herein is representative of conditions found onsite during the date/time this survey was conducted. Environmental conditions, renovation, vandalism, etc. may alter conditions from the date/time that this survey was conducted, potentially creating new hazards.

Please do not hesitate to contact me if I may provide any additional information.

Sincerely,

Anthony DeMiglio
President

Table of Contents

Pre-Renovation Asbestos Sampling Report

Part 1: Asbestos Containing Materials Summary

Asbestos Containing Materials Summary

1360 Niagara St., Buffalo, NY 14213
AMD Project ID: 15-0819JWA

HAN #	Material Description	Space Identification Number (S.I.D.)	Estimated Amount	Condition
101A	Joint Compound	1001, 1002, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 2003, 2005, 3002, 3004, 3005, 3006, 3010, 3011, 3012, 3013, 3015, 3016, 3017, 3018, 3019, 3020, 4002, 4004	28,400 Sq. Ft.	I
103 (Note 1)	Wall Panel Mastic (Black)	1002, 1019, 1020	150 Sq. Ft.	D
104	Wall Panel Mastic (Dark Brown)	1008, 1011	400 Sq. Ft.	D
206	Textured Ceiling Coating (White)	1012	600 Sq. Ft.	I
304	12”x12” Floor Tile (Beige w/Grey Streaks)	3002	250 Sq. Ft.	D
313 (Note 1)	12”x12” Floor Tile (Red Pattern)	1002	60 Sq. Ft.	D
311/ 311A (Note 3)	9”x9”Floor Tile and Mastic (Black)	1000, 1001,1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017,1018, 1019, 1020, 1023,1024	14,000 Sq. Ft.	D
315/ 315A (Note 3)	12”x12”Floor Tile (Gray Mottled) and Mastic			
318 (Note 3)	9”x9”Floor Tile (Red)			
320 (Note 3)	Vapor Barrier (Under Flooring)			
401	Thermal Systems Insulation Mud Fittings	B001, B002	10 Sq. Ft.	D
402	Thermal Systems Insulation 12” Pipe Wrap	B002, 3012	250 Ln. Ft.	D
601 (Note 1)	Elevator Brake Shoes	Elevator Shaft	15 Sq. Ft.	D
603	Exterior Door Caulk	All Exterior Doors	15 Sq. Ft.	D
607	Electrical Rm. Curtain	B005	50 Sq. Ft.	D
608	Exterior Window Caulk	Exterior Roof Penthouse Windows	6 Sq. Ft.	D
702	Exterior Roof Repair Tar	Exterior Roof at Chimney	10 Sq. Ft.	D
703 (Note 4)	Exterior Roof Felt and all Roofing components	Exterior Loading Dock Roof	3,800 Sq. Ft.	D

Quantities are estimated and subject to bidders verification.

See Site Maps for Space Identification Number (S.I.D.) locations.

Inspection Notes

Asbestos containing materials (ACM) were identified above 1% during sampling for all materials in the above listed asbestos containing materials summary table.

Note 1: Analysis of material has not been performed. The material identified is known to be an asbestos containing material (ACM) and should be considered as such unless proven otherwise.

Note 2: Black vapor barrier tar was observed on concrete ceilings beneath plaster layer but was not accessible for sampling. This is a suspect asbestos containing material and should be sampled before disturbing.

Note 3: Floor tiles, mastic and vapor barrier were located throughout the building in various rooms and areas. In some cases, multiple layers of floor tiles are adhered to asbestos containing mastic and vapor barrier. If a particular floor tile did not contain asbestos, it is still considered an asbestos containing material as it cannot be removed without disturbing the asbestos mastic and or vapor barrier. ACM flooring components should be presumed to be in all space identification numbers listed.

Note 4: Limited sampling of the loading dock roof was performed. Therefore, all other roofing components in addition to the roof felt must be considered ACM until proven otherwise.

Terms / Definitions Key

HAN #:	**Homogeneous Area**
S.I.D	**Sample Location (Space Identification Number)**
I:	**Intact Condition**
D:	**Damaged Condition**
SD:	**Significantly Damaged Condition**
F:	**Friable**
NF:	**Non-Friable**
PLM:	**Analyzed by Polarized Light Microscopy**
TEM:	**Analyzed by Transmission Electron Microscopy**
NAD:	**No asbestos detected**
NA:	**Not applicable**
PS:	**Positive Stop**
Trace:	**Less than 1% asbestos (Non ACM)**
ACM:	**Asbestos Containing Material**
PACM:	**Presumed Asbestos Containing Material**

Part 2: Homogeneous Materials List

Homogenous Materials List

1360 Niagara St., Buffalo, NY 14213
AMD Project ID: 15-0819JWA

HAN #	Space Identification Number (S.I.D.)	Material Description	Sample Number(s)	Confirmed ACM (Y/N)	Friability (F/NF)
100A	1000, 1001, 1002, 1003, 1004, 1005, 1011, 1012, 3004, 3011, 3012, 3013, 4003	Plaster/Skim Coat	100A-1, 100A-2, 100A-3, 100A-4, 100A-5, 100A-6, 100A-7	No	F
100B	1000, 1001, 1002, 1003, 1004, 1005, 1011, 1012, 1021, 2001, 2002, 2002A, 2003, 2007, 3004, 3011, 3012, 3013, 4003, B001, B003, B004,	Plaster Base Layer	100B-1, 100B-2, 100B-3, 100B-4, 100B-5, 100B-6, 100B-7, 100B-8, 100B-9, 100B-10	No	F
101	1001, 1002, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 2003, 2005, 3002, 3004, 3005, 3006, 3010, 3011, 3012, 3013, 3015, 3016, 4002, 4004	Drywall	101-1, 101-2, 101-3, 101-4, 101-5, 101-6, 101-7, 101-8, 101-9, 101-10	No	F
101A	**1001, 1002, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 2003, 2005, 3002, 3004, 3005, 3006, 3010, 3011, 3012, 3013, 3015, 3016, 4002, 4004**	**Joint Compound**	**101A-1, 101A-2, 101A-3, 101A-4, 101A-5, 101A-6, 101A-7, 101A-8, 101A-9, 101A-10**	**YES**	**F**
102	3005	Wall Panel Mastic (Beige)	102-1, 102-2	No	NF
104	**1008, 1011**	**Wall Panel Mastic (Dark Brown)**	**104-1, 104-2**	**YES**	**NF**
200	1013, 1014, 1015, 1016, 1017, 1019, 1020, 1024,	2'x2' Ceiling Tile	200-1, 200-2	No	F
201	1006, 1007, 1008, 1018, 2002A,	2'x4' Ceiling Tile	201-1, 201-2	No	F
202	1002, 1003, 1004, 1009, 1010, 1022, 1023, 2005, 3015, 3018, 3019, 3020	2'x4' Ceiling Tile with Fissure Pattern	202-1, 202-2	No	F
203	1005, 1011, 3016, 3017	2'x2' Ceiling Tile Textured Pattern	203-1, 203-2	No	F
204	1000, 1001	1'x1' Ceiling Tile 2-Spline	204-1, 204-2	No	F

Homogenous Materials List (Continued)
1360 Niagara St., Buffalo, NY 14213

HAN #	Space Identification Number (S.I.D.)	Material Description	Sample Number(s)	Confirmed ACM (Y/N)	Friability (F/NF)
205	1002	1'x1' Ceiling Tile Drill cont'd Hole Pattern	205-1, 205-2	No	F
205A	1002	Mastic of 1'x1' Ceiling Tile Drill Hole Pattern	205A-1, 205A-2	No	NF
206	**1012**	**Textured Ceiling Coating**	**206-1, 206-2, 206-3**	**YES**	**F**
300	2002, 3011	Quarry Tile Mortar	300-1, 300-2	No	NF
300A	2002, 3004, 3007, 3009, 3010, 3011, 3013, 3014, 4001	Quarry Tile Mastic	300A-1, 300A-2	No	NF
300B	3004, 3007, 3009, 3010, 3013, 3014, 4001	Quarry Tile Mud Bed	300B-1, 300B-2	No	NF
301	4004	12"x12" Floor Tile (Gray)	301-1, 301-2	No	NF
301A	4004	Mastic of 12x12 Floor Tile (Gray)	301A-1, 301A-2	No	NF
302	3001	12"x12" Floor Tile (White with Gray Flecks)	302-1, 302-2	No	NF
302A	3001	Mastic of 12"x12" Floor Tile (White w/ Gray)	302A-1, 302A-2	No	NF
303	1000, 1003, 1006, 1009, 1010, 1015, 1018, 1022, 1023, 2001, 2002A, 2003, 2004, 2005, 3000, 3001, 3002, 3004, 3006, 3012, 3015, 3016, 3018, 3019, 3020	Cove Base Mastic	302-1, 302-2	No	NF
304	**3002**	**12"x12" Floor Tile (Beige w/ Gray streaks)**	**304-1, 304-2**	**YES**	**NF**
304A	3002	Mastic from 12"x12" Floor Tile (Beige w/ Gray)	304A-1, 304A-2	No	NF
305	3002	Floor Leveler	305-1, 305-2	No	F
306	3012, 3013	Flooring (Red)	306-1, 306-2	No	NF
308	1003, 2002A,	Linoleum (Gray Stone Pattern)	308-1, 308-2	No	NF
309	3015, 3016, 3017	12"x12" Floor Tile (Gray and Blue)	309-1, 309-2	No	NF
309A	3015, 3016, 3017, 3020	Mastic of 12"x12" Floor Tile (Gray and Blue)	309A-1, 309A-1	No	NF
310	3015, 3016, 3017	Felt Paper under Mastic of 12"x12" Floor Tile (Gray and Blue)	310-1, 310-2	No	NF

Homogenous Materials List (Continued)
1360 Niagara St., Buffalo, NY 14213

HAN #	Space Identification Number (S.I.D.)	Material Description	Sample Number(s)	Confirmed ACM (Y/N)	Friability (F/NF)
311	1000, 1001, 1003, 1004, 1007	9”x9” Floor Tile	311-1, 311-2	No	NF
311A	**1000, 1001, 1003, 1004, 1007**	**Mastic of 9”x9” Floor Tile**	**311A-1, 311A-2**	**YES**	**NF**
312	1000, 1001	Vapor Barrier Under 9”x9” Floor Tile	312-1, 312-2	No	NF
314	1003, 1005	12”12” Floor Tile (Gray w/ Brown Streaks)	314-1, 314-2	No	NF
315	1004, 1021	12”12” Floor Tile (Gray Mottled)	315-1, 315-2	No	NF
315A	**1004, 1021**	**Mastic of 12”12” Floor Tile (Gray Mottled)**	**315A-1, 315A-2**	**YES**	**NF**
317	1007	12”12” Floor Tile (Blue)	317-1, 317-2	No	NF
318	**1012, 1013, 1014, 1015, 1016, 1017, 1024**	**9”x9” Floor Tile (Red)**	**318-1, 318-2**	**YES**	**NF**
319	1012	Floor Leveler (Gray)	319-1, 319-2	No	NF
320	**1012, 1013, 1014, 1015, 1016, 1017, 1024**	**Vapor Barrier Under 9”x9” Floor Tile (Red)**	**320-1, 320-2**	**YES**	**NF**
401	**B001, B002**	**Mud Fittings**	**401-1, 401-2, 401-3**	**YES**	**F**
402	**B002**	**TSI- 12” Line**	**402-1, 402-2, 402-3**	**YES**	F
500	1021	Canvas Wrap (Tan/Brown)	500-1, 500-2	No	NF
600	4001 (Throughout Bldg.)	Interior Window Glazing	600-1, 600-2	No	NF
603	**Exterior**	**Exterior Door Caulk**	**603-1, 603-2**	**YES**	**NF**
604	Exterior	Exterior Seam Caulk	604-1, 604-2	No	NF
605	Exterior	Exterior Window Glazing	605-1, 605-2	No	NF
606	Exterior	Exterior Stone Façade	606-1, 606-2	No	NF
607	**B005**	**Electric Room Curtain**	**607-1, 607-2**	**YES**	**F**
608	**Exterior-Roof Penthouse**	**Window Caulk**	**608-1, 608-2**	**YES**	**NF**
700	Roof	Roof Field	700-1, 700-2	No	NF
701	Roof	Interior Seam of Aluminum Capping Caulk	701-1, 701-2	No	NF
702	**Roof**	**Base of Chimney Repair Tar**	**702-1, 702-2**	**YES**	NF
703	**Loading Dock Roof**	**Loading Dock Roof Felt**	**703-1, 703-2**	**YES**	NF

The above listed table provides a list of the materials that were sampled and tested for asbestos by Polarized Light Microscopy (PLM) and or Transmission Electron Microscopy (TEM), as applicable. Any sample determined to be a non-friable organically bound material (NOB) and which was found to be negative by Polarized Light Microscopy (PLM) analysis, is then analyzed by Transmission Electron Microscopy (TEM) analysis at AmeriSci Laboratories in NYC. AmeriSci is an ELAP Certified laboratory (ID: 11480) and conducts analysis according to EPA Method 198.4.

Part 3: Laboratory Analytical Results

PARADIGM
ENVIRONMENTAL SERVICES, INC.
1815 Love Road, Grand Island, NY 14072 Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS ANALYSIS REPORT

via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 1 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
100A-1	29951	1000	White Skim Coat	None Detected	0%		Not Required	N/A	None Detected	100%
100A-2	29952	1000	White Skim Coat	None Detected	0%		Not Required	N/A	None Detected	100%
100A-3	29953	1001	White Skim Coat	None Detected	0%		Not Required	N/A	None Detected	100%
100A-4	29954	1004	White Skim Coat	None Detected	0%		Not Required	N/A	None Detected	100%
100A-5	29955	1004	White Skim Coat	None Detected	0%		Not Required	N/A	None Detected	100%
100A-6	29956	1004	White Skim Coat	None Detected	0%		Not Required	N/A	None Detected	100%
100A-7	29957	1002	White Skim Coat	None Detected	0%		Not Required	N/A	None Detected	100%
100B-1	29958	4003	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%
100B-2	29959	4003	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%
100B-3	29960	3001	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%

ELAP ID No.: 11955

Comments:

KEY TO NOB COLUMN SYMBOLS:

√ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 Polarized Light Microscopy (PLM) and/or 198.4 Transmission Electron Microscopy (TEM) per NYSDOH.

√̃ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. *This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.*

# denotes cellulose containing ceiling tile analyzed by ELAP Method 198.6 (PLM) and/or 198.4 (TEM) per NYSDOH guidelines.

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

*** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.*

PLM Date Analyzed: 8/28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

PARADIGM
ENVIRONMENTAL SERVICES, INC.
1815 Love Road, Grand Island, NY 14072 Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS ANALYSIS REPORT

via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 2 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
100B-4	29961	3011	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%
100B-5	29962	2003	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%
100B-6	29963	2007	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%
100B-7	29964	1000	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%
100B-8	29965	1004	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%
100B-9	29966	B002	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%
100B-10	29967	B001	Gray Plaster Base	None Detected	0%		Not Required	N/A	None Detected	100%
101-1	29968	4004	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%
101-2	29969	4002	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%
101-3	29970	3000	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%

ELAP ID No.: 11955

Comments:

KEY TO NOB COLUMN SYMBOLS:

√ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 Polarized Light Microscopy (PLM) and/or 198.4 Transmission Electron Microscopy (TEM) per NYSDOH.

√ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. *This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.*

# denotes cellulose containing ceiling tile analyzed by ELAP Method 198.6 (PLM) and/or 198.4 (TEM) per NYSDOH guidelines.

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

*** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.*

PLM Date Analyzed: 8/28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

PARADIGM
ENVIRONMENTAL SERVICES, INC.
1815 Love Road, Grand Island, NY 14072 Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS ANALYSIS REPORT

via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 3 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
101-4	29971	3012	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%
101-5	29972	2003	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%
101-6	29973	2005	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%
101-7	29974	B001	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%
101-8	29975	B001	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%
101-9	29976	1006	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%
101-10	29977	1023	Gray Fibrous Drywall	None Detected	0%		Not Required	N/A	Cellulose 10%	90%
101A-1	29978	4004	White Joint Compound	None Detected	0%		Not Required	N/A	None Detected	100%
101A-2	29979	4002	White Joint Compound	None Detected	0%		Not Required	N/A	None Detected	100%
101A-3	29980	3011	White Joint Compound	None Detected	0%		Not Required	N/A	None Detected	100%

ELAP ID No.: 11955

Comments:

KEY TO NOB COLUMN SYMBOLS:

√ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 Polarized Light Microscopy (PLM) and/or 198.4 Transmission Electron Microscopy (TEM) per NYSDOH.

√̈ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. *This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.*

# denotes cellulose containing ceiling tile analyzed by ELAP Method 198.6 (PLM) and/or 198.4 (TEM) per NYSDOH guidelines.

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

*** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.*

PLM Date Analyzed: 8/28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

PARADIGM
ENVIRONMENTAL SERVICES, INC.
1815 Love Road, Grand Island, NY 14072 Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS ANALYSIS REPORT

via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 4 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
101A-4	29981	3012	White Joint Compound	None Detected	0%		Not Required	N/A	None Detected	100%
101A-5	29982	2003	White Joint Compound	None Detected	0%		Not Required	N/A	None Detected	100%
101A-6	29983	2005	White Joint Compound	None Detected	0%		Not Required	N/A	None Detected	100%
101A-7	29984	1021	White Joint Compound	None Detected	0%		Not Required	N/A	None Detected	100%
101A-8	29985	1021	White Joint Compound	Chrysotile 2.5%	2.5%		Not Required	N/A	None Detected	97.5%
101A-9	29986	1006	White Joint Compound	None Detected	0%		Not Required	N/A	None Detected	100%
101A-10	29987	1023	White Joint Compound	None Detected	0%		Not Required	N/A	None Detected	100%
102-1	29988	3005	Beige Wall Panel Mastic	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
102-2	29989	3005	Beige Wall Panel Mastic	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
104-1	29990	1004	Dark Brown Fibrous Wall Panel Mastic	Chrysotile 20%	20%	√	Not Required	N/A	None Detected	80%

ELAP ID No.: 11955

Comments:

KEY TO NOB COLUMN SYMBOLS:

√ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 Polarized Light Microscopy (PLM) and/or 198.4 Transmission Electron Microscopy (TEM) per NYSDOH.

V̈ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. *This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.*

# denotes cellulose containing ceiling tile analyzed by ELAP Method 198.6 (PLM) and/or 198.4 (TEM) per NYSDOH guidelines.

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

*** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.*

PLM Date Analyzed: 8/27-28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

PARADIGM
ENVIRONMENTAL SERVICES, INC.
1815 Love Road, Grand Island, NY 14072 Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS ANALYSIS REPORT

via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 5 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
104-2	29991	1004	Dark Brown Fibrous Wall Panel Mastic	Chrysotile 14%	14%	√	Not Required	N/A	None Detected	86%
200-1	29992	1009	White/Gray 2'x2' Ceiling Tile	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
200-2	29993	1009	White/Gray 2'x2' Ceiling Tile	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
201-1	29994	2002A	White/Gray 2'x4' Ceiling Tile	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
201-2	29995	2002A	White/Gray 2'x4' Ceiling Tile	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
202-1	29996	2005	Gray 2'x4' Ceiling Tile Random Fissure	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
202-2	29997	2005	Gray 2'x4' Ceiling Tile Random Fissure	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
203-1	29998	3015	White/Gray 2'x2' Ceiling Tile Rough	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
203-2	29999	3016	White/Gray 2'x2' Ceiling Tile Rough	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
204-1	30000	1000	White/Gray Fibrous 1'x1' Ceiling Tile	None Detected	0%		Not Required	N/A	Mineral Wool 80%	20%

ELAP ID No.: 11955

Comments:

KEY TO NOB COLUMN SYMBOLS:

√ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 Polarized Light Microscopy (PLM) and/or 198.4 Transmission Electron Microscopy (TEM) per NYSDOH.

V̈ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. *This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.*

# denotes cellulose containing ceiling tile analyzed by ELAP Method 198.6 (PLM) and/or 198.4 (TEM) per NYSDOH guidelines.

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

*** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.*

PLM Date Analyzed: 8/27-28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

PARADIGM
ENVIRONMENTAL SERVICES, INC.
1815 Love Road, Grand Island, NY 14072 Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS ANALYSIS REPORT

via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 6 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
204-2	30001	1001	White/Gray Fibrous 1'x1' Ceiling Tile	None Detected	0%		Not Required	N/A	Mineral Wool 80%	20%
205-1	30002	1002	White/Brown 1'x1' Ceiling Tile Hole Drilled	Inconclusive No Asbestos Detected	0%	#	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
205-2	30003	1002	White/Brown 1'x1' Ceiling Tile Hole Drilled	Inconclusive Trace Chrysotile Detected	<1.0%	#	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
205A-1	30004	1002	Brown Mastic of 205	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
205A-2	30005	1002	Brown Mastic of 205	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
206-1	30006	1012	White Fibrous Textured Ceiling Coating	Chrysotile 4.4%	4.4%		Not Required	N/A	Cellulose 40%	55.6%
206-2	30007	1012	White Fibrous Textured Ceiling Coating	Chrysotile 3.7%	3.7%		Not Required	N/A	Cellulose 40%	56.3%
206-3	30008	1012	White Fibrous Textured Ceiling Coating	Chrysotile 3.0%	3.0%		Not Required	N/A	Cellulose 40%	57%
300-1	30009	3011	Gray Quarry Tile Mortar	None Detected	0%		Not Required	N/A	None Detected	100%
300-2	30010	3009	Gray Quarry Tile Mortar	None Detected	0%		Not Required	N/A	None Detected	100%

ELAP ID No.: 11955

Comments:

KEY TO NOB COLUMN SYMBOLS:

√ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 Polarized Light Microscopy (PLM) and/or 198.4 Transmission Electron Microscopy (TEM) per NYSDOH.

V̇ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. *This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.*

# denotes cellulose containing ceiling tile analyzed by ELAP Method 198.6 (PLM) and/or 198.4 (TEM) per NYSDOH guidelines.

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

*** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.*

PLM Date Analyzed: 8/27-28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By: _____
Asbestos Technical Director Eric Fischer

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ENVIRONMENTAL SERVICES, INC.
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PLM & TEM BULK ASBESTOS ANALYSIS REPORT

via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 7 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
300A-1	30011	3011	Tan Quarry Tile Mastic	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
300A-2	30012	3011	Tan Quarry Tile Mastic	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
300B-1	30013	3011	Brown Quarry Tile Mud Bed	None Detected	0%		Not Required	N/A	None Detected	100%
300B-2	30014	3011	Gray Quarry Tile Mud Bed	None Detected	0%		Not Required	N/A	None Detected	100%
301-1	30015	4004	Gray 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
301-2	30016	4004	Gray 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
301A-1	30017	4004	Tan Mastic of 301	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
301A-2	30018	4004	Tan Mastic of 301	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
302-1	30019	3001	White/Gray 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
302-2	30020	3001	White/Gray 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%

ELAP ID No.: 11955

Comments:

KEY TO NOB COLUMN SYMBOLS:

√ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 Polarized Light Microscopy (PLM) and/or 198.4 Transmission Electron Microscopy (TEM) per NYSDOH.

√ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. *This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.*

# denotes cellulose containing ceiling tile analyzed by ELAP Method 198.6 (PLM) and/or 198.4 (TEM) per NYSDOH guidelines.

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

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PLM Date Analyzed: 8/27-28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

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1815 Love Road, Grand Island, NY 14072 Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS ANALYSIS REPORT

via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 8 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
302A-1	30021	3001	Brown Mastic of 302	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
302A-2	30022	3001	Brown Mastic of 302	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
303-1	30023	3001	Tan Cove Base Mastic	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
303-2	30024	3001	Tan Cove Base Mastic	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
304-1	30025	3001	Beige/Gray 12"x12" Floor Tile	Inconclusive Trace Chrysotile Detected	<1.0%	√	Chrysotile 7.7%	7.7%	None Detected	92.3%
304-2	30026	3001	Beige/Gray 12"x12" Floor Tile	Inconclusive Trace Chrysotile Detected	<1.0%	√	Chrysotile 8.1%	8.1%	None Detected	91.9%
304A-1	30027	3001	Tan Mastic of 304	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
304A-2	30028	3001	Tan Mastic of 304	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
305-1	30029	3001	Tan Floor Leveler	None Detected	0%		Not Required	N/A	None Detected	100%
305-2	30030	3001	Tan Floor Leveler	None Detected	0%		Not Required	N/A	None Detected	100%

ELAP ID No.: 11955

Comments:

KEY TO NOB COLUMN SYMBOLS:

√ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 Polarized Light Microscopy (PLM) and/or 198.4 Transmission Electron Microscopy (TEM) per NYSDOH.

Ṽ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. *This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.*

# denotes cellulose containing ceiling tile analyzed by ELAP Method 198.6 (PLM) and/or 198.4 (TEM) per NYSDOH guidelines.

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

*** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.*

PLM Date Analyzed: 8/27-28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

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ENVIRONMENTAL SERVICES, INC.
1815 Love Road, Grand Island, NY 14072 Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS ANALYSIS REPORT

via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 9 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
306-1	30031	3012	Red Flooring	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
306-2	30032	3012	Red Flooring	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
308-1	30033	2002A	Tan/Gray Linoleum Stone Pattern	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
308-2	30034	2002A	Tan/Gray Linoleum Stone Pattern	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
309-1	30035	3015	Gray/Blue 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
309-1	30036	3015	Gray/Blue 12"x12" Floor Tile	Sample not Submittted	N/A		N/A	N/A	N/A	N/A
310-1	30037	3015	Black Felt Paper Under 309	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
310-2	30038	3016	Black Felt Paper Under 309	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
311-1	30039	1000	Tan 9"x9" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
311-2	30040	1004	Tan 9"x9" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%

ELAP ID No.: 11955

Comments:

KEY TO NOB COLUMN SYMBOLS:

√ NOB (non-friable organically bound) denotes material analyzed by ELAP Method 198.6 Polarized Light Microscopy (PLM) and/or 198.4 Transmission Electron Microscopy (TEM) per NYSDOH.

√̊ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. *This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.*

# denotes cellulose containing ceiling tile analyzed by ELAP Method 198.6 (PLM) and/or 198.4 (TEM) per NYSDOH guidelines.

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

*** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.*

PLM Date Analyzed: 8/27-28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

PARADIGM
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via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 10 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
311A-1	30041	1000	Black 9"x9" Floor Tile Mastic	Inconclusive Trace Chrysotile Detected	<1.0%	√	Chrysotile 2.3%	2.3%	None Detected	97.7%
311A-2	30042	1004	Black 9"x9" Floor Tile Mastic	Inconclusive Trace Chrysotile Detected	<1.0%	√	Chrysotile 1.4%	1.4%	None Detected	98.6%
312-1	30043	3111A	Black Vapor Barrier 3111A	Inconclusive No Asbestos Detected	0%	√	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
312-2	30044	3111A	Black Vapor Barrier 3111A	Inconclusive No Asbestos Detected	0%	√	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
314-1	30045	1003	Beige/Brown 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
314-2	30046	1003	Beige/Brown 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
315-1	30047	1004	Gray Mottled 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
315-2	30048	1004	Gray Mottled 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
315A-1	30049	1004	Black/Brown Mastic of 315	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
315A-2	30050	1004	Black/Brown Mastic of 315	Inconclusive Trace Chrysotile Detected	<1.0%	√	Chrysotile 2.6%	2.6%	None Detected	97.4%

ELAP ID No.: 11955

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PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

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via NYSDOH ELAP Method 198.1, 198.4 and 198.6

Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 11 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
317-1	30051	1007	Blue 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
317-2	30052	1007	Blue 12"x12" Floor Tile	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
318-1	30053	1012	Red Fibrous 9"x9" Floor Tile	Chrysotile 27%	27%	√	Not Required	N/A	None Detected	73%
318-2	30054	1016	Red Fibrous 9"x9" Floor Tile	Chrysotile 21%	21%	√	Not Required	N/A	None Detected	79%
319-1	30055	1012	Gray Floor Leveler	None Detected	0%		Not Required	N/A	None Detected	100%
319-2	30056	1012	Gray Floor Leveler	None Detected	0%		Not Required	N/A	None Detected	100%
320-1	30057	1012	Black Vapor Barrier	Chrysotile 1.4%	1.4%	√	Not Required	N/A	None Detected	98.6%
320-2	30058	1016	Black Vapor Barrier	Inconclusive Trace Chrysotile Detected	<1.0%	√	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
401-1	30059	B002	Tan/Gray Fibrous Mud Fittings	Chrysotile 21%	21%		Not Required	N/A	Mineral Wool 20%	59%
401-2	30060	B001	Gray Fibrous Mud Fittings	None Detected	0%		Not Required	N/A	Mineral Wool 40%	60%

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No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 Polarized Light Microscopy (PLM).

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PLM Date Analyzed: 8/27-28/2015
PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

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Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 12 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
401-3	30061	B001	Brown/Tan/Gray Fibrous Mud Fittings	Chrysotile 3.6%	3.6%		Not Required	N/A	Mineral Wool 50%	46.4%
402-1	30062	B002	Tan/Gray Fibrous TSI Wrap 12" Line	Chrysotile 27%	27%		Not Required	N/A	Cellulose 30%	43%
402-2	30063	B002	Gray Fibrous TSI Wrap 12" Line	Chrysotile 80%	80%		Not Required	N/A	None Detected	20%
402-3	30064	B002	Gray Fibrous TSI Wrap 12" Line	Chrysotile 80%	80%		Not Required	N/A	None Detected	20%
500-1	30065	1021	Tan/Brown Fibrous Canvas Wrap	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	Mineral Wool 30%	70%
500-2	30066	1021	Tan/Brown Fibrous Canvas Wrap	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	Mineral Wool 30%	70%
600-1	30067	4003	White Interior Window Glaze	Inconclusive No Asbestos Detected	0%	√	Anthophyllite <1.0%	<1.0%	None Detected	100%
600-2	30068	3008	White Interior Window Glaze	Inconclusive No Asbestos Detected	0%	√	Anthophyllite <1.0%	<1.0%	None Detected	100%
603-1	30069	Exterior	Gray Fibrous Exterior Door Caulk	Inconclusive No Asbestos Detected	0%	√	Anthophyllite 12%	12%	None Detected	88%
603-2	30070	Exterior	Gray Fibrous Exterior Door Caulk	Inconclusive No Asbestos Detected	0%	√	Anthophyllite 14%	14%	None Detected	86%

ELAP ID No.: 11955

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PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
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Page: 13 of 20
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Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
604-1	30071	Exterior	White Exterior Seam Caulk	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
604-2	30072	Exterior	White Exterior Seam Caulk	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
605-1	30073	Exterior	White Exterior Window Glaze	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
605-2	30074	Exterior	White Exterior Window Glaze	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
606-1	30075	Exterior	White/Green Exterior Stone Façade	None Detected	0%		Not Required	N/A	None Detected	100%
606-2	30076	Exterior	White/Green Exterior Stone Façade	None Detected	0%		Not Required	N/A	None Detected	100%
607-1	30077	B005	White Fibrous Elect. Room Curtain	Chrysotile 67%	67%		Not Required	N/A	Cellulose 20%	13%
607-2	30078	B005	White Fibrous Elect. Room Curtain	Chrysotile 57%	57%		Not Required	N/A	Cellulose 20%	23%
608-1	30079	Roof Penthouse	Red Window Caulk	Inconclusive No Asbestos Detected	0%	√	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
608-2	30080	Roof Penthouse	White Window Caulk	Chrysotile 1.3%	1.3%	√	Not Required	N/A	None Detected	98.7%

ELAP ID No.: 11955

Comments:

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PLM & TEM BULK ASBESTOS ANALYSIS REPORT

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Client: AMD Environmental
Location: 1360 Niagara Street
15-0819JWA
Job No: 3452-15B
Page: 14 of 20
Sample Date: 8/21/2015
Sample Received Date: 8/25/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
700-1	30081	Roof	Black Roof Field	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
700-2	30082	Roof	Black Roof Field	<1.0% Residue Remaining. PLM and TEM Not Required.	N/A	√	N/A	N/A	N/A	N/A
701-1	30083	Roof	Gray Roof Seam Caulk	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
701-2	30084	Roof	Gray Roof Seam Caulk	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%
702-1	30085	Roof	Black Fibrous Repair Tar	Chrysotile 23%	23%	√	Not Required	N/A	None Detected	77%
702-2	30086	Roof	Black Fibrous Repair Tar	Chrysotile 12%	12%	√	Not Required	N/A	None Detected	88%
703-1	30087	Loading Dock Roof	Black Fibrous Roof Felt	Chrysotile 11%	11%	√	Not Required	N/A	None Detected	89%
703-2	30088	Loading Dock Roof	Black Fibrous Roof Felt	Chrysotile 32%	32%	√	Not Required	N/A	None Detected	68%

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PLM Analyst: A. Dembski
Microscope: *Olympus BH-2 #225026*

TEM Date Analyzed: 8/31/2015
TEM Analyst: A. Dembski
Microscope: *Hitachi 600 AB*

Laboratory Results Approved By:
Asbestos Technical Director Eric Fischer

Part 4: Sample Chain of Custody

3452-15B

AMERISCI

www.amerisci.com

CHAIN OF CUSTODY RECORD

AMERISCI JOB #

AMERISCI NEW YORK
117 East 30th Street
New York, NY 10016
Toll Free (800) 705-5227
Phone (212) 679-8600
Fax (212) 679-9392

COMPANY:	ADDRESS:	P.O.#:
AMD Environmental	4248 Ridge Lea Road, Amherst, NY 14226	

PROJECT INFORMATION	ANALYSIS TYPE	TURNAROUND TIME (X) 6-8 HR	12 HR	24 HR	48 HR	72 HR	5 DAY	OTHER	AIR FILTER INFORMATION:	
JOB NAME: 1360 Niagara St	TEM/AHERA								MCE	
	TEM/LEVEL II								PC	
JOB NUMBER: 15-0819 JWA	TEM/BULK						✓		25 mm	
	TEM/DUST								37 mm	
JOB MANAGER: Anthony DeMiglio	TEM/WATER								0.45 um	
	PCM	RUSH							0.80 um	
JOB DESCRIPTION:	PLM	RUSH					✓		TEMP:	
	OTHER:								OTHER:	

RESULTS TO: AMD Environmental	RETURN SAMPLES YES_____ NO_____
EMAIL TO: JWolf@AMDEnv.com & SDunlap@AMDEnv.com	PHONE: 716-201-2772
INVOICE TO: AMD Environmental	FAX:
COMMENTS: NYS ELAP Positive Stop	SITE FAX:
	PAGER/CELL:

	SAMPLE ID	SAMPLE LOCATION	START TIME	STOP TIME	TOTAL TIME	X LITERS /MIN.	= TOTAL VOLUME	DATE COLLECTED
99951	100A-1	Skim Coat - 1000						8/21/15
52	100A-2	Skim Coat - 1000						8/21/15
53	100A-3	Skim Coat - 1001						8/21/15
54	100A-4	Skim Coat - 1004						8/21/15
55	100A-5	Skim Coat - 1004						8/21/15
56	100A-6	Skim Coat 1004						8/21/15
57	100A-7	Skim Coat - 1002						8/21/15
58	100B-1	Plaster-Base - 4003						8/21/15
59	100B-2	Plaster Base - 4003						8/21/15
60	100B-3	Plaster Base - 3001						8/21/15
61	100B-4	Plaster Base - 3011						8/21/15
62	100B-5	Plaster Base - 2003						8/21/15
63	100B-6	Plaster-Base - 2007						8/21/15
64	100B-7	Plaster Base - 1000						8/21/15
65	100B-8	Plaster Base - 1004						8/21/15
66	100B-9	Plaster-Base - B002						8/21/15
67	100B-10	Plaster-Base B001						8/21/15
68	101-1	Drywall - 4004						8/21/15
69	101-2	Drywall - 4002						8/21/15
70	101-3	Drywall - 3000						8/21/15
71	101-4	Drywall - 3012						8/21/15
72	101-5	Drywall - 2003						
73	101-6	Drywall - 2005						
74	101-7	Drywall - B001						

SAMPLED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
S Dunlap	8/21/15		
RELINQUISHED BY:	**DATE/TIME:**	**RECEIVED IN LAB BY:**	**DATE/TIME:**
S Dunlap	8/24/15	My MDgl	8-25-15 0750

3457-15B

AMERISCI

www.amerisci.com

CHAIN OF CUSTODY RECORD

AMERISCI JOB #:

AMERISCI NEW YORK
117 East 30th Street
New York, NY 10016
Toll Free (800) 705-5227
Phone (212) 679-8600
Fax (212) 679-9392

COMPANY:	ADDRESS:	P.O.#:
AMD Environmental	4248 Ridge Lea Road, Amherst, NY 14226	

PROJECT INFORMATION	ANALYSIS TYPE	TURNAROUND TIME (X) 6-8 HR	12 HR	24 HR	48 HR	72 HR	5 DAY	OTHER	AIR FILTER INFORMATION:	
JOB NAME: 1360 Niagara St	TEM/AHERA								MCE	
	TEM/LEVEL II								PC	
JOB NUMBER: 15-0819 JWA	TEM/BULK						✓		25 mm	
	TEM/DUST								37 mm	
JOB MANAGER: Anthony DeMiglio	TEM/WATER								0.45 um	
	PCM	RUSH							0.80 um	
JOB DESCRIPTION:	PLM	RUSH					✓		TEMP:	
	OTHER:								OTHER:	

RESULTS TO: AMD Environmental	RETURN SAMPLES YES_____ NO_____
EMAIL TO: JWolf@AMDEnv.com & SDunlap@AMDEnv.com	PHONE: 716-201-2772
INVOICE TO: AMD Environmental	FAX:
COMMENTS:	SITE FAX:
NYS ELAP Positive Stop	PAGER/CELL:

	SAMPLE ID	SAMPLE LOCATION	START TIME	STOP TIME	TOTAL TIME	X LITERS /MIN.	= TOTAL VOLUME	DATE COLLECTED
19975	101-8	Dry wall - 1001						8/21/15
76	101-9	Dry wall - 1006						8/21/15
77	101-10	Dry wall - 1023						8/21/15
78	101A-1	Joint compound - 4004						8/21/15
79	101A-2	Joint compound - 4002						8/21/15
80	101A-3	Joint compound - 3011						8/21/15
81	101A-4	Joint compound - 3012						8/21/15
82	101A-5	Joint compound - 2003						8/21/15
83	101A-6	Joint compound - 2005						8/21/15
84	101A-7	Joint compound - 1021						8/21/15
85	101A-8	Joint compound - 1021						8/21/15
86	101A-9	Joint compound - 1006						8/21/15
87	101A-10	Joint compound - 1023						8/21/15
88	102-1	- Wall Panel Mastic - Beige - 3005						8/21/15
89	102-2	- Wall Panel Mastic - Beige - 3005						8/21/15
90	104-1	Wall Panel Mastic DK Brown 1004						8/21/15
91	104-2	Wall Panel mastic DK Brown 1004						8/21/15
92	~~3001~~ 200-1	2x2 Ceiling Tile - 1009						8/21/15
93	~~3002~~ 200-2	2x2 Ceiling Tile - 1009						8/21/15
94	201-1	2x4 Ceiling Tile - 2002A						8/21/15
95	201-2	2x4 Ceiling Tile - 2002A						8/21/15
96	202-1	2x4 Ceiling Tile - Random Fiss. 2005						8/21/15
97	202-2	2x4 Ceiling Tile - Random Fiss. 2005						8/21/15

SAMPLED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
S Dunlap	8/21/15		
RELINQUISHED BY:	**DATE/TIME:**	**RECEIVED IN LAB BY:**	**DATE/TIME:**
S Dunlap	8/24/15	Mg MDgl	8-25-15 0750

345715B

AMERISCI

www.amerisci.com

CHAIN OF CUSTODY RECORD

AMERISCI JOB #

AMERISCI NEW YORK
117 East 30th Street
New York, NY 10016
Toll Free (800) 705-5227
Phone (212) 679-8600
Fax (212) 679-9392

COMPANY:	ADDRESS:	P.O.#:
AMD Environmental	4248 Ridge Lea Road, Amherst, NY 14226	

PROJECT INFORMATION	ANALYSIS TYPE	TURNAROUND TIME (X) 6-8 HR	12 HR	24 HR	48 HR	72 HR	5 DAY	OTHER	AIR FILTER INFORMATION:	
JOB NAME: 1360 Niagara	TEM/AHERA								MCE	
	TEM/LEVEL II								PC	
JOB NUMBER: 150819-JWA	TEM/BULK						✓		25 mm	
	TEM/DUST								37 mm	
JOB MANAGER: Anthony DeMiglio	TEM/WATER								0.45 um	
	PCM	RUSH							0.80 um	
JOB DESCRIPTION:	PLM	RUSH					✓		TEMP:	
	OTHER:								OTHER:	

RESULTS TO: AMD Environmental	RETURN SAMPLES YES_____ NO_____
EMAIL TO: JWolf@AMDEnv.com & SDunlap@AMDEnv.com	PHONE: 716-201-2772
INVOICE TO: AMD Environmental	FAX:
COMMENTS: NYS ELAP Positive Stop	SITE FAX:
	PAGER/CELL:

	SAMPLE ID	SAMPLE LOCATION	START TIME	STOP TIME	TOTAL TIME	X LITERS /MIN.	= TOTAL VOLUME	DATE COLLECTED
29998	203-1	2x2 Ceiling Tile - Rough 3015						8/21/15
99	203-2	2x2 Ceiling Tile - Rough 3016						8/21/15
30000	204-1	1x1 Ceiling Tile - 1000						8/21/15
01	204-2	1x1 Ceiling Tile - 1001						8/21/15
02	205-1	1x1 Ceiling Tile Hole Drilled 1002						8/21/15
03	205-2	1x1 Ceiling Tile Hole Drilled 1002						8/21/15
04	205A-1	Mastic of 205 - 1002						8/21/15
05	205A-2	Mastic of 205 - 1002						8/21/15
06	206-1	Text. ceiling Coating 1012						8/21/15
07	206-2	Textured Ceiling Coating 1012						8/21/15
08	206-3	Textured Ceiling Coating 1012						8/21/15
09	300-1	Quarry Tile Mortar - 3011						8/21/15
10	300-2	Quarry Tile Mortar - ~~3004~~ 3009						8/21/15
11	300A-1	Quarry Tile Mastic - 3011						8/21/15
12	300A-2	Quarry Tile Mastic - 3011						8/21/15
13	300B-1	Quarry Tile Mud Bed - 3011						8/21/15
14	300B-2	Quarry Tile Mud Bed - 3011						8/21/15
15	301-1	12x12 FT - Gray - 4004						8/21/15
16	301-2	12x12 FT - Gray - 4004						8/21/15
17	301A-1	Mastic of 301 - 4004						8/21/15
18	301A-2	Mastic of 301 - 4004						8/21/15
19	302-1	12x12 FT - white w/gray - 3001						8/21/15
20	302-2	12x12 FT - white w/gray - 3001						8/21/15

SAMPLED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
	8/21/15		
RELINQUISHED BY	DATE/TIME:	RECEIVED IN LAB BY:	DATE/TIME:
	8/24/15		8-25-15 0750

3452-15D

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CHAIN OF CUSTODY RECORD

AMERISCI JOB #

AMERISCI NEW YORK
117 East 30th Street
New York, NY 10016
Toll Free (800) 705-5227
Phone (212) 679-8600
Fax (212) 679-9392

COMPANY:	ADDRESS:	P.O.#:
AMD Environmental	4248 Ridge Lea Road, Amherst, NY 14226	

PROJECT INFORMATION	ANALYSIS TYPE	TURNAROUND TIME (X) 6-8 HR	12 HR	24 HR	48 HR	72 HR	5 DAY	OTHER	AIR FILTER INFORMATION:	
JOB NAME: 1360 Niagara	TEM/AHERA								MCE	
	TEM/LEVEL II								PC	
JOB NUMBER: 150819-JWA	TEM/BULK						✓		25 mm	
	TEM/DUST								37 mm	
JOB MANAGER: Anthony DeMiglio	TEM/WATER								0.45 um	
	PCM	RUSH							0.80 um	
JOB DESCRIPTION:	PLM	RUSH					✓		TEMP:	
	OTHER:								OTHER:	

RESULTS TO: AMD Environmental	RETURN SAMPLES YES_____ NO_____
EMAIL TO: JWolf@AMDEnv.com & SDunlap@AMDEnv.com	PHONE: 716-201-2772
INVOICE TO: AMD Environmental	FAX:
COMMENTS: NYS ELAP Positive Stop	SITE FAX:
	PAGER/CELL:

	SAMPLE ID	SAMPLE LOCATION	START TIME	STOP TIME	TOTAL TIME	X LITERS /MIN.	= TOTAL VOLUME	DATE COLLECTED
30021	302A-1	Mastic of 302 - 3001						8/21/15
22	302A-2	Mastic of 302 - 3001						8/21/15
23	303-1	Cove Base Mastic - 3001						8/21/15
24	303-2	Cove Base Mastic - 3001						8/21/15
25	304-1	12x12 FT - Beige w/gray - 3001						8/21/15
26	304-2	12x12 FT - Beige w/gray - 3001						8/21/15
27	304A-1	Mastic of 304 - 3001						8/21/15
28	304A-2	Mastic of 304 - 3001						8/21/15
29	305-1	Floor Leveler - 3001						8/21/15
30	305-2	Floor Leveler - 3001						8/21/15
31	306-1	Flooring - Red - 3012						8/21/15
32	306-2	Flooring - Red - 3012						8/21/15
33	308-1	Linoleum, Stone Pattern - 2002A						8/21/15
34	308-2	Linoleum Stone Pattern - 2002A						8/21/15
35	309-1	12x12 FT - gray w/Blue - 3015						8/21/15
36	309-2	12x12 FT - gray w/Blue - 3015						8/21/15
37	310-1	Felt Paper under 309 - 3015						8/21/15
38	310-2	Felt Paper under 309 - 3016						8/21/15
39	311-1	9x9 Floor Tile - 1004						8/21/15
40	311-2	9x9 Floor Tile - 1004						8/21/15
41	311A-1	9x9 Ft. Mastic - 1004						8/21/15
42	311A-2	9x9 FT Mastic - 1004						8/21/15
43	312-1	Vapor Barrier under 311/10						8/21/15
44	312-2	Vapor Barrier under 311/A						8/21/15

SAMPLED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
S Dunlap	8/24/15		
RELINQUISHED BY	**DATE/TIME:**	**RECEIVED IN LAB BY:**	**DATE/TIME:**
S Dunlap	8/24/15	Meg McGaye	8-25-15 0750

3452-15B

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CHAIN OF CUSTODY RECORD

AMERISCI JOB #:

AMERISCI NEW YORK
117 East 30th Street
New York, NY 10016
Toll Free (800) 705-5227
Phone (212) 679-8600
Fax (212) 679-9392

COMPANY:	ADDRESS:	P.O.#:
AMD Environmental	4248 Ridge Lea Road, Amherst, NY 14226	

PROJECT INFORMATION	ANALYSIS TYPE	TURNAROUND TIME (X) 6-8 HR	12 HR	24 HR	48 HR	72 HR	5 DAY	OTHER	AIR FILTER INFORMATION:	
JOB NAME: 1360 Niagara	TEM/AHERA								MCE	
	TEM/LEVEL II								PC	
JOB NUMBER: 150819 JWA	TEM/BULK						✓		25 mm	
	TEM/DUST								37 mm	
JOB MANAGER: Anthony DeMiglio	TEM/WATER								0.45 um	
	PCM	RUSH							0.80 um	
JOB DESCRIPTION:	PLM	RUSH					✓		TEMP:	
	OTHER:								OTHER:	

RESULTS TO: AMD Environmental	RETURN SAMPLES YES_____ NO_____
EMAIL TO: JWolf@AMDEnv.com & SDunlap@AMDEnv.com	PHONE: 716-201-2772
INVOICE TO: AMD Environmental	FAX:
COMMENTS:	SITE FAX:
NYS ELAP Positive Stop	PAGER/CELL:

	SAMPLE ID	SAMPLE LOCATION	START TIME	STOP TIME	TOTAL TIME	X LITERS /MIN.	= TOTAL VOLUME	DATE COLLECTED
~~314-1~~								
~~314-2~~								
30045	314-1	12x12 Beige w/Brown 1003						8/21/15
46	314-2	12x12 Beige w/Brown 1003						8/21/15
EV 4867	315-1	12x12 gray mottled - 1004						8/21/15
Bottle 48	315-2	12x12 gray mottled - 1004						8/21/15
49	315A-1	Master of 315 - 1004						8/21/15
50	315A-2	Master of 315 - 1004						8/21/15
51	317-1	12x12 FT-Blue - 1007						8/21/15
52	317-2	12x12 FT-Blue - 1007						8/21/15
53	318-1	9x9 FT-Red - 1012						8/21/15
54	318-2	9x9 FT-Red - 1014						8/21/15
55	319-1	Floor Leveler - 1012						8/21/15
56	319-2	Floor Leveler - 1012						8/21/15
57	320-1	Vapor Barrier 1012						8/21/15
58	320-2	Vapor Barrier 1014						8/21/15
59	401-1	Mud Fittings - B002						8/21/15
60	401-2	Mud Fittings - B001						8/21/15
61	401-3	Mud Fittings B001						8/21/15
62	402-1	TSI Wrap 12" Line B002						8/21/15
63	402-2	TSI Wrap 12" Line B002						8/21/15
64	402-3	TSI Wrap 12" Line B002						8/21/15

SAMPLED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
S Dunlap	8/21/15		
RELINQUISHED BY	**DATE/TIME:**	**RECEIVED IN LAB BY:**	**DATE/TIME:**
S Dunlap	8/24/15	Meg McGaffigan	8-25-15 0750

345275B

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CHAIN OF CUSTODY RECORD

AMERISCI JOB #

AMERISCI NEW YORK
117 East 30th Street
New York, NY 10016
Toll Free (800) 705-5227
Phone (212) 679-8600
Fax (212) 679-9392

COMPANY:	ADDRESS:	P.O.#:
AMD Environmental	4248 Ridge Lea Road, Amherst, NY 14226	

PROJECT INFORMATION	ANALYSIS TYPE	TURNAROUND TIME (X) 6-8 HR	12 HR	24 HR	48 HR	72 HR	5 DAY	OTHER	AIR FILTER INFORMATION:	
JOB NAME: 1360 Niagara	TEM/AHERA								MCE	
	TEM/LEVEL II								PC	
JOB NUMBER: 150819 JWA	TEM/BULK						✓		25 mm	
	TEM/DUST								37 mm	
JOB MANAGER: Anthony DeMiglio	TEM/WATER								0.45 um	
	PCM	RUSH							0.80 um	
JOB DESCRIPTION:	PLM	RUSH					✓		TEM:	
	OTHER:								OTHER:	

RESULTS TO: AMD Environmental	RETURN SAMPLES YES_____ NO_____
EMAIL TO: JWolf@AMDEnv.com & SDunlap@AMDEnv.com	PHONE: 716-201-2772
INVOICE TO: AMD Environmental	FAX:
COMMENTS: NYS ELAP Positive Stop	SITE FAX:
	PAGER/CELL:

	SAMPLE ID	SAMPLE LOCATION	START TIME	STOP TIME	TOTAL TIME	X LITERS /MIN.	= TOTAL VOLUME	DATE COLLECTED
30065	500-1	canvas wrap - 1021						8/21/15
66	500-2	canvas wrap - 1021						8/21/15
67	600-1	Int. Window Glazing - 4003						8/21/15
68	600-2	Int. Window Glazing - 3008						8/21/15
69	603-1	Ext. Door caulk - exterior						8/21/15
70	603-2	Ext. Door Caulk - exterior						8/21/15
71	604-1	ext Seam caulk - exterior						8/21/15
72	604-2	ext Seam caulk - exterior						8/21/15
73	605-1	Ext Window Glazing - ext.						8/21/15
74	605-2	Ext. Window Glazing - ext.						8/21/15
75	606-1	exterior Stone Facade						8/21/15
76	606-2	exterior Stone Facade						8/21/15
77	607-1	elect. Room curtain Boo5						8/21/15
78	607-2	elect Room Curtain Boo5						8/21/15
79	608-1	Window Caulk - Roof Penthouse						8/21/15
80	608-2	Window Caulk Roof Penthouse						8/21/15
81	700-1	Roof - Field						8/21/15
82	700-2	Roof - Field						8/21/15
83	701-1	Seam caulk - Roof						8/21/15
84	701-2	Seam Caulk - Roof						8/21/15
85	702-1	Repair Tar						8/21/15
86	702-2	Repair Tar						8/21/15
87	703-1	Roof-Felt - Loading Dock						8/21/15
88	703-2	Roof Felt Loading Dock						8/21/15

SAMPLED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
[signature]	8/21/15		
RELINQUISHED BY:	**DATE/TIME:**	**RECEIVED IN LAB BY:**	**DATE/TIME:**
[signature]	8/24/15	Meg Mudge	8-25-15 0750

Part 5: Firm Qualifications

New York State – Department of Labor
Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

AMD Environmental Consultants, Inc.
Suite 16
4248 Ridge Lea Rd.

Amherst, NY 14226

FILE NUMBER: 10-56177
LICENSE NUMBER: 56177
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 10/30/2014
EXPIRATION DATE: 11/30/2015

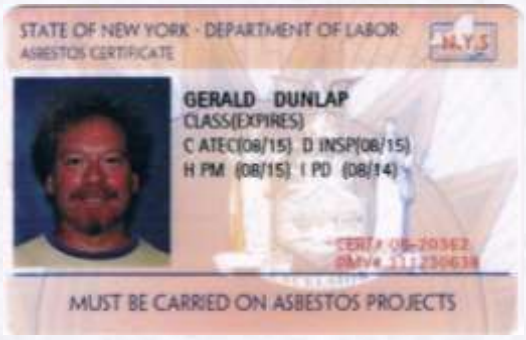
Duly Authorized Representative – Anthony DeMiglio:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Eileen M. Franko, Director
For the Commissioner of Labor

SH 432 (8/12)



Part 6: Lab Qualifications

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2016
Issued April 01, 2015

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. ERIC FISCHER
PARADIGM ENVIRONMENTAL SERVICES
1815 LOVE ROAD
GRAND ISLAND, NY 14072

NY Lab Id No: 11955

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

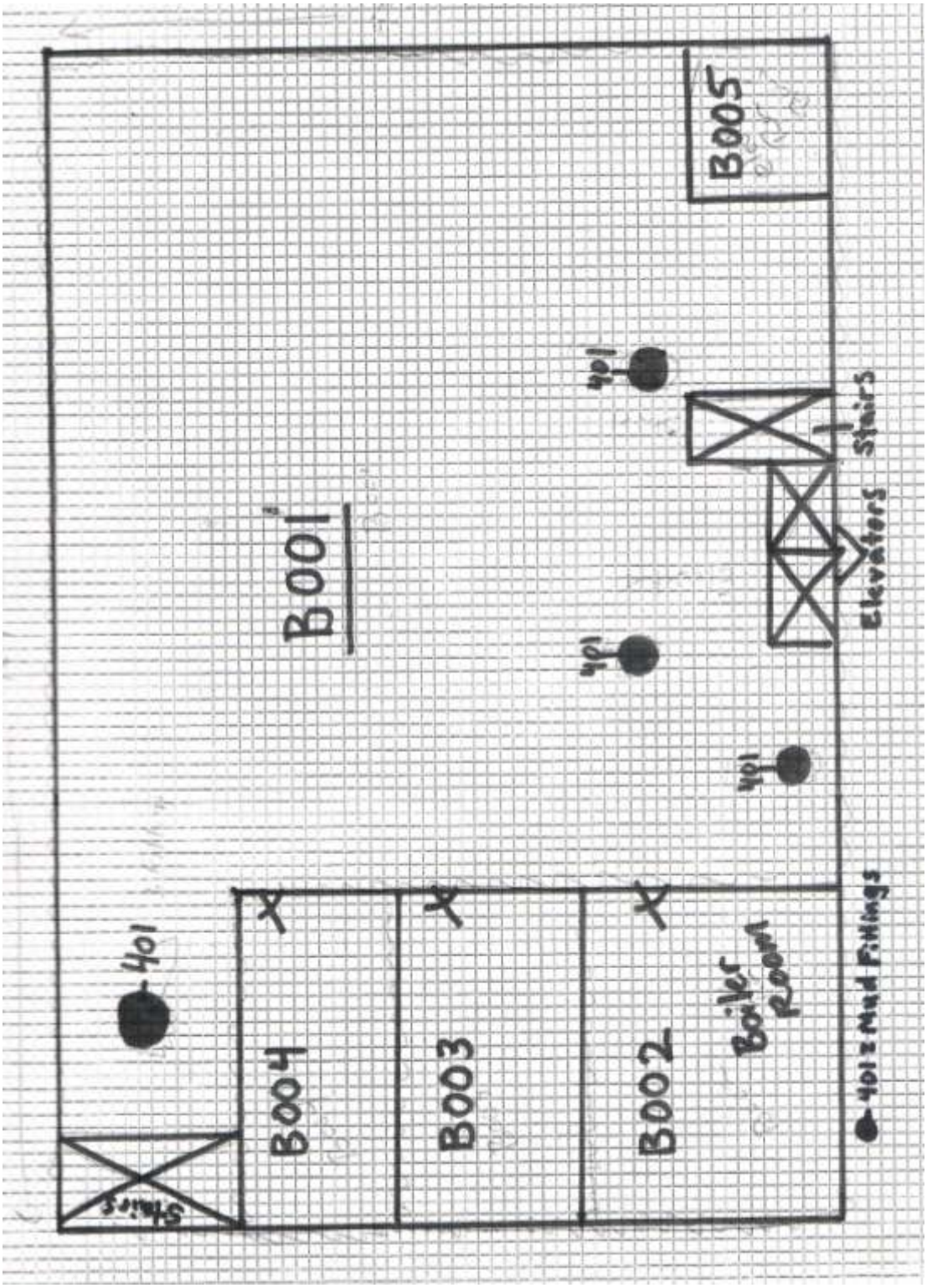
Miscellaneous

Asbestos in Friable Material	Item 198.1 of Manual
	EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual

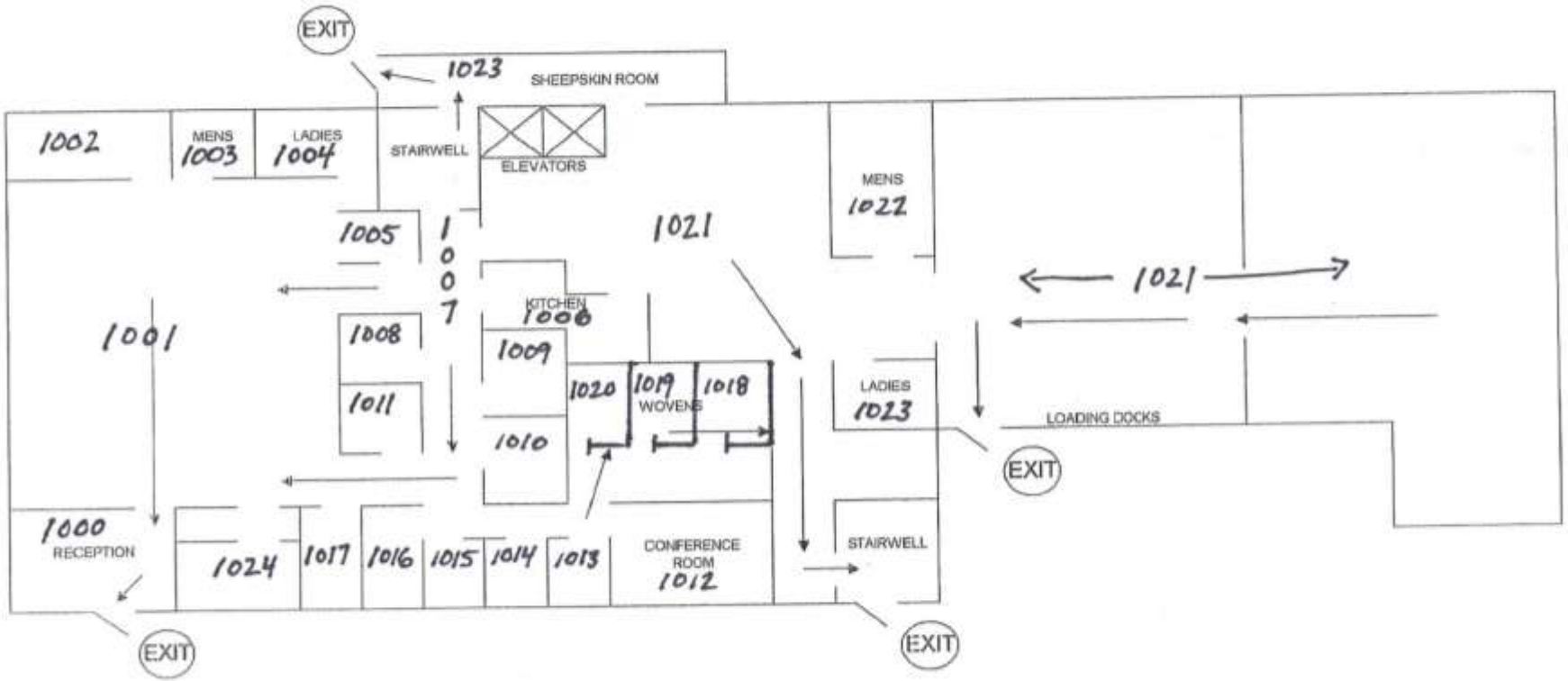
Serial No.: 52678

Appendix A: Site Maps

Basement Level



1st Floor Level

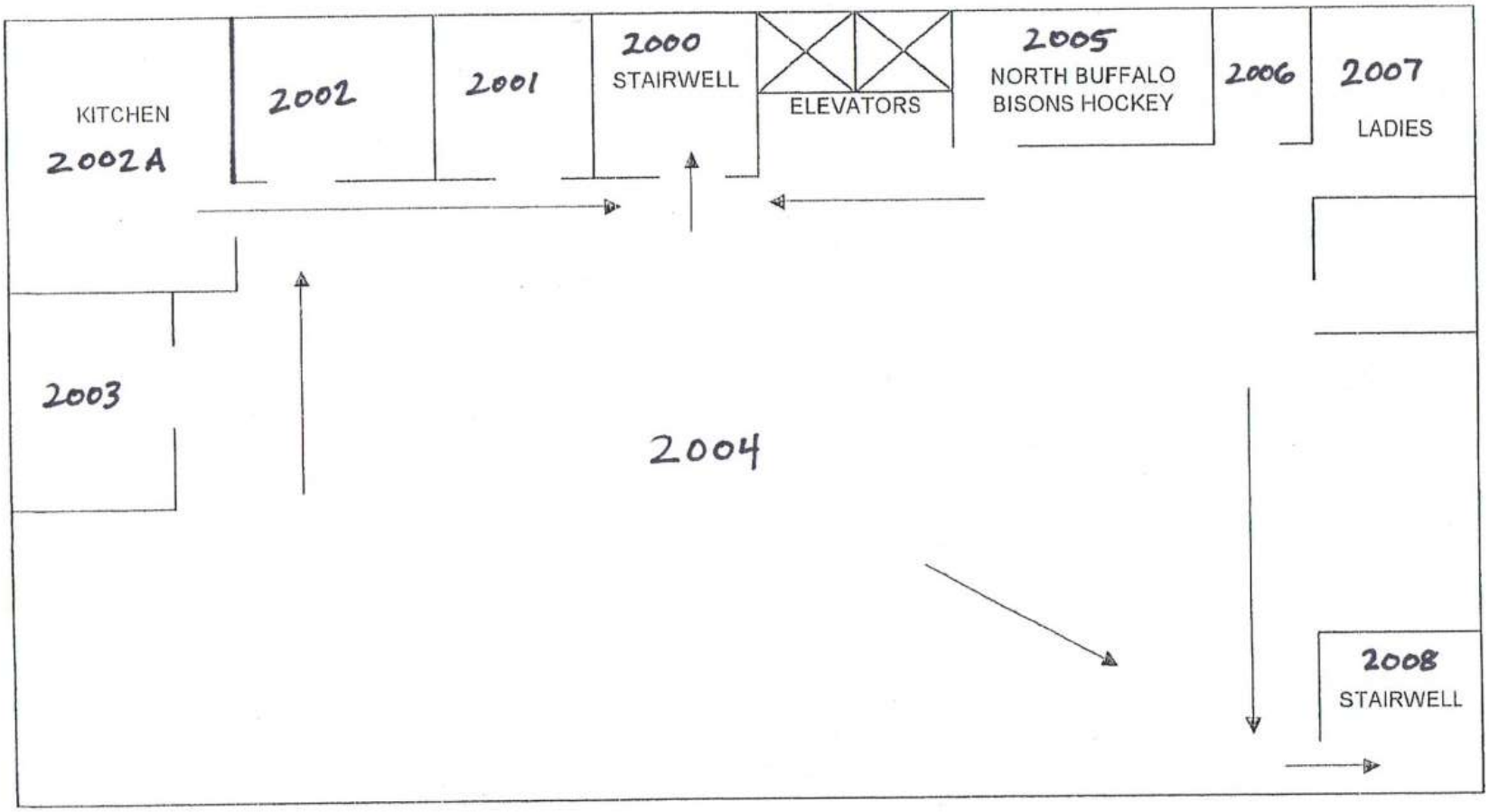


15-0819JWA

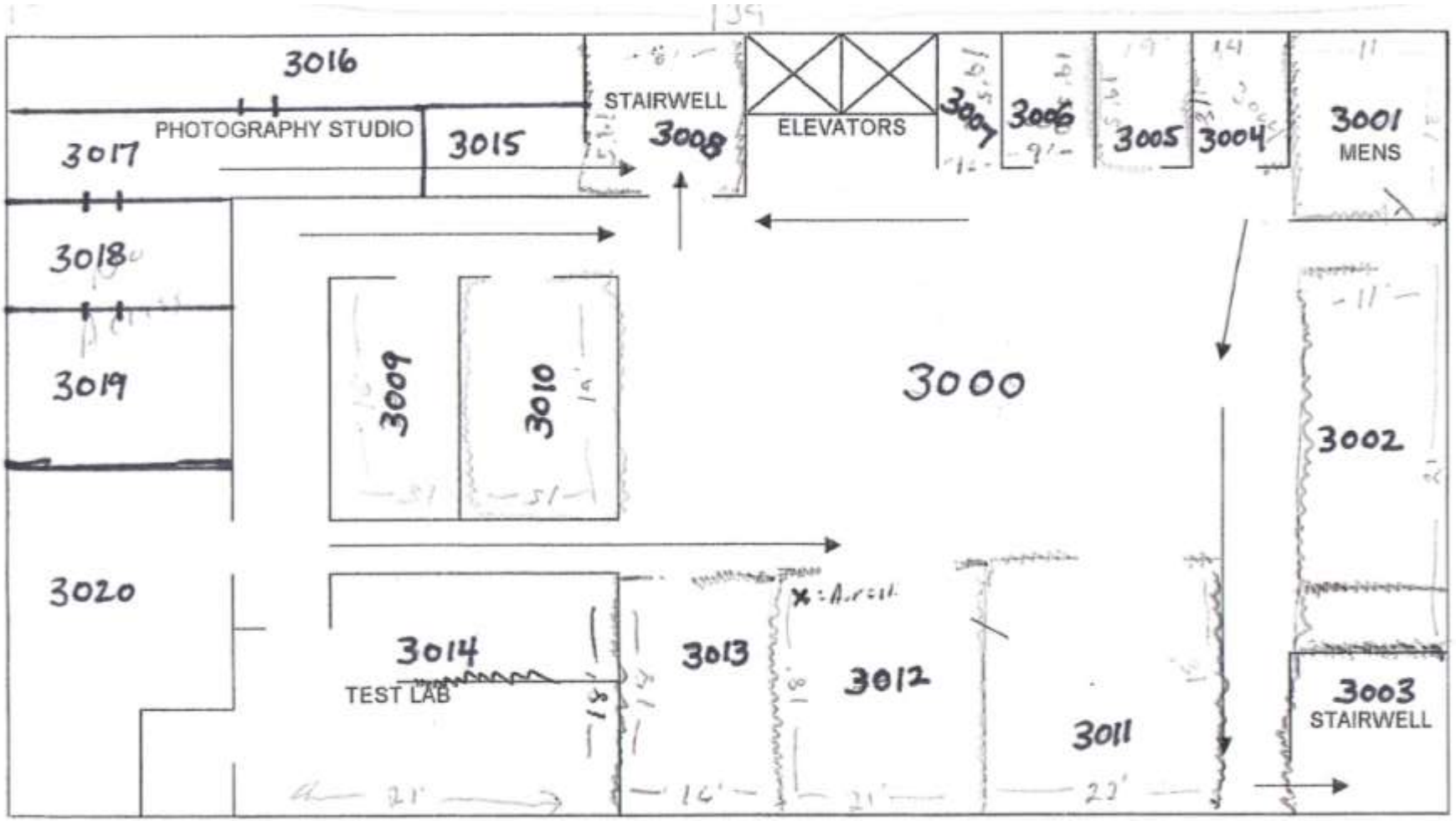
39

1360 Niagara St.

2nd Floor Level



3rd Floor Level

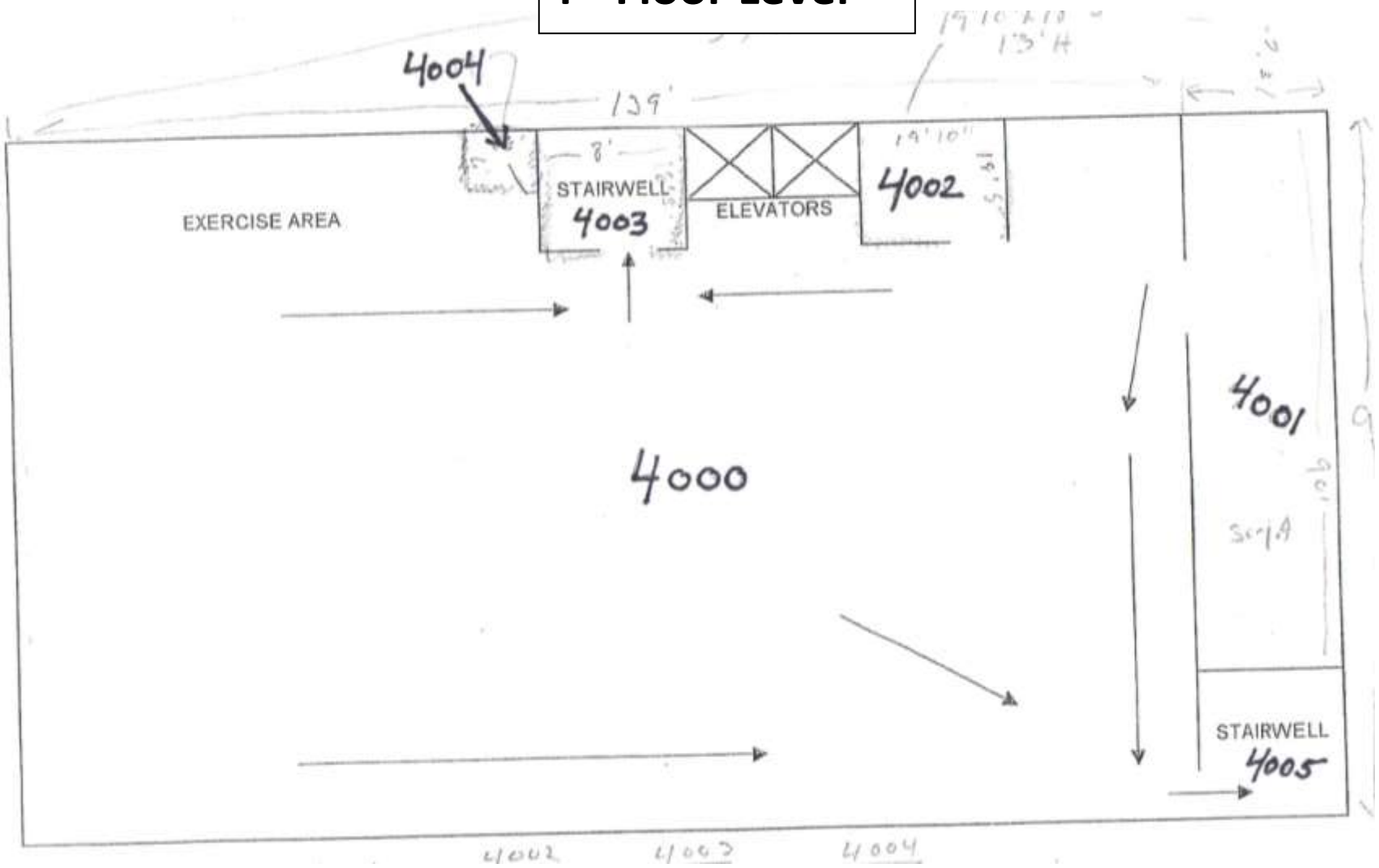


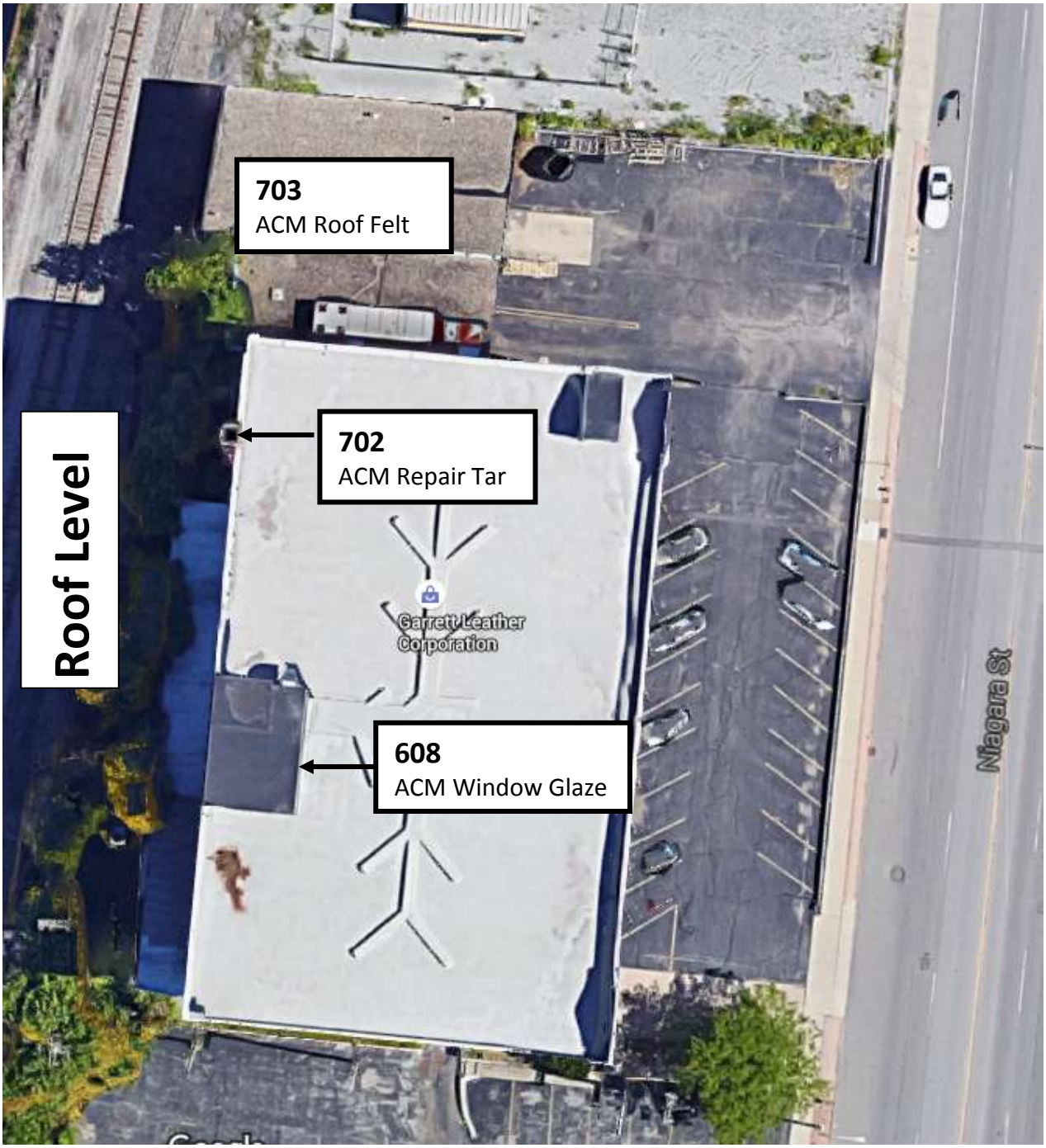
15-0819JWA

41

1360 Niagara St.

4th Floor Level




703
ACM Roof Felt
Roof Level
702
ACM Repair Tar
Garrett Leather Corporation
608
ACM Window Glaze
Niagara St

END OF REPORT

Limited Renovation Related
Lead Based Paint Inspection Report

Project Location:

1360 Niagara St.
Buffalo, NY 14213
AMD Project: 15-0819JWA

Prepared for:

Amber Holycross
Ciminelli Real Estate Corporation
350 Essjay Road
Williamsville, NY 14221

Prepared by:

AMD Environmental Consultants
4248 Ridge Lea Road
Amherst, NY 14226

Conditions as of : August 24th, 2015

Table of Contents

Lead- Based Paint Inspection Report

August 28th, 2015

Amber Holycross
Ciminelli Real Estate Corporation
350 Essjay Road
Williamsville, NY 14221

Re: Limited Renovation Related Lead-Based Paint Testing
1360 Niagara St.
Buffalo, NY 14213

Ms. Holycross:

I am pleased to present the enclosed summary report of paint testing at the above referenced address.

- **Per USHUD 1012 requirements for Subpart J (Rehabilitation), a review of the results of the representative renovation/rehabilitation related paint testing indicates that lead based paint was found in areas tested. Refer to Summary of LBP testing for details.**

Enclosed please find information regarding the summary of our services and results from our testing/sampling activities. Part 2 details identifying information on services conducted. Part 3 details hazards identified in our investigation and results of laboratory analysis. Part 4 includes supporting information on firm, personnel and laboratory credentials as well as other information that may be associated with the project.

Please review the attached for information for additional details on our risk assessment and paint survey services. Do not hesitate to contact me if I may provide any additional information.

Sincerely,

Anthony DeMiglio
President

Part 2:

1. Risk Assessor(s) State License Information and Signature
2. Property Information
3. Requesting Agency Information
4. Date of Report and Date of Environmental Sampling

Risk Assessor(s):	Gerald Dunlap / John Doucette
License Number	NY-R-128132-1 / NY-R-16234-3
Issuing State	New York
Signature	
Property Address:	1360 Niagara St. Buffalo, NY 14213
Agency:	N/A
Date of Report:	08/28/15
Date of Testing:	08/24/15

Part 3:

1. Summary of LBP Testing

Summary of LBP Testing

Summary of Lead-Based Paint Testing

Per USHUD 1012 requirements for Subpart J (Rehabilitation), representative paint testing was conducted at locations that are to be affected by planned renovations only per owners request. A review of the results of renovation related paint testing indicates that lead-based paint was found during representative testing conducted at locations that were tested. All components found on the following lead based paint summary as well as components of the same likeness should be considered as lead containing and be treated as such.

Building components that consistently tested positive for lead were:

- **Walls (Concrete, Plaster, Brick, Drywall)**
- **Concrete Columns**
- **Door Components (Door, Casing, Jamb)**
- **Radiators**

08250843 Sum 1360 Niagara

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Ciminelli Construction

Inspection Date: 08/25/15
Report Date: 8/28/2015
Abatement Level: 1.0
Report No. S#01584 - 08/25/15 08:43
Total Readings: 154 Actionable: 52
Job Started: 08/25/15 08:43
Job Finished: 08/25/15 13:50

1360 Niagara St.
Buffalo, NY 14213

Read No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Paint Color	Lead (mg/cm²)	Mode
Exterior A Wall									
142	A	Overhang	Lft		P	Concrete	White	7.5	QM
140	A	Door	Ctr	Rgt casing	F	Wood	White	1.0	QM
Exterior B Wall									
144	B	Garage	Rgt	Casing	P	Wood	Grey	4.0	QM
Exterior D Wall									
148	D	Foundation	Lft		F	Concrete	Grey	1.0	QM
Interior Structure									
037	A	column	Ctr		F	Concrete	White	2.1	QM
048	A	Pipe	Ctr		P	metal	Beige	1.0	QM
050	A	Radiator	Ctr		P	metal	Beige	1.0	QM
077	A	Pipe	Ctr		P	steel	White	9.1	QM
099	A	column	Ctr		I	Concrete	White	1.0	QM
072	A	Wall	Ctr		F	Concrete	White	1.7	QM
085	A	Wall	Ctr		F	Plaster	blue	3.1	QM
089	A	Door	Ctr	Door	F	metal	blue	>9.9	QM
130	A	Door	Ctr	Door	F	metal	blue	8.3	QM
029	A	Door	Ctr	Rgt casing	F	metal	blue	1.0	QM
088	A	Door	Ctr	Rgt casing	F	metal	blue	1.0	QM
129	A	Door	Ctr	Rgt casing	F	metal	Beige	1.0	QM
014	B	Radiator	Ctr		P	metal	White	1.0	QM
026	B	Wall	Ctr		F	Plaster	blue	2.6	QM
033	B	Wall	Ctr		F	Dry wall	White	3.7	QM
066	B	Wall	Ctr		F	Concrete	White	1.0	QM
086	B	Wall	Ctr		F	Plaster	White	1.0	QM
031	B	Stairs	Ctr	handrail	F	metal	black	1.0	QM
062	C	Wall	Ctr		P	Concrete	White	1.0	QM
093	C	Wall	Ctr		I	Glazedtile	green	1.0	QM
119	C	Wall	Ctr		F	Plaster	green	1.6	QM
126	C	Wall	Ctr		F	Brick	White	5.2	QM
019	C	Door	Ctr	Casing	F	steel	blue	1.0	QM
020	C	Door	Ctr	Door	F	steel	blue	9.0	QM
043	C	Door	Ctr	Door	F	metal	blue	>9.9	QM
081	C	Door	Ctr	Door	F	metal	green	1.0	QM
042	C	Door	Ctr	Rgt casing	F	metal	blue	2.2	QM
090	C	Stairs	Ctr	Treads	F	Concrete	Grey	1.0	QM
138	C	Railing	Ctr	Railing	P	metal	green	3.7	QM
024	D	column	Ctr		F	Concrete	White	6.0	QM
030	D	floor	Ctr		F	Cement	Grey	>9.9	QM
056	D	Pipe	Ctr		F	metal	White	>9.9	QM

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071	D	column		Ctr		F	Concrete	White	1.9	QM
083	D	Radiator		Ctr		P	metal	green	1.0	QM
128	D	Radiator		Ctr		P	metal	Beige	2.8	QM
131	D	Radiator		Ctr		P	metal	blue	2.0	QM
027	D	Wall		Ctr		F	Plaster	blue	4.4	QM
047	D	Wall		Ctr		P	plastic	White	1.0	QM
055	D	Wall		Ctr		F	Plaster	White	1.0	QM
063	D	Wall		Ctr		P	Concrete	White	3.3	QM
087	D	Wall		Ctr		F	Plaster	blue	2.7	QM
127	D	Wall		Ctr		F	Brick	White	1.0	QM
136	D	Wall		Ctr		P	Concrete	Beige	5.0	QM
028	D	Wall	U	Ctr		F	Concrete	blue	2.2	QM
133	D	Door		Ctr	Door	F	metal	blue	4.7	QM
021	D	Door		Ctr	Rgt casing	F	steel	White	1.0	QM
070	D	Door		Ctr	Rgt casing	F	Wood	White	1.0	QM
132	D	Door		Ctr	Rgt casing	F	metal	blue	2.1	QM

Calibration Readings

---- End of Readings ----

Paint Sampling Results

XRF Lead Based Paint Testing Results

AMD Project: 15-0819JWA

Client Name : Ciminelli Real Estate
Address :

Test Site Name: Garrett Leather Co.
Address: 1360 Niagara St.
Buffalo, NY 14213

Inspection Date : 08/24/15
Instrument Type : RMD XRF

Model #: LPA–1

AMD Technician: Gerald Dunlap / John Doucette
License #: NY-R-128132-1 / NY-R-16234-3

XRF Job Number: 082515-0843

XRF Unit Number: 1

XRF Calibration Check

Scan No	Reading	Scan No	Reading
1	1.0	149	1.0
2	1.0	150	1.0
3	1.0	151	1.0
4	-0.3	152	-0.1
5	0.0	153	0.1
6	-0.1	154	0.1

RMD Report KEY

Substrate
B = Brick
C = Concrete
D = Drywall
M = Metal
P = Plaster

Paint Condition (PC)
I = Intact
F = Fair
P = Poor
U = Unfinished
W = Wood
FF = Factory Finish

08250843 Detail 1360 Niagara

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Ciminelli Construction

Inspection Date: 08/25/15
Report Date: 8/28/2015
Abatement Level: 1.0
Report No. S#01584 - 08/25/15 08:43
Total Readings: 154
Job Started: 08/25/15 08:43
Job Finished: 08/25/15 13:50

1360 Niagara St.
Buffalo, NY 14213

Read No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Paint Color	Lead (mg/cm²)	Mode
Exterior A Wall									
142	A	Overhang	Lft		P	Concrete	White	7.5	QM
141	A	Wall	Ctr	Lower	F	Concrete	Grey	0.2	QM
140	A	Door	Ctr	Rgt casing	F	Wood	White	1.0	QM
Exterior B Wall									
144	B	Garage	Rgt	Casing	P	Wood	Grey	4.0	QM
145	B	Garage	Rgt	Door	P	metal	White	-0.1	QM
146	B	Foundation	Rgt		P	Concrete	Grey	0.1	QM
143	B	Wall	U Rgt		F	Concrete	White	0.3	QM
Exterior C Wall									
147	C	Foundation	Rgt		F	Concrete	Grey	0.0	QM
Exterior D Wall									
148	D	Foundation	Lft		F	Concrete	Grey	1.0	QM
Interior Structure									
012	A	Pipe	Ctr		F	steel	Silver	-0.2	QM
037	A	column	Ctr		F	Concrete	White	2.1	QM
048	A	Pipe	Ctr		P	metal	Beige	1.0	QM
050	A	Radiator	Ctr		P	metal	Beige	1.0	QM
077	A	Pipe	Ctr		P	steel	White	9.1	QM
099	A	column	Ctr		I	Concrete	White	1.0	QM
122	A	column	Ctr		F	Concrete	White	0.5	QM
123	A	column	Ctr		F	Concrete	White	0.3	QM
007	A	Wall	Ctr		F	conc block	White	-0.3	QM
025	A	Wall	Ctr		F	Plaster	White	0.4	QM
032	A	Wall	Ctr		F	Plaster	White	0.0	QM
049	A	Wall	Ctr		F	conc block	Beige	-0.1	QM
054	A	Wall	Ctr		F	Concrete	White	-0.1	QM
057	A	Wall	Ctr		F	Dry wall	White	-0.1	QM
065	A	Wall	Ctr		F	Concrete	White	0.0	QM
072	A	Wall	Ctr		F	Concrete	White	1.7	QM
085	A	Wall	Ctr		F	Plaster	blue	3.1	QM
096	A	Wall	Ctr		F	Dry wall	White	0.1	QM
107	A	Wall	Ctr		I	metal	Beige	0.0	QM
111	A	Wall	Ctr		I	metal	Beige	0.1	QM
114	A	Wall	Ctr		F	Dry wall	Beige	-0.1	QM
121	A	Wall	Ctr		F	Plaster	White	0.2	QM
139	A	Wall	Ctr		F	Plaster	White	0.0	QM
011	A	Window	Ctr	Casing	F	Wood	White	0.1	QM

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051	A	Window	Ctr	Rgt casing	F	Wood	White	-0.1	QM
076	A	Window	Ctr	Rgt casing	F	Wood	White	0.0	QM
095	A	Window	Ctr	Rgt casing	F	Wood	White	0.0	QM
038	A	Window	Ctr	Apron	F	Wood	White	0.4	QM
040	A	Door	Ctr	Door	F	metal	White	0.1	QM
089	A	Door	Ctr	Door	F	metal	blue	>9.9	QM
101	A	Door	Ctr	Door	I	metal	White	-0.1	QM
130	A	Door	Ctr	Door	F	metal	blue	8.3	QM
029	A	Door	Ctr	Rgt casing	F	metal	blue	1.0	QM
039	A	Door	Ctr	Rgt casing	F	Wood	White	-0.3	QM
088	A	Door	Ctr	Rgt casing	F	metal	blue	1.0	QM
100	A	Door	Ctr	Rgt casing	I	metal	White	0.1	QM
129	A	Door	Ctr	Rgt casing	F	metal	Beige	1.0	QM
014	B	Radiator	Ctr		P	metal	White	1.0	QM
053	B	floor	Ctr		F	Concrete	red	0.0	QM
125	B	floor	Ctr		P	Concrete	Grey	-0.4	QM
008	B	Wall	Ctr		F	conc block	White	-0.1	QM
026	B	Wall	Ctr		F	Plaster	blue	2.6	QM
033	B	Wall	Ctr		F	Dry wall	White	3.7	QM
041	B	Wall	Ctr		F	Dry wall	Grey	-0.1	QM
046	B	Wall	Ctr		F	Dry wall	White	0.0	QM
052	B	Wall	Ctr		F	Dry wall	Beige	0.0	QM
058	B	Wall	Ctr		F	Dry wall	White	-0.1	QM
066	B	Wall	Ctr		F	Concrete	White	1.0	QM
073	B	Wall	Ctr		F	conc block	White	0.0	QM
079	B	Wall	Ctr		P	Plaster	White	0.4	QM
086	B	Wall	Ctr		F	Plaster	White	1.0	QM
092	B	Wall	Ctr		I	Plaster	green	0.4	QM
104	B	Wall	Ctr		F	metal	Beige	-0.1	QM
108	B	Wall	Ctr		I	metal	Beige	0.2	QM
112	B	Wall	Ctr		I	Dry wall	Beige	-0.1	QM
116	B	Wall	Ctr		F	Dry wall	Beige	-0.1	QM
118	B	Wall	Ctr		F	Plaster	green	0.1	QM
124	B	Wall	Ctr		F	Dry wall	White	-0.2	QM
013	B	Window	Ctr	Casing	F	Wood	White	0.0	QM
069	B	Window	Ctr	Rgt casing	F	Wood	White	-0.1	QM
078	B	Door	Ctr	Rgt casing	I	steel	blue	0.1	QM
031	B	Stairs	Ctr	handrail	F	metal	black	1.0	QM
015	C	Pipe	Ctr		F	metal	Silver	-0.2	QM
084	C	floor	Ctr		P	Wood	Grey	0.0	QM
134	C	column	Ctr		P	Concrete	White	0.1	QM
135	C	floor	Ctr		P	Concrete	Grey	0.0	QM
009	C	Wall	Ctr		F	plastic	White	0.0	QM
018	C	Wall	Ctr		F	Dry wall	White	-0.3	QM
034	C	Wall	Ctr		F	conc block	White	0.0	QM
045	C	Wall	Ctr		P	Concrete	White	0.2	QM
059	C	Wall	Ctr		F	Dry wall	blue	-0.1	QM
062	C	Wall	Ctr		P	Concrete	White	1.0	QM
067	C	Wall	Ctr		F	Concrete	White	0.0	QM
074	C	Wall	Ctr		P	Plaster	White	-0.2	QM
082	C	Wall	Ctr		F	Dry wall	red	-0.1	QM
093	C	Wall	Ctr		I	Glazedtile	green	1.0	QM
097	C	Wall	Ctr		I	Dry wall	White	-0.1	QM
105	C	Wall	Ctr		F	metal	Beige	0.0	QM
109	C	Wall	Ctr		I	Dry wall	Beige	0.1	QM
115	C	Wall	Ctr		F	Dry wall	Beige	-0.1	QM
119	C	Wall	Ctr		F	Plaster	green	1.6	QM
126	C	Wall	Ctr		F	Brick	White	5.2	QM
137	C	Wall	Ctr		P	Plaster	Beige	-0.2	QM
044	C	Window	Ctr	Rgt casing	P	metal	White	-0.2	QM
017	C	Door	Ctr	Door	F	Wood	White	-0.1	QM
019	C	Door	Ctr	Casing	F	steel	blue	1.0	QM
020	C	Door	Ctr	Door	F	steel	blue	9.0	QM

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043	C	Door		Ctr	Door	F	metal	blue	>9.9	QM
081	C	Door		Ctr	Door	F	metal	green	1.0	QM
016	C	Door		Ctr	Rgt casing	F	Wood	White	-0.2	QM
042	C	Door		Ctr	Rgt casing	F	metal	blue	2.2	QM
080	C	Door		Ctr	Rgt casing	P	metal	green	-0.1	QM
090	C	Stairs		Ctr	Treads	F	Concrete	Grey	1.0	QM
091	C	Railing		Ctr	Railing	P	metal	black	0.1	QM
138	C	Railing		Ctr	Railing	P	metal	green	3.7	QM
023	D	floor		Ctr		P	Concrete	black	-0.3	QM
024	D	column		Ctr		F	Concrete	White	6.0	QM
030	D	floor		Ctr		F	Cement	Grey	>9.9	QM
056	D	Pipe		Ctr		F	metal	White	>9.9	QM
061	D	floor		Ctr		P	Concrete	Brown	-0.2	QM
064	D	Radiator		Ctr		P	metal	White	0.0	QM
071	D	column		Ctr		F	Concrete	White	1.9	QM
083	D	Radiator		Ctr		P	metal	green	1.0	QM
128	D	Radiator		Ctr		P	metal	Beige	2.8	QM
131	D	Radiator		Ctr		P	metal	blue	2.0	QM
010	D	Wall		Ctr		F	conc block	White	-0.3	QM
027	D	Wall		Ctr		F	Plaster	blue	4.4	QM
035	D	Wall		Ctr		F	Dry wall	White	-0.3	QM
036	D	Wall		Ctr		F	Dry wall	White	0.0	QM
047	D	Wall		Ctr		P	plastic	White	1.0	QM
055	D	Wall		Ctr		F	Plaster	White	1.0	QM
060	D	Wall		Ctr		F	Dry wall	blue	-0.3	QM
063	D	Wall		Ctr		P	Concrete	White	3.3	QM
068	D	Wall		Ctr		F	Concrete	White	0.1	QM
075	D	Wall		Ctr		F	conc block	White	-0.2	QM
087	D	Wall		Ctr		F	Plaster	blue	2.7	QM
094	D	Wall		Ctr		I	Plaster	green	0.1	QM
098	D	Wall		Ctr		I	Dry wall	White	-0.2	QM
106	D	Wall		Ctr		F	metal	Beige	0.1	QM
110	D	Wall		Ctr		I	metal	Beige	0.1	QM
113	D	Wall		Ctr		I	Dry wall	Beige	-0.1	QM
117	D	Wall		Ctr		F	Dry wall	Beige	-0.1	QM
120	D	Wall		Ctr		F	Dry wall	green	-0.3	QM
127	D	Wall		Ctr		F	Brick	White	1.0	QM
136	D	Wall		Ctr		P	Concrete	Beige	5.0	QM
028	D	Wall	U	Ctr		F	Concrete	blue	2.2	QM
022	D	Door		Ctr	Door	F	steel	White	0.2	QM
103	D	Door		Ctr	Door	F	Wood	White	0.0	QM
133	D	Door		Ctr	Door	F	metal	blue	4.7	QM
021	D	Door		Ctr	Rgt casing	F	steel	White	1.0	QM
070	D	Door		Ctr	Rgt casing	F	Wood	White	1.0	QM
102	D	Door		Ctr	Rgt casing	F	Wood	White	0.3	QM
132	D	Door		Ctr	Rgt casing	F	metal	blue	2.1	QM

Calibration Readings

001	1.0	QM
002	1.0	QM
003	1.0	QM
004	-0.3	QM
005	0.0	QM
006	-0.1	QM
149	1.0	QM
150	1.0	QM
151	1.0	QM
152	-0.1	QM
153	0.1	QM
154	0.1	QM

---- End of Readings ----

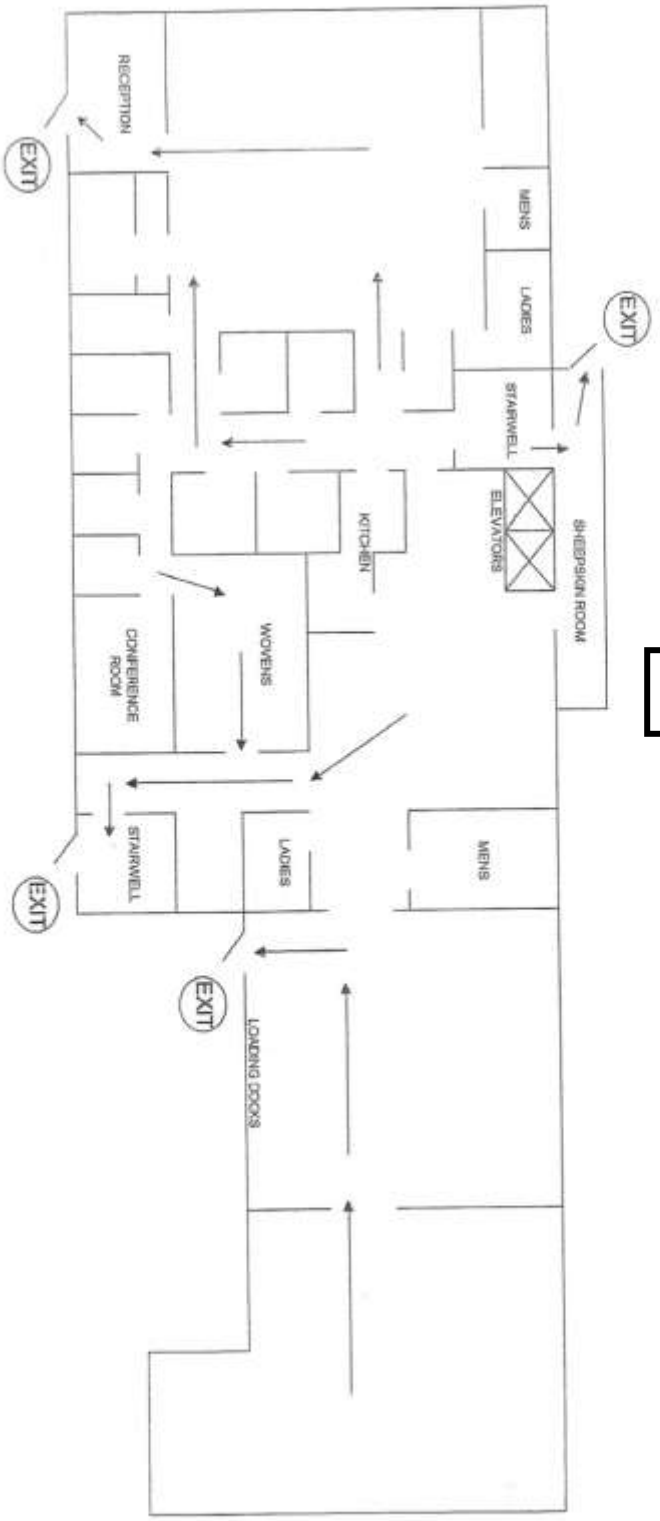
Part 4:

Appendix B

1. Site Maps
2. Personnel Qualifications
3. Firm Qualifications

Site Maps

B Wall

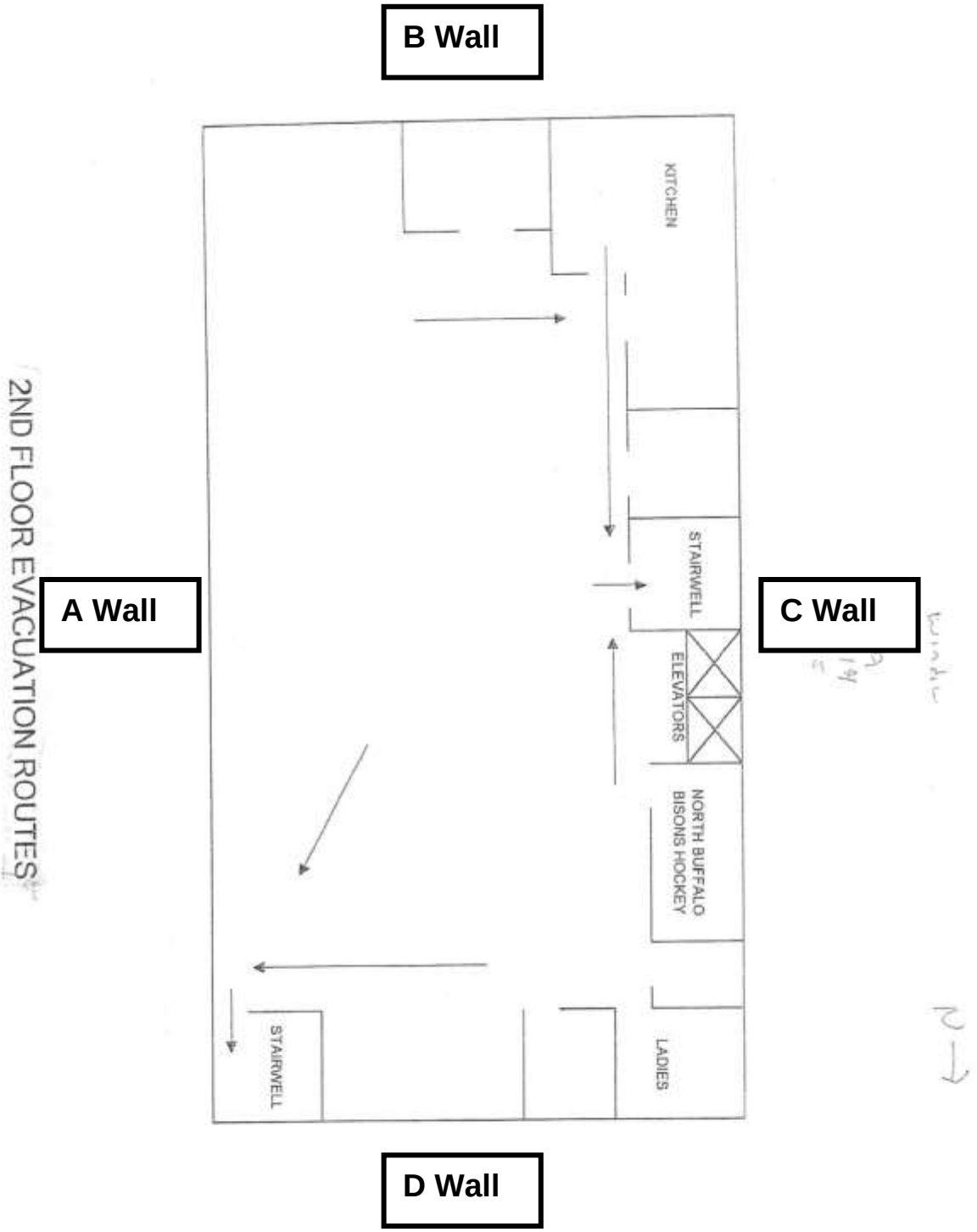


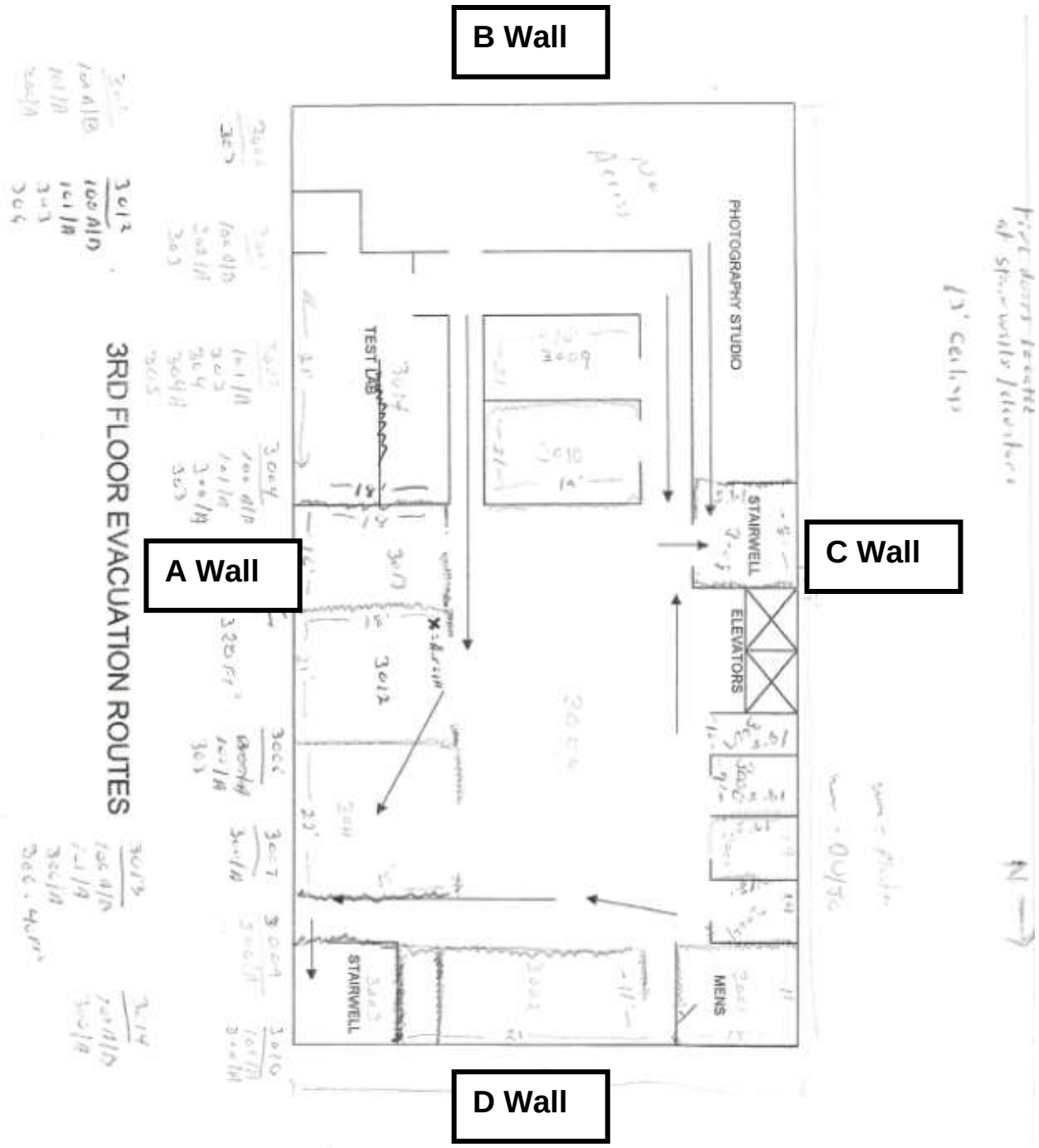
A Wall

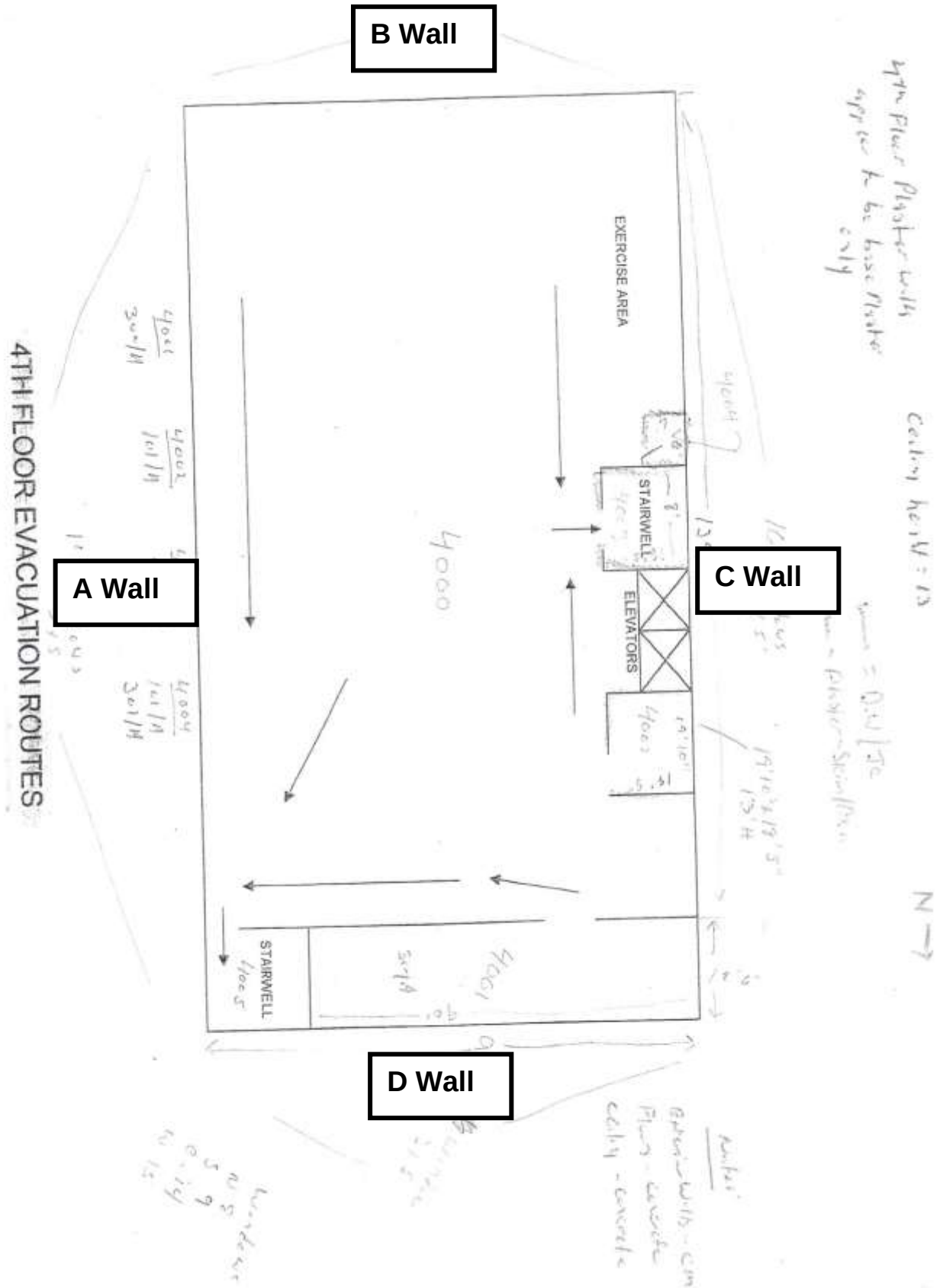
C Wall

1ST FLOOR EVACUATION ROUTES

D Wall


B Wall
A Wall
C Wall
D Wall
KITCHEN
STAIRWELL
ELEVATORS
NORTH BUFFALO
BISONS HOCKEY
LADIES
STAIRWELL
2ND FLOOR EVACUATION ROUTES


B Wall
PHOTOGRAPHY STUDIO
STAIRWELL
C Wall
A Wall
TEST LAB
ELEVATORS
3012
MENS
STAIRWELL
D Wall
3RD FLOOR EVACUATION ROUTES


B Wall
EXERCISE AREA
STAIRWELL
ELEVATORS
C Wall
A Wall
STAIRWELL
D Wall
4TH FLOOR EVACUATION ROUTES

Personnel Qualifications

United States Environmental Protection Agency

This is to certify that

Gerald Dunlap

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as a:

Risk Assessor

In the Jurisdiction of:

New York

This certification is valid from the date of issuance and expires May 1, 2016

NY-R-128132-1
Certification #

APR 2 3 2013
Issued On

John Gorman, Chief
Pesticides & Toxic Substances Branch

United States Environmental Protection Agency

This is to certify that

John Edward Doucette

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as

Risk Assessor

In the Jurisdiction of:

New York

This certification is valid from the date of issuance and expires August 14, 2013

NY-R-16234-3
Certificaton #

December 16, 2014
Issued On

John Gorman, Chief
Pesticides & Toxic Substances Branch

Firm Qualifications

15-0819JWA
08/28/15

26

AMD Environmental
1360 Niagara St., Buffalo, NY

United States Environmental Protection Agency

This is to certify that

AMD Environmental Consultants, Inc.

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226

In the Jurisdiction of:

New York

This certification is valid from the date of issuance and expires December 25, 2016

NY-83285-2
Certification #

December 11, 2013
Issued On

Michelle Price, Chief
Lead, Heavy Metals, and Inorganics Branch

Performance Characteristic Sheet

EFFECTIVE DATE: **December 1, 2006** **EDITION NO.: 5**

MANUFACTURER AND MODEL:

Make: ***Radiation Monitoring Devices***
Model: ***LPA-1***
Source: ^{57}Co
Note: This sheet supersedes all previous sheets for the XRF instrument of the make, model, and source shown above ***for instruments sold or serviced after June 26, 1995. For other instruments, see prior editions.***

FIELD OPERATION GUIDANCE

OPERATING PARAMETERS:

Quick mode or 30-second equivalent standard (Time Corrected) mode readings.

XRF CALIBRATION CHECK LIMITS:

0.7 to 1.3 mg/cm^2 (inclusive)

SUBSTRATE CORRECTION:

For XRF results below 4.0 mg/cm^2, substrate correction is recommended for:

Metal using 30-second equivalent standard (Time Corrected) mode readings.
None using quick mode readings.

Substrate correction is not needed for:

Brick, Concrete, Drywall, Plaster, and Wood using 30-second equivalent standard (Time Corrected) mode readings
Brick, Concrete, Drywall, Metal, Plaster, and Wood using quick mode readings

THRESHOLDS:

30-SECOND EQUIVALENT STANDARD MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Results corrected for substrate bias on metal substrate only	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	0.9
	Plaster	1.0
	Wood	1.0

QUICK MODE READING DESCRIPTION	SUBSTRATE	THRESHOLD (mg/cm^2)
Readings not corrected for substrate bias on any substrate	Brick	1.0
	Concrete	1.0
	Drywall	1.0
	Metal	1.0
	Plaster	1.0
	Wood	1.0

BACKGROUND INFORMATION

EVALUATION DATA SOURCE AND DATE:

This sheet is supplemental information to be used in conjunction with Chapter 7 of the HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* ("HUD Guidelines"). Performance parameters shown on this sheet are calculated from the EPA/HUD evaluation using archived building components. Testing was conducted on approximately 150 test locations in July 1995. The instrument that performed testing in September had a new source installed in June 1995 with 12 mCi initial strength.

OPERATING PARAMETERS:

Performance parameters shown in this sheet are applicable only when properly operating the instrument using the manufacturer's instructions and procedures described in Chapter 7 of the HUD Guidelines.

XRF CALIBRATION CHECK:

The calibration of the XRF instrument should be checked using the paint film nearest 1.0 mg/cm^2 in the NIST Standard Reference Material (SRM) used (e.g., for NIST SRM 2579, use the 1.02 mg/cm^2 film).

If readings are outside the acceptable calibration check range, follow the manufacturer's instructions to bring the instruments into control before XRF testing proceeds.

SUBSTRATE CORRECTION VALUE COMPUTATION :

Chapter 7 of the HUD Guidelines provides guidance on correcting XRF results for substrate bias. Supplemental guidance for using the paint film nearest 1.0 mg/cm^2 for substrate correction is provided:

XRF results are corrected for substrate bias by subtracting from each XRF result a correction value determined separately in each house for single-family housing or in each development for multifamily housing, for each substrate. The correction value is an average of XRF readings taken over the NIST SRM paint film nearest to 1.0 mg/cm^2 at test locations that have been scraped bare of their paint covering. Compute the correction values as follows:

> Using the same XRF instrument, take three readings on a bare substrate area covered with the NIST SRM paint film nearest 1 mg/cm^2. Repeat this procedure by taking three more readings on a second bare substrate area of the same substrate covered with the NIST SRM.
>
> Compute the correction value for each substrate type where XRF readings indicate substrate correction is needed by computing the average of all six readings as shown below.
>
> For each substrate type (the 1.02 mg/cm^2 NIST SRM is shown in this example; use the actual lead loading of the NIST SRM used for substrate correction):
>
> $$\text{Correction value} = (1^{st} + 2^{nd} + 3^{rd} + 4^{th} + 5^{th} + 6^{th}\ \textit{Reading}) / 6 - 1.02\ \text{mg/cm}^2$$
>
> Repeat this procedure for each substrate requiring substrate correction in the house or housing development.

EVALUATING THE QUALITY OF XRF TESTING:

Randomly select ten testing combinations for retesting from each house or from two randomly selected units in multifamily housing. Use either the Quick Mode or 30-second equivalent standard (Time Corrected) Mode readings.

Conduct XRF re-testing at the ten testing combinations selected for retesting.

Determine if the XRF testing in the units or house passed or failed the test by applying the steps below.

Compute the Retest Tolerance Limit by the following steps:

Determine XRF results for the original and retest XRF readings. Do not correct the original or retest results for substrate bias. In single-family and multi-family housing, a result is defined as a single reading. Therefore, there will be ten original and ten retest XRF results for each house or for the two selected units.

Calculate the average of the original XRF result and retest XRF result for each testing combination.

Square the average for each testing combination.

Add the ten squared averages together. Call this quantity C.

Multiply the number C by 0.0072. Call this quantity D.

Add the number 0.032 to D. Call this quantity E.

Take the square root of E. Call this quantity F.

Multiply F by 1.645. The result is the Retest Tolerance Limit.

Compute the average of all ten original XRF results.

Compute the average of all ten re-test XRF results.

Find the absolute difference of the two averages.

If the difference is less than the Retest Tolerance Limit, the inspection has passed the retest. If the difference of the overall averages equals or exceeds the Retest Tolerance Limit, this procedure should be repeated with ten new testing combinations. If the difference of the overall averages is equal to or greater than the Retest Tolerance Limit a second time, then the inspection should be considered deficient.

Use of this procedure is estimated to produce a spurious result approximately 1% of the time. That is, results of this procedure will call for further examination when no examination is warranted in approximately 1 out of 100 dwelling units tested.

BIAS AND PRECISION:

Do not use these bias and precision data to correct for substrate bias. These bias and precision data were computed without substrate correction from samples with reported laboratory results less than 4.0 mg/cm^2 lead. The data which were used to determine the bias and precision estimates given in the table below have the following properties. During the July 1995 testing, there were 15 test locations with a laboratory-reported result equal to or greater than 4.0 mg/cm^2 lead. Of these, one 30-second standard mode reading was less than 1.0 mg/cm^2 and none of the quick mode readings were less than 1.0 mg/cm^2. The instrument that tested in July is representative of instruments sold or serviced after June 26, 1995. These data are for illustrative purposes only. Actual bias must be determined on the site. Results provided above already account for bias and precision. Bias and precision ranges are provided to show the variability found between machines of the same model.

30-SECOND STANDARD MODE READING MEASURED AT	SUBSTRATE	BIAS (mg/cm^2)	PRECISION* (mg/cm^2)
0.0 mg/cm^2	Brick	0.0	0.1
	Concrete	0.0	0.1
	Drywall	0.1	0.1
	Metal	0.3	0.1
	Plaster	0.1	0.1
	Wood	0.0	0.1
0.5 mg/cm^2	Brick	0.0	0.2
	Concrete	0.0	0.2
	Drywall	0.0	0.2
	Metal	0.2	0.2
	Plaster	0.0	0.2
	Wood	0.0	0.2
1.0 mg/cm^2	Brick	0.0	0.3
	Concrete	0.0	0.3
	Drywall	0.0	0.3
	Metal	0.2	0.3
	Plaster	0.0	0.3
	Wood	0.0	0.3
2.0 mg/cm^2	Brick	-0.1	0.4
	Concrete	-0.1	0.4
	Drywall	-0.1	0.4
	Metal	0.1	0.4
	Plaster	-0.1	0.4
	Wood	-0.1	0.4

*Precision at 1 standard deviation.

CLASSIFICATION RESULTS:

XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, and negative if they are less than the lower boundary of the inconclusive range, or inconclusive if in between. The inconclusive range includes both its upper and lower bounds. Earlier editions of this *XRF Performance Characteristic Sheet* did not include both bounds of the inconclusive range as "inconclusive." While this edition of the Performance Characteristics Sheet uses a different system, the specific XRF readings that are considered positive, negative, or inconclusive for a given XRF model and substrate remain unchanged, so previous inspection results are not affected.

DOCUMENTATION:

An EPA document titled *Methodology for XRF Performance Characteristic Sheets* provides an explanation of the statistical methodology used to construct the data in the sheets, and provides empirical results from using the recommended inconclusive ranges or thresholds for specific XRF instruments. For a copy of this document call the National Lead Information Center Clearinghouse at 1-800-424-LEAD. A HUD document titled *A Nonparametric Method for Estimating the 5th and 95th Percentile Curves of Variable-Time XRF Readings Based on Monotone Regression* provides supplemental information on the methodology for variable-time XRF instruments. A copy of this document can be obtained from the HUD lead web site, www.hud.gov/offices/lead.

This XRF Performance Characteristic Sheet was developed by QuanTech, Inc., under a contract from the U.S. Department of Housing and Urban Development (HUD). HUD has determined that the information provided here is acceptable when used as guidance in conjunction with Chapter 7, Lead-Based Paint Inspection, of HUD's *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing.*

End of Report

PHASE I/II ENVIRONMENTAL SITE ASSESSMENT
FOR
1336, 1340 AND 1360 NIAGARA STREET
BUFFALO, ERIE COUNTY, NEW YORK

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C&S Project No:

E67.016.001

LIST OF SELECTED ACRONYMS FOR FEDERAL, STATE AND TRIBAL ENVIRONMENTAL DATABASES

Federal Records

Abbreviation	Description
NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
De-listed NPL	National Priorities List Deletions
NPL LIENS	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, Liability Information System.
CERCLIS-NFRAP	CERCLIS- No further Remedial Action Planned
CORRACTS	Corrective Action Report
RCRA	Resource Conservation and Recovery Act
ERNS	Emergency Response Notification System
RCRA-TSDF	RCRA- Treatment, Storage and Disposal Facility
RCRA-LQG	RCRA- Large Quantity Generators
RCRA- CESQG	RCRA- Conditionally Exempt Small Quantity Generators
RCRA-NonGen	RCRA- Non Generating Sites
US Brownfield	A listing of Brownfield Sites
ROD	Records of Decision
FINDS	Facility Index System/Facility Registry System

State Records

Abbreviation	Description
SHWS	Hazardous Waste Cleanup Act Sites List
SWF/LF	Licensed Solid Waste Facilities
SWRCY	Registered Recycling Facility List
LTANKS	Leaking Storage Tank File
UST	Underground Storage Tank File
HIST UST	Historic Underground Storage Tank File

AST	Listing of PA Regulated ASTs
NY Manifest	Manifest Information
NY Spills	NYSDEC Spill Report Database
NY Hist Spills	NYSDEC Historic Spill Report Database
ENG CONTROLS	Engineering Controls Site List
INST CONTROL	Institutional Controls Site Listing
VCP	Voluntary Cleanup Sites
DRYCLEANERS	Drycleaners Facility Locations
BROWNFIELDS	Brownfield Sites

Tribal Records

Abbreviation	Description
INDIAN LUST	Leaking Underground Storage Tanks
INDIAN UST	Underground Storage Tanks

EDR Proprietary Records

Abbreviation	Description
MGP	Manufactured Gas Plants
HAS	Historical Auto Stations
HCL	Historical Cleaners

Note: A complete list of acronyms and detailed descriptions are provided in the EDR Radius Map Report in Appendix C.

EXECUTIVE SUMMARY

At the request of Ciminelli Real Estate Corporation, C&S Engineers, Inc. (C&S) has prepared this Phase I and II Environmental Site Assessment Report (ESA) for the properties located at 1336, 1340 and 1360 Niagara Street in the City of Buffalo, Erie County, New York. For this Phase I/II ESA, both the structure and property are collectively called the "Subject Properties." C&S conducted the Phase I ESA site visit on August 28, 2015 and completed the Phase II ESA fieldwork on August 24 – 26, 2015. The remainder of this Phase I/II ESA includes information collected from various federal, state and local agencies provided by Environmental Data Resources, Inc. ("EDR"), and reasonably ascertainable historical records such as tax records, aerial photographs, and topographic maps.

Based on the results of this Phase I ESA, the following conclusions and recommendations are made:

Findings

- The Subject Properties with the address 1360 Niagara Street is a four story commercial building operated by Garrett Leather. Properties 1336 and 1340 Niagara Street are vacant.
- The Subject Properties are owned by Garrett Holdings LLC.
- The Subject Properties is located in an urban area that has been heavily developed for more than 100 years.
- According to historical records, 1360 Niagara Street was first developed as residential properties and a lubricating factory by 1889. 1340 and 1336 Niagara Street was occupied by a planning mill from 1889 to 1986. The Mentholatum Building was constructed in 1919. Surrounding historic property uses consist of commercial and industrial from 1889 to present.
- ASTs and USTs for the Mentholatum Building and use of coal for fuel at a former planning mill at 1340 Niagara Street, were all historically located on the Subject Properties. The potential for releases associated with these historic property uses is considered a REC.
- There were no hazardous or regulated materials observed onsite.
- Based on the date of construction at the Subject Properties, between 1970 and 1978, asbestos-containing materials are potentially present on site.
- The Subject Properties is not located within the mapped limits of either the 100-year or 500-year flood zones.
- There are approximately 15 groundwater wells located at the Subject Properties.

The Subject Properties (1360 Niagara Street) is identified in NY UST, NY HIST AST, RCRA NonGen, and NY MANIFEST environmental databases.Because Recognized Environmental Conditions (RECs) were discovered during this Phase I Environmental

Site Assessment, C&S completed a Phase II ESA intended to characterize the RECs. The Phase II ESA included:

- The advancement of 22 soil borings
- The screening and visual characterization of the resulting soil samples
- The analysis of samples for characterization purposes

Based on the results of this Phase II ESA, the following findings are made:

1. Fill material was encountered across the Subject Properties from just below the asphalt and gravel sub-base to 3-4 feet bgs. Native clay material was observed directly beneath the fill.

2. Fill material had exceedances above Commercial and Industrial Use SCOs for PAH compounds, copper, lead and arsenic. Samples from native clay exceeded for total chromium above Unrestricted Use SOCs.

3. PCBs were detected above Commercial Use criteria from the sample collected at EB-19, location adjacent to 1318 Niagara Street (Site Number E915213). Two samples collected along the western property line between 1360 Niagara Street and the railroad line (EB-21 and EB-22) exceeded Commercial and Unrestricted Use criteria for PCBs.

4. Groundwater appeared to be perched in the soils at intervals that suggest the water was isolated in previously disturbed layers. Significant amounts of groundwater were not encountered during the boring program. Therefore, no groundwater analysis was completed.

1.0 INTRODUCTION

At the request of Ciminelli Real Estate Corporation., C&S Engineers, Inc. ("C&S") has completed a Phase I Environmental Site Assessment (ESA) and subsequent Phase II ESA at 1336, 1340 and 1360 Niagara Street, located in the City of Buffalo, Erie County, New York. These properties will be referenced as the "Subject Properties" in this report.

The Phase I Environmental Assessment was performed consistent with American Society of Testing and Materials (ASTM) E-1527-13 Standard Practice for Environmental Site Assessment Process, except as noted below.

The purpose of this Phase I Environmental Site Assessment is to identify:

- Possible environmental contaminants;
- The proximity of sensitive receptors;
- Past and present uses on or adjacent to the Subject Properties that may be qualified as a Recognized Environmental Condition ("REC");
- Hazardous material and waste storage or disposal practices.

The intent of this report is to provide appropriate due diligence for the sale of the Subject Properties to satisfy the standard for CERCLA's "All Appropriate Inquiry" as described in **Section 1.2: Scope of Services**.

The work conducted in the process of this Phase I ESA was completed in accordance with the applicable guidelines developed in the ASTM Standard E 1527-13. The purpose of this Phase I ESA is to help establish the innocent landowner defense to identify potential environmental issues which may affect future development of the Subject Properties. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability: that is, the practice that constitutes "all appropriate inquiry into previous ownership and uses of the property consistent with good commercial or customary practice as defined at 42 U.S.C. 9601(35) (B)." This Phase I ESA will evaluate whether current or historical activities on or adjacent to the Subject Properties may have resulted in significant contamination by hazardous materials and/or wastes, which is subsequently referred to in this report as an REC.

The standard ASTM E1527-13 defines three types of RECs as follows:

> **Recognized Environmental Condition:**
>
> "The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat to the environment."

Controlled Recognized Environmental Condition:

"A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

Historical Recognized Environmental Condition:

"A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

The scope of services for this Phase I ESA included the following tasks:

- Review of the current and past uses of the Subject Properties;
- Review of environmental studies/data readily available for the Subject Properties;
- Site inspection;
- Review of state and federal databases;
- Evaluation of the potential environmental impact of adjacent properties on the Subject Properties; and
- Interview with site owner and/or manager, as available.

Phase I ESA is not meant to be exhaustive in research; additionally, no environmental site assessment can wholly eliminate uncertainty regarding the potential for RECs in connection with a property.

1.1 Limitations and Exceptions

C&S has prepared this Phase I ESA in accordance with the contract scope of work, using reasonable efforts to identify areas of potential liability associated with RECs at the Subject Properties. The conclusions in this report were based solely on a visual review of the site and on readily available records, interviews, and other secondary sources. C&S has made no independent investigation of the accuracy of these secondary sources and has assumed them to be accurate and complete. C&S does not warrant the accuracy of completeness of the information provided by the secondary sources. C&S does not

warrant that contamination that may exist on the site has been discovered, that the site is suitable for any particular purpose, or that the site is clean or free of liability.

Consistent with ASTM E 1527-13, the following items were beyond the scope of this Phase I Environmental Site Assessment:

- Asbestos-Containing Materials
- Industrial Hygiene
- Health and Safety
- Ecological Resources
- Endangered Species
- Indoor Air Quality
- Biological Agents
- Mold
- Radon
- Lead-Based Paint
- Lead in Drinking Water
- Wetlands
- Regulatory Compliance
- Cultural and Historical Resources

2.0 SITE DESCRIPTION

A description of the location, site characteristics and land use of the Subject Properties included in this section was obtained from the following sources:

- Erie County On-line Mapping System
- GIS parcel data for Erie County

2.1 Location and Legal Description

The Subject Properties are located within the City of Buffalo, Erie County, New York. The Subject Properties was identified through tax records from the Erie County parcel data as 88.1-1-8 (1336 Niagara St.), 88.1-1-7 (1340 Niagara St.) and 88.81-1-6 (1360 Niagara St.). The list below describes the roads located adjacent to the Subject Properties from each cardinal direction:

North- None
East- Adjacent to Niagara Street
South- None
West- N.Y.S. Thruway

2.2 Site Characteristics

The Subject Properties consist of three parcels, 1360 Niagara Street is occupied by one commercial building, 1336 and 1340 Niagara Street are undeveloped. Based on parcel data from Erie County GIS, the Subject Properties are approximately 1.8 acres. The majority of the Subject Properties is undeveloped. The current owner of 1336, 1340 and 1360 Niagara Street is Garrett Holding LLC.

2.3 Adjoining Properties

Property class codes and ownership information were taken from the Erie County Internet Mapping System. The Subject Properties are located within a dense commercially developed area with some surrounding residential use. Land uses immediately adjacent to the Subject Properties are summarized in **Table 2-1: Adjoining Properties** below.

Table 2-1: Adjoining Properties

DIRECTION	LAND USE DESCRIPTION
North	Vacant Lot
South	Commercial building (vacant) and Vacant Lot
East	Buffalo Sewer Authority Metering Station and auto repair shops
West	Railroad and N.Y.S. Thruway

3.0 USER PROVIDED INFORMATION

The Client/User Questionnaire is provided in *Appendix A*. The User Questionnaire did not identify any RECs associated with the Subject Properties.

4.0 RECORDS REVIEW

A records review was conducted by Environmental Data Resources, Inc. ("EDR") for the Subject Properties and the surrounding area. Records complied by EDR are consistent with standards outlined in ASTM E1527-13 for records that are:

1. Within the approximate minimum search distance
2. Reasonably ascertainable and are from standard sources
3. Provide records under reasonable time and cost constraints

The results of the records review are summarized in the preceding sections and are provided in the following appendices:

- EDR Radius Map Report with GeoCheckfi (Appendix B)
- Historical Aerial Photography (Appendix C)
- Historical Sanborn Fire Insurance Maps (Appendix D)
- Historical Topographic Maps (Appendix E)
- City Directory Abstract (Appendix F)

5.0 PHYSICAL SETTING

The following informational resources were used to help identify the physical setting of the Subject Properties.

- Soil Survey of Erie County, New York, located from the United States Department of Agriculture (USDA) Natural Resources Conservation Services Web Soil Survey.
- Geologic Map of New York, Niagara Sheet, dated 1970.
- Surficial Geological Map of New York, Niagara Sheet, dated 1988.

5.1 Physical Setting – Description

5.1.1 Topography

EDR provided topographic map coverage and analysis for the Subject Properties. The topography in the vicinity of the Subject Properties are generally sloped to the west. The Subject Properties is situated at an approximate elevation of 593 feet above mean sea level ("amsl").

5.1.2 General Geologic Setting

The Subject Properties are located within the Central Lowlands region Eastern Lakes section physiographic province. The Eastern Lake section occupies an area along the shore lines of the Great Lakes from Lake Michigan east to Lake Ontario and up the St. Lawrence River to Vermont.

The regional geology consists of unconsolidated deposits of lake deposited lacustrine silt and clay. According to the Geological Map of New York – Niagara Sheet, the bedrock is Onondaga Limestone.

Local soil type identified by the Natural Resources Conservation Service ("NRCS") is Urban Land. Surrounding soil types within 0.25 mile of the Subject Properties is Urban Land Complex, Udorthents, and Dumps.

5.1.3 General Hydrogeologic Setting

Based on a review of topographic maps developed by the USGS and collected by EDR, groundwater is known to flow to the west. Potential influences include local drainage features, seasonal groundwater level fluctuations, subsurface geology, surface topography, and/or other local site features.

U.S. Fish and Wildlife Service National Wetland Inventory ("NWI") identifies the Black Rock Canal, located 200 feet to the west, as a riverine wetland (R2UBH).

5.1.4 Flood Plain Setting

Flood plains are described as areas adjoining a river, stream, drain, or lake that transmit floodwaters during high water conditions. Under the National Flood Insurance Program, they are categorized as either 100-year or 500-year flood zones.

Based on information provided by Flood Insurance Rate Maps developed by the Federal Emergency Management Association ("FEMA"), the Subject Properties is located in Zone X, indicating that there is minimal risk of flooding.

6.0 HISTORICAL USE ASSESSMENT

Historical information was used to develop a history of the previous uses of the Subject Properties and surrounding area. Historical sources of land use pertaining to the Subject Properties were obtained primarily from historic topographic maps, historic aerial photographs and Sanborn Fire Insurance Maps. These sources were used to help identify the possibility of past land uses contributing to recognized environmental conditions in regard to the current Subject Properties.

These historical sources satisfy the standard for CERCLA's most "reasonably ascertainable" information available. ASTM Standards define "reasonably ascertainable" as information that is publicly available, obtainable within reasonable time and cost limits, and practically reviewable.

This assessment used the following informational resources to help identify past and present site uses upon and surrounding the Subject Properties.

- Aerial photography dated 1938, 1951, 1959, 1966, 1978, 1983, 1985, 1995, 2006, 2008, 2009, and 2011
- Historical Topographic Maps dated 1901, 1948, 1949, 1950, and 1965
- Historical Sanborn Maps – 1889,1900, 1916, 1950, 1981 and 1986
- EDR City Directory Abstract

6.1 Historical Aerial Photography

A search for historical aerial photographs was conducted by EDR with coverage of the Subject Properties and its surrounding area. Historical aerial photographs were found for years shown below. Details of this review can be found below in **Table 6-1: Historical Aerial Photographs** below. A copy of Historical Aerial Photographs can be found in *Appendix C*.

TABLE 6-1: HISTORICAL AERIAL PHOTOGRAPHS

YEAR	SCALE	OBSERVATIONS
1938	1 inch = 500 feet	The Subject Properties are developed with what appears to be 3 commercial buildings. A street also appears in the middle of the Subject Properties. Adjacent parcels appear to be developed with multiple commercial buildings. Adjacent to the west there appears to be a rail line. The surrounding community appears to be dense residential and commercial.
1951	1 inch = 500 feet	The Subject Properties appears relatively unchanged from the previous photograph.
1959	1 inch = 500 feet	The Subject Properties appear to be relatively unchanged from the previous photographs. There appears to be thruway development to the west of the Subject Properties.
1966	1 inch = 500 feet	The Subject Properties appear to be relatively unchanged from the previous photographs.

1978	1 inch = 500 feet	The street within the Subject Properties appear to be a parking lot. The Subject Properties buildings appear to be relatively unchanged from the previous photograph.
1983	1 inch = 500 feet	The Subject Properties appear to be relatively unchanged from the previous photographs.
1985	1 inch = 500 feet	The Subject Properties appear to be relatively unchanged from the previous photographs.
1995	1 inch = 500 feet	The two south most buildings appear to have been demolished and left undeveloped. The building adjacent to the south appears to have been partially demolished.
2006	1 inch = 500 feet	The Subject Properties appears to be relatively unchanged from the previous photographs.
2008	1 inch = 500 feet	The Subject Properties appears to be unchanged from the previous photographs. The building in the parcel adjacent to the south appears to have been completely demolished leaving one structure in the northeast corner.
2009	1 inch = 500 feet	The Subject Properties appear to be unchanged from the previous photographs. The parcel to the north appears to have redeveloped into one large commercial building.
2011	1 inch = 500 feet	The Subject Properties appear to be unchanged from the previous photographs.

6.2 Historical Topographic Maps

As part of this ESA, a search for historic topographic maps with coverage of the Subject Properties was conducted by EDR. Little detail on site-specific property use is presented in these maps; however, the maps confirm the urban density of the area since at least 1901. A copy of the Historical Topographic Mapping is provided in *Appendix E*.

6.3 Historic Sanbornfi Maps

A search for historical Sanborn Fire Insurance Rate Maps was conducted by EDR with coverage of the Subject Properties and its surrounding area. Details of this review can be found in **Table 6-2: Historical Sanborn Fire Insurance Rate Maps** below. A copy of the Historical Sanborn Mapping Report is provided in *Appendix D*.

Table 6-2: Historical Sanborn Fire Insurance Rate Map

YEAR	OBSERVATIONS
1889	Brace Street is located through the middle portion of the Subject Properties. Walkman, Dohn and Fischer Planing Mill, a sash, door and blind factory, is developed adjacent to the south of Brace Street within 1340 and 1336 Niagara Street. Walkam, Dohn and Fischer Lumber Yard is located to the east of the Subject Properties, along with multiple small commercial buildings and dwellings. A former lubrication factory is located adjacent to the north of Brace Street in the western portion of 1360 Niagara Street. Dwellings are located in the northern portion of the parcel as well as in the adjacent property to the north. A warehouse for Cooperage Stock is located adjacent to the south of the Subject Properties. The Belt Line Railroad is located adjacent to the west of the Subject Properties. Mrs. Bitters Soap Factory and a Buffalo Printing Ink Works are located west of the Subject Properties.
1900	The former lubrication factory is now vacant. The southern portion of the property has been renamed to Dohn, Ficher and Beyer Planing Mill and Lumber Yard (1340 and 1336 Niagara

	Street). Ducro Oil Co. is located in the northwest of the Subject Properties. Tinder & Jackson, Slack Cooperage Stock Store Houses is located adjacent to the south of the Subject Properties. Mrs. Bitters Soap Factory is now closed. Brace Street, Buffalo Printing Ink Works and the Belt Line Railroad remain unchanged.
1916	The parcels to the east and in southern portion of the Subject Properties appear to be unchanged from the previous map. Ducro oil Co. has been redeveloped and is now Holbur Co., a machine shop. A small tin shop has been developed below the machine shop and the former lubrication building has been removed. Cassadaga Spring Water Co. Depot and Buffalo Wax Paper Co. have been developed north of the Subject Properties. Adjacent to the south and replacing all prior buildings to the west is Geo J. Meyer Malting Co.
1950	The southern portion of the Subject Properties appear to be unchanged from the previous map, as does the parcel adjacent to the south and west. The Mentholatum Co., a health and wellness company, has been developed adjacent to the north of Brace Street within 1360 Niagara Street. Holbur Co. has been replaced with Niagara Metal Co. A filling station has been developed adjacent to the northeast portion of the Subject Properties. A tool factory is located east of the Subject Properties. To the north of the Subject Properties, there is the following: • Sunshine Biscuits, Inc. • Chemical Sales Corp., chemical stock room and warehouse • Crandall Gan Filler Machine Co. • Exterminator Manufacturing • Common Sense Manufacturing Co. Inc. • Dry Cleaning
1981	West of the Belt Line Railroad has been developed into the N.Y.S. Thruway. Brace Street is now parking. F. and M. Schaffer Brewing Co. has been developed adjacent to the south of the Subject Properties, replacing Geo J. Meyer Malting Co. The expanded eastern portion of Dohn, Ficher and Beyer Planing Mill is now a water pollution control facility. Auto repair shops have been developed adjacent to the north of the water pollution facility and the filling station. There appears to be no change to the parcels adjacent to the north.
1986	The northern portion of the Subject Properties appear unchanged. Dohn, Ficher and Beyer Planing Mill in the southern portion of the Subject Properties is now vacant (1340 and 1336 Niagara Street). Sunshine Biscuits is now a wired glass skylights facility, Common Sense Manufacturing Co. is now a chemical storage yard, the water pollution facility is now Buffalo Sewer Authority and F. and M. Schaefer Brewing is now Stroh Brewing.

6.4 EDR City Directory Abstract

An EDR City Directory Abstract was prepared for C&S by EDR. The City Directories were used to evaluate the historic uses of the Subject Properties listed in Polk City Directories. The reports covered records from 1925 through 2013.

1360 Niagara Street

1360 Niagara Street was owned by the Mentholatum Company from 1930 to 1998, then owned by Garrett Leather from 2001 to present.

1340 Niagara Street

Dohn, Fisher & Co. Inc. (lumber supply) owned this property from 1964 to 1970. Records show that the property was vacant in 1975 then owned by Mentholatum Co. from 1980 to 1992.

1336 Niagara Street

City Directory information was not found for this property.

Surrounding Area

Niagara Street has been composed of commercial and industrial property uses since 1930. The following owners appear on the 1382 Niagara Street property:

- ChemCore (1998),
- Chemical Sales Corp (1930 to 1992),
- Prant Equipment Co. (1946 to 1950),
- Cranndall Filling Machinery (1925 to 1998) and
- Common Sense Manufacturing Co (Insecticides) 1925 to 1970.

Historic gasoline stations were located at the following locations:

- 1339 Niagara Street Major Brand Gas (1975);
- 1375 Niagara Street Greenawalt Morris (1935),
- Flynns Trailer Rental & Gas Station (1975).

6.5 Historic Use Assessment Conclusions

The Subject Properties has been developed since the early 1800s. Traditional site use for a majority of its history has been related to industry including warehousing, manufacturing and general commercial use. A partial summary of past uses includes:

- Sash, Door, and Blind Facility
- Lubricating Facility
- Planing Mill
- Tin shop
- Skin and health care product manufacturing

There is a potential for related commercial activities such as chemical storage, above and underground fuel storage and coal burning may have deposited environmental

contaminates on the Subject Properties; therefore these historic uses are considered a REC.

Nearby Properties

Surrounding property uses along Niagara Street were industrial and commercial. Some facilities, such as ChemCore and several other former gasoline stations could be indicative of RECs.

7.0 ENVIRONMENTAL RECORDS SEARCH

To comply with the USEPA's requirements for "All Appropriate Inquiry", C&S requested a federal and state database search for the Subject Properties from EDR. EDR compiles up-to-date information from federal, state, and local agencies, including the United States Environmental Protection Agency (USEPA). The EDR Radius Map Report with GeoCheck[fi] can be found in *Appendix B* and is summarized in the following sub-sections.

7.1 Environmental Record Sources

The database search resulted in several listings. **Table 7-1: Environmental Database Review** lists those databases that produced results that were identified as the most critical to evaluating potential off-site and on-site conditions.

TABLE 7-1: ENVIRONMENTAL DATABASE REVIEW

DATABASE	SEARCH DISTANCE (MILES)	SITES WITHIN RADIUS
LTANKS	0.5	7
HIST LTANKS	0.5	0
NY SPILLS	0.125	17
NY Brownfields	0.5	1
UST	0.25	6
RCRA	0.25	16
AST	0.25	4
CBS	0.25	0
CERCLIS NFRAP	0.5	2
NY SHWS	1	4
NPL	1.0	0

7.1.1 Subject Properties

The Subject Properties was identified for its historic owner, Mentholatum Co., in RCRA NonGen, FINDS, NY MANIFEST, NY UST, and NY AST environmental databases.

7.1.2 Adjacent Properties

Based on the ASTM specified records reviewed, ten potentially significant sites were identified to be within a 400 feet of the of the property line (adjacent or across the street) at elevations relatively equal to or greater than the Subject Properties are described in **Table 7-2: EDR Radius Map Review Adjacent Properties**.

TABLE 7-2: EDR RADIUS MAP REVIEW ADJACENT PROPERTIES

SITE	DATABASE	COMMENTS
Niagara Mohawk Pump Plant	NY Spills	Located at the Subject Properties. Truck backed into a pole, pole caught fire causing 3 transformers, 1 containing oil with 332 PPM PCB's, to fall onto the ground. No oil

		was released. Spill #8807847 met cleanup standards and was closed on 1/11/1989. Located at the Subject Properties. Known release with minimal potential for fire or hazard. Spill #8905942 meet cleanup standards and was closed 9/21/1989.
Mentholatum Co.	MANIFEST; RCRA NonGen / NLR; HIST AST; AST; HIST UST; UST	Located at the Subject Properties. Small quantity generator in 1984 of halogenated solvents, large quantity generator in 1996 and not a generator as of 1998. ASTs converted to non-regulated use. Historical UST containing NO. 1, 2 or 4 fuel oil closed prior to April 1, 1991. UST installed on 12/01/1980 containing gasoline. Closed prior to conversion in 1991. Two USTs were used to store fuel oil to heat the building when it was operated by the Mentholatum Company. In 1998, these USTs were cleaned, dried and rendered vapor free by Elmwood Tank & Piping Corporation. At the same time, a 4,000 gallon gasoline UST was removed from the northeast corner of the property. (Tank closure report submitted to NYSDEC June 23, 1998).
Hoffstetter Service	LTANKS	Approximately 42 ft. northeast. Spill #8801345 met cleanup standards and was closed on 5/23/1988. Caused by tank failure. Gasoline odor detected with no free product found.
Buffalo Sewer Authority	MANIFEST; CERC-NFRAP; RCRA NonGEN / NLR	Approximately 53 ft. southeast. Removal only site. Large quantity generator, with no violations, in 1996 and not a generator as of 2006.
ChemCore Co.	NY Spills; MANIFEST; RCRA-SQG; SHWS; CERCLIS	Adjacent to the north. 40 gallons of hydrogen peroxide spilled. Spill #9403776 met cleanup standards and was closed 8/10/1994. Large quantity generator in 1998. Small quantity generator since 1999. Presence of hazardous waste, primarily tetrachloroethene (PCE), 1,1,1-trichloroethane, and trichloroethene (TCE) found under the facility and parking areas.

		Groundwater contaminated as well. Buildings were demolished, contaminated soils were excavated and a pump and treat system was put in place for the groundwater. High VOC levels are being treated with bioremediation since November 2011 and being monitored periodically.
Schaeffer Brewing	NY Spills	Adjacent to the south. Several old transformers in basement of abandoned plant. Spill #9312138, no spill occurred from transformers, closed 5/23/1994.
27 Penfield Street	NY Spills	Approximately 187 ft. to the east. Due to equipment failure. One pint of hydraulic oil spilled on road. Spill # 1105793 did not meet cleanup standards and was closed on 8/22/2011.
1318 Niagara Street at Lafayette	NY Spill; ERP	Approximately 200 ft. to the south. Two 20,000 gal UST's were found with PCBs above 50 ppm along with a furnace with oil containing PCBs at 23,700 ppm. Site Qualified for Brownfield Cleanup which is being undertaken through the NYSDEC. Spill #0651726 did not meet cleanup standards and was closed 1/10/2008.
Great Lakes Pressed Steel Corp.	MANIFEST; NYSpills; FINDS; RCRA NonGen / NLR	Approximately 240 ft. north northeast. Due to equipment failure. 2 gallons of petroleum. Spill #1105716 met cleanup standards and was closed in 12/5/2011.
Dickies Donuts	NY Spills; LTANKS	Approximately 250 ft. south southeast. Due to equipment failure. Slight elevated groundwater values but further work is not warranted unless property development leads to soil removal. Spill #1206126 did not meet cleanup standards and was closed on 6/6/2014.

ChemCore Spill (1382 Niagara Street - Site Number 9-15-176)

During the initial operation of the company, a significant percentage of the business was related to supplying acids to metal fabrication industries. In the early 1930s, operations included a chemical handling facility, with several business and commercial tenants operating from rented portions of the site structure. During the 1950s, sales involved chlorinated solvents for dry-cleaning industries. In the 1970s and 1980s, the company sold chlorinated degreasing solvents. Another large percentage of sales involved inert

materials such as diatomaceous earth, Fullers earth, and bentonite clay. The company also marketed propylene glycol and glycerine to the hand lotion industry and primary alcohol to the printing industry. Until 1980, ChemCore received diatomaceous earth via a rail spur located directly west of the building. During the 1970s and until 1988, the company received bulk liquid materials at a receiving station on the north side of the building.

The site was determined to be eligible for implementation of a Remedial Investigation/Feasibility Study (RI/FS) under State Superfund. The results of the RI indicated that chlorinated compounds such as perchloroethylene (PCE) and trichloroethylene (TCE) were detected most frequently and at highest concentrations in subsurface soil samples. PCE was detected as high as 38,000 mg/kg and TCE was detected as high as 8 mg/kg.

VOCs such as PCE, TCE, vinyl chloride and other breakdown products of PCE were found in all well locations. PCE was found as high as 21,000 ug/L and TCE was found as high as 16,000 ug/L. Cis-1,2-dichloroethene was found as high as 30,000 ug/L. The contaminant plume extends from the 1382 Niagara Street underneath the Garrett Leather building and to the western portion of 1340 Niagara Street. The contaminate plume is approximately 30 to 50 feet bgs into the bedrock formation.

A Record of Decision (ROD) was issued in 2003 that included the demolition of the buildings, excavation of contaminated soils and implementation of a groundwater pump and treatment systems with a five year review. Included in the remedial effort was a pilot study of enhanced bioremediation of groundwater for off-site groundwater contamination. As part of the remedial action, the building was demolished, 19,370 tons of contaminated soils were excavated for off-site disposal and an on-site groundwater pump and treatment system was installed to address the groundwater contamination. The pilot study for the off-site groundwater contamination by bioremediation technology was completed. The contaminant concentration in off-site groundwater has declined and the groundwater monitoring is in progress.

After five years of pump and treatment operation to address the on-site groundwater contamination, the system's use was discontinued at the end of 2011. A total of 212 pounds of VOCs were removed from the groundwater. Overall, VOC concentrations have remained constant since the start of the system in February 2007. To address the on-site groundwater contamination, the bioremediation technology (edible oil substrate) has been implemented at the site since November 2011. On-site and off-site groundwater is monitored on a periodic basis to determine the effectiveness of the bioremediation technology.

Environmental reports indicate the ChemCore spill has impacted the Subject Properties in the groundwater at 30 to 50 feet below grade: therefore this site is a REC.

This site is considered an offsite REC. ***Figure 4***: ***ChemCore Historic Groundwater Sampling Results*** presents a map that shows historic concentrations of chlorinated compounds from July 2009 to June 2014.

1318 Niagara Street (Site Number E915213)

Prior uses that appear to have led to site contamination include two 20,000 gallon USTs, a furnace pit, and storage of 55 gallon drums containing PCBs and waste oil. In 2004 the City of Buffalo obtained the property through tax foreclosure. Demolition of the site buildings began in May of 2006. Residual oil in the USTs was removed using a vacuum truck and the USTs were excavated in February 2007. The tanks were staged and subsequently removed from the site in 2010. Upon UST excavation, it was found that one of the USTs had leaked into the subsurface, impacting the surrounding soil. As a result of the UST leak, the New York State Department of Environmental Conservation assigned Spill Number 0651726 to the site. Underground piping associated with the USTs was also discovered and removed prior to 2009. A former furnace was discovered in January 2007. The furnace contained PCB sludge (23,700 mg/kg) and TCLP organics/metals. The furnace and sludge were subsequently removed.

The primary contaminant of concern is PCBs in soil. The only metals in soil exceeding commercial SCOs are copper (8,770 mg/kg) and zinc (70,000 mg/kg). No VOCs exceeded restricted residential in soil. On-site groundwater also indicated the presence of PCBs at trace levels, in addition to VOCs and metals.

Soil contamination is limited to PCBs in fill but extends to native clay at depths of 12 ft bgs or greater in the former UST and furnace pit areas. Based on soil excavation confirmatory sample results, PCB-contaminated fill material remains site wide from 1 mg/kg to 530 mg/kg.

Groundwater contamination slightly exceeding groundwater standards consisted of several volatile organic compounds (VOCs) and associated degradation products (e.g., trichloroethylene at 350 ug/L). PCB impacts to groundwater were limited to one well, with total PCBs at 1.3 ug/L and 8.7 ug/L. There is no evidence of site-related contaminated groundwater migrating off-site.

Properties within the 400-foot radius with database listings for only MANIFEST, FINDS and/or RCRA are listed below.

- Decarlo Collision: 85 ft. south southeast, MANIFEST, FINDS and RCRA-CESQC
- Acme Bearing Corp.: 85 ft. northeast, FINDS and RCRA NonGen / NLR
- Crandall: 165 ft. north northeast, FINDS and RCRA NonGen / NLR
- Texaco Downstream properties: 251 ft. south southeast, RCRA NonGen / NLR
- Ivbro Properties: 362 ft. north northeast, MANIFEST and RCRA-CESQG

Based on the regulatory status and a review of the environmental database records, these sites do not pose a significant threat to the Subject Properties.

7.1.3 Unmapped Sites

C&S reviewed the EDR listed sites (Orphan Summary) that are unmapped due to insufficient geocode information. The unmapped orphan sites are summarized in EDR

Radius Map Report with GeoCheck, which is provided in *Appendix B.* To the best knowledge of C&S, none of these sites are within the relevant ASTM specified radii for the Subject Properties and do not suggest a release at or proximal to the Subject Properties.

7.2 Database Records Review Conclusions

Numerous USTs have been removed or cleaned around the Garrett Leather building. Some records are available that indicate successful removal and no historic leaks. However, a 12,000 gallon #2 fuel oil UST was reported by LCS, Inc. in a 2003 Phase I update of the property. The City of Buffalo Fire Protection Bureau has a record of the tank being "slushed" (filled in with an inert material) in 1990. The tank is located on the south side of the building inside a retaining wall and berm. Remedial documents did not provide evidence if UST had leaked. Do to the lack of documentation with this UST is will be considered a REC.

The ChemCore TCE spill is a known environmental impact to the Subject Properties. Impacts to the Subject Properties are in groundwater 30 to 50 feet bgs within the bedrock formation.

Historic operations on 1318 Niagara Street may have contaminated Subject Properties soil with PCBs. This site is considered an REC.

8.0 SITE RECONNAISSANCE

Mr. Cody Martin from C&S performed the Phase I ESA site visit at the Subject Properties on August 28, 2015.

Site observations were documented on the Phase I Environmental Site Assessment Checklist provided in *Appendix G* and a photographic log detailing the Subject Properties and surroundings provided in *Appendix H*.

The objective of the site investigation was to identify physical and/or visual evidence indicative of an obviously recognizable environmental condition, such as:

- Soil discoloration
- Stained surfaces
- Stressed and/or dead vegetation
- Spills, leaks, leachate, and/or discolored surface waters
- Evidence of previous fire damage
- Evidence of waste disposal
- Barrels, drums, or other containers
- Areas of subsidence or fill

In addition, there are a variety of physical and visual signs that may potentially indicate the presence of an obviously recognizable subsurface condition, such as:

- Vent pipes or fill ports associated with underground storage tanks
- Aboveground storage tanks
- Pipelines
- Electrical transformers and abandoned pads
- Rail yards
- Well casings or riser pipes associated with groundwater monitoring wells
- Landfills or dumps
- Surface impoundments or lagoons

8.1 Exterior Observations - Subject Properties

General Observations

1360 Niagara Street

At the time of the site investigation, 1360 Niagara Street was occupied by a four-story building with asphalt parking lot on the east and south sides of the building. Four monitoring wells were observed around the building. Disconnected piping and electric utilities for the former UST removed in 1998 located at the northeast corner of the building.

1340 Niagara Street

This parcel is vacant. Buildings that occupied this parcel have been demolished. Bricks and building debris piles are located in the center of the parcel. Concrete slab from the former structure extends throughout most of the parcel with an asphalt parking lot on the western portion of the property. A former driveway is along the southern border of the property. One monitoring well is in the driveway and up to 10 monitoring wells have been observed in the parking lot.

1336 Niagara Street

This parcel is vacant. Buildings that occupied this parcel have been demolished. Concrete slab from a former structure was observed on the southwest portion of the property. One monitoring well is on this parcel.

8.1.1 Other Relevant Exterior Features - Subject Properties

Consistent with ASTM E-1527-05 the following items are to be documented during the course of the exterior grounds investigation:

Aboveground and Underground Storage Tanks

There is no evidence of underground storage tanks (UST) or aboveground storage tanks (AST) at the Subject Properties..

Noxious Odors

Noxious odors were not detected at the time of the site investigation.

Drums and Containers

At the time of the site Investigation, three containers of sodium solution for fire proofing leather were observed in the Garrett Leather building.

Hazardous and Regulated Materials

There is no evidence indicating the Subject Properties currently or historically contained hazardous and regulated materials.

PCB-Containing Equipment

Polychlorinated biphenyls (PCBs) are typically associated with fluid-cooled (wet) electrical transformers, large capacitors, wet switchgear, fluorescent light ballasts, window caulking, and hydraulic oils manufactured between the early 1940s and the late 1970s. No PCB-containing equipment was observed; however, the presence of PCBs may be possible given the age of the building.

Pits, Ponds or Lagoons

At the time of the investigation, no pits, ponds or lagoons were observed at the Subject Properties.

Stained or Discolored Soil or Pavement

At the time of the investigation, no stained or discolored soil or pavement was observed.

Stressed Vegetation

No evidence of stressed vegetation was observed at the time of the site investigation.

Evidence of On-Site Disposal of Solid Waste

At the time of the site investigation, no evidence of solid waste disposal or dumping was observed at the Subject Properties.

Wastewater and Stormwater Management

At the time of the site investigation, no wastewater or stormwater drains or sumps were observed at the Subject Properties.

Wells (dry wells, irrigation, monitoring, water supply, etc.)

At the time of the site investigation, approximately 15 monitoring wells were observed across the Subject Properties. These monitoring wells were installed for the monitoring and remediation of the ChemCore spill at 1382 Niagara Street.

Potable Water Supply

The Subject Properties obtains its potable water supply from the City of Buffalo.

Pools of Liquid

At the time of the site investigation, no pools of liquid was observed.

Asbestos

The use of asbestos in building materials was largely banned by 1980. No asbestos materials were observed during site visit. However, based on the date of construction at the Subject Properties, prior to 1980, it is possible asbestos-containing materials are on site.

Lead-Based Paint

The use of lead-based paint (LBP) is typically associated with buildings constructed before 1977. Based on the date of construction at the Subject Properties, the presence of lead based paint is a possibility.

Septic Systems

At the time of the site investigation, no evidence of septic systems were observed at the Subject Properties.

8.2 Interior Observations – Subject Properties

1360 Niagara Street is occupied by a four-story building operated by Garrett Leather. The main uses of the building are for office space, leather storage, leather cutting and shipping/receiving. Heating and water systems are located in the basement. Some cleaning chemicals and paints are stored in the basement.

The first floor is used for office space, showroom and shipping/receiving department. Second floor is used for leather storage and cutting. Third floor is used for custom color matching and photographic studio. Water-based paints are stored on this floor. Fire proofing are conducted on this floor using a sodium and water solution. The fourth floor is used only for leather storage.

8.3 Site Reconnaissance Conclusions

A site investigation of the Subject Properties was performed August 28, 2015. The interior and exterior of the buildings had no significant damage or deterioration. There was no evidence of RECs observed during the site visit.

9.0 INTERVIEWS

An interview was conducted during the site investigation with Jeffery Vogel Garrett Leather General Manager. No RECs were identified during this interview. No other interviews were conducted.

10.0 FINDINGS AND RECOMMENDATIONS

C&S Engineers, Inc. completed this Phase I Environmental Site Assessment with the scope and limitations of ASTM E 1527-13 on the 1.82-acre Subject Properties identified on Figure 1 of this report. Based on information gathered during the course of this Phase I Environmental Site Assessment including a database search report, the site investigation, and interviews documented in this report, the following has been identified.

10.1 Site Background

Based on the results of this ESA, the following findings can be made:

1. The Subject Properties with the address 1360 Niagara Street is a four story commercial building operated by Garrett Leather. Properties 1336 and 1340 Niagara Street are vacant.

2. The Subject Properties are owned by Garrett Holdings LLC.

3. The Subject Properties is located in an urban area that has been heavily developed for more than 100 years.

4. According to historical records, 1360 Niagara Street was first developed as residential properties and a lubricating factory by 1889. 1340 and 1336 Niagara Street was occupied by a planning mill from 1889 to 1986. The Mentholatum Building was constructed in 1919. Surrounding historic property uses consist of commercial and industrial from 1889 to present.

5. ASTs and USTs for the Mentholatum Building and use of coal for fuel at a former planning mill at 1340 Niagara Street, were all historically located on the Subject Properties. The potential for releases associated with these historic property uses is considered a REC.

6. There were no hazardous or regulated materials observed onsite.

7. Based on the date of construction at the Subject Properties, between 1970 and 1978, asbestos-containing materials are potentially present on site.

8. The Subject Properties is not located within the mapped limits of either the 100-year or 500-year flood zones.

9. There are approximately 15 groundwater wells located at the Subject Properties.

10. The Subject Properties (1360 Niagara Street) is identified in NY UST, NY HIST AST, RCRA NonGen, and NY MANIFEST environmental databases.

10.2 Recognized Environmental Conditions

The following Recognized Environmental Conditions were identified:

- The 12,000 -gallon #2 fuel oil UST reported by the City of Buffalo Fire Protection Bureau as being "slushed" (filled in with an inert material) in 1990 represents a REC due to the limited information available to its regulatory statuts and condition. UST

- The contamination at the former ChemCore, Inc. property Spill Number 915176 has migrated towards the Subject Properties and represents a REC to the Subject Properties.

- Historic operations on 1318 Niagara Street used PCB containing material. Subsurface soils onsite were contaminated with PCB. It is likely that soil on the Subject Properties may have been impacted from this site. Therefore, this site represents an REC to the Subject Properties.

10.3 Controlled Recognized Environmental Conditions

No Controlled Recognized Environmental Conditions were identified.

10.4 Historical Recognized Environmental Conditions

No Historical Recognized Environmental Conditions were identified.

10.5 De minimus Conditions

De minimus conditions are defined as conditions that generally do not present a threat to human health or the environment and would not be subject to action of appropriate governmental agencies. A de minimus condition is not considered a REC. No de minimus conditions were found.

10.6 Data Failure

ASTM 1527-13 defines a data failure as a failure to achieve the historical research objectives of all appropriate inquiry even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Specifically, the historical research objectives include identifying all obvious uses of the site from the present, back to the site's first developed use, or back to 1938, whichever is earlier.

A data failure was not encountered within Scope of Work of this assessment.

10.7 Data Gap

ASTM 1527-13 defines a data gap as a lack of or an inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance, interviews, data failure, or lack of a User Questionnaire.

For this Phase I ESA, an environmental lien search were not conducted, but based on current operations of the Subject Properties, this does not represent a significant data gap.

10.8 Opinion on Findings

Recognized Environmental Conditions (RECs) were discovered during this Phase I Environmental Site Investigation. C&S has found issues that would represent an additional environmental concern for the Subject Properties. Further environmental assessment of the Subject Properties is recommended. In response, C&S completed a Phase II ESA intended to characterize the RECs as described in the subsequent sections of this report.

11.0 PHASE II ENVIRONMENTAL SITE ASSESSMENT

11.1 Phase II ESA Scope and Objectives

This Phase II ESA is intended to provide additional information on the RECs that were discovered during the Phase I ESA. The scope of the Phase II ESA includes: a subsurface investigation; soil sample collection; and analytical testing.

The site investigation was conducted to assess whether the soil has been impacted by:

- Historic underground storage tanks
- Historic commercial property uses (manufacturing facilities, planning mill, tin shop, Mentholatum Company)
- Historic gasoline stations across Niagara Street
- ChemCore TCE Spill (1382 Niagara Street)
- 1318 Niagara Street (PCB soil contamination)

11.2 Site Investigation Methods

11.2.1 Subsurface Investigation

NYEG Drilling LLC was contracted to drill 22 soil borings from ground surface to approximately 16 feet bgs or to refusal. Drilling was conducted using a truck mounted Geo-probe drilling unit. Each boring location was continuously sampled in 3 to 4 feet intervals using a one-inch by four-foot steel sampling tube fitted with a disposable acetate liner. All non-disposable sampling equipment was decontaminated between runs and between drill locations to avoid potential cross contamination of samples.

Figure 2 Sample Locations shows the locations (EB-1 through EB-22) that were drilled for this investigation.

Material description and physical evidence of petroleum contamination (staining or sheen) of each direct push sample was recorded on soil boring logs provided in *Appendix I.*

11.2.2 Field Screening and Sampling

A portion of each direct push sample was collected and placed in a plastic zip lock bag. Head space readings for each sample were conducted using a Mini-Rae 2000 photo-ionization detector ("PID") with an 11.7 volt lamp. The PID head space readings for all samples and the depths of the selected lab analysis samples are recorded on the soil boring logs provided in *Appendix I.*

11.2.3 Analytical Testing

Soil samples were selected for lab analysis based on staining, odor, PID readings or depth. The soil samples were analyzed for Volatile Organic Compounds (VOC), Semi-Volatile Organic Compounds (SVOC), PCB and Metals listed in NYSDEC's Part 375 Soil Cleanup Objective. Alpha Analytical, Inc. was contracted to analyze soil samples for VOCs using Method 8260B, SVOCs using Method 8270, PCBs using EPA Method 8081 and TAL Metals using EPA Method 6010.

12.0 PHASE II ESA FINDINGS

The Phase II ESA was conducted on August 24 through 26, 2015 and included borings at the following locations:

- Eleven soil borings (EB-1 through EB-8, EB-20, EB-21 and EB-22) on 1360 Niagara Street.
- Five borings (EB-9, EB-10, EB-11, EB-12 and EB-13) on 1340 Niagara Street.
- Six borings (EB-14, EB-15, EB-16, EB-17, EB-18 and EB-19) on 1336 Niagara Street.

Soil samples were taken at each of the borings, the table below summarizes the location, depth and number of samples taken for lab analysis.

TABLE 12-1: SUMMARY OF COLLECTED SOIL SAMPLES

Boring ID	*Total Depth[1] (ft. bgs)*	*Total Samples Collected*	*Interval Sampled (ft. bgs)*	*Material Type*
EB-1	11	1	5	Native
EB-2	12	1	0-4	Fill
EB-3	12	1	4-8	Fill
EB-5	11	1	7	Fill
EB-6	8	1	0-2	Fill
EB-7	7.5	1	2-4	Fill
EB-8	7	1	0-2	Fill
EB-9	13.5	2	0.5-2	Fill
			12	Fill
EB-10	9	1	6	Native
EB-11	16	1	0.5-1.5	Fill
EB-12	16	1	8-9	Fill
EB-13	16	1	2-3	Fill
EB-14	16	1	2-3	Fill
EB-15	7	2	Surface (0-3”)	Fill
			2	Fill
EB-16	10.5	1	4	Fill
EB-17	12	1	0-4	Fill

EB-18	12	1	0-2	Fill
EB-19	10	1	0-2	Fill
EB-20	5	1	0-2	Fill
EB-21	12	1	0-3	Fill
EB-22	12	1	0-3	Fill

Note: No samples were collected from EB-4.

1: Feet below ground surface.

12.1 Subsurface Conditions

Each soil sample retrieved from the geo-probe was observed for general soil type, estimated moisture content and any evidence of contamination. A representative composite sample was collected for field screening with a PID.

12.1.1 Simplified Site Stratigraphy

The soils from borehole samples were classified in the following simplified categories:

Asphalt/Gravel- Asphalt and gravel sub-base thickness observed between 4 to 17 inches.

Fill- Anthropogenic sources of any one, or mixture, of the material re-worked to build a site to a defined grade. This material can include:

Crushed Rock	Lumber
Sand	Ash/Cinders
Silt	Ceramics
Clay	Bricks
Plastics	Metal
Construction Debris	

Clay- Brown stiff and dense

Fill was observed across the Subject Properties from beneath the asphalt to 3-4 feet bgs. Directly beneath the fill material was native clay. Based on site investigation reports from the ChemCore site, bedrock was observed at 18 feet bgs. The former roadway between 1360 and 1360 has a moderate grade change dropping 13 feet below Niagara Street. Bedrock was encountered at the bottom of the former roadway at EB-20 4 feet below the asphalt surface. The native clay soil was observed directly beneath the fill material from 4 feet bgs to the end of the borings at 16 feet bgs.

12.1.2 Hydrogeologic Conditions

Groundwater encountered during the assessment was limited, likely due to the fine-grained nature of the on-site soils. When encountered, the groundwater appeared to be perched, rather than continuous. The fine-grained nature of the on-site soils also suggests that significant migration of groundwater is not likely.

12.2 Lab Analytical Data

Soil samples were analyzed for VOC using EPA Method 8260B, SVOC using EPA Method 8270, PCB using EPA Method 8082 and TAL Metals using EPA Method 6010. Samples were relinquished to the laboratory on August 24 – 26, 2015. Analytical results were issued on September 2, 3 and 9, 2015.

Total of twenty-three soil samples were collected from all the twenty-two borings. Soil results are discussed below in comparison to the soil cleanup objectives ("SCO") outlined in NYSDEC 6NYRR Part 375-6.8(b).

TABLE 12-2: SUMMARY OF SAMPLES EXCEEDING SOIL CLEANUP CRITERIA

	Unrestricted	Residential	Restricted Residential	Commercial	Industrial
EB-1	-	-	-	-	-
EB-2	1	-	6	2	2
EB-3	-	-	-	-	-
EB-5	-	-	-	-	-
EB-6	4	1	3	-	-
EB-7	1	-	1	-	1
EB-8	-	-	-	-	-
EB-9	1	-	-	-	-
EB-10	-	-	-	-	-
EB-11	-	-	-	-	-
EB-12	1	-	-	-	-
EB-13	4	-	1	-	1
EB-14	3	1	4	1	-
EB-15	5	2	4	-	1
EB-16	1	-	3	1	4
EB-17	2	2	4	-	1
EB-18	2	-	2	1	4
EB-19	4	-	2	1	5
EB-20	-	-	-	-	1

EB-21	4	-	4	2	6
EB-22	3	1	2	4	2

12.2.1 Fill Material

VOCs

Three soil/fill samples exceeded for VOCs. All three samples exceed for Unrestricted Use SCOs for Trichloroethene and/or acetone. Two soil/fill samples exceeded Restricted Residential for Tetrachloroethene.

Figure 3 Soil Sample Results shows the location of samples that exceed NYSDEC standards. *Appendix J* provides a table of detected VOCs and *Appendix K* provides laboratory analytical report.

SVOCs

Ten soil/fill samples exceeded for SVOCs. Exceedances of SVOCs typically occur in discrete deposits of ash or soil intermixed with ash/cinders. Samples indicate that detected SVOCs present in these deposits are classified as polycyclic aromatic hydrocarbons ("PAH"). PAH compounds are usually associated with burning of organic material (i.e. wood, coal or petroleum products). The presence of these compounds are consistent with the historical industrial uses of the site.

Metals

All soil/fill samples exceeded for metal contaminants. Five soil/fill samples exceeded Industrial Use for arsenic. Three soil samples exceeded for Commercial Use for copper and one sample exceeded Commercial Use for Lead.

All soil samples exceeded for total chromium. NYSDEC standards separate chromium into trivalent and hexavalent. Soil samples were collected for total chromium and the results need to be compared to the more restrictive hexavalent chromium SCO.

PCBs

Three soil/fill samples exceeded total PCB standards. Samples collected from boring locations EB-19 and EB-22 exceed Commercial Use and EB-21 exceed Unrestricted Use SCO.

The extent of soil/fill contamination is generally limited to the horizontal and vertical extent of the fill layer. Fill deposits are heterogeneous and consist of a mixture of sand, silt, clay, ash/cinders, organic matter and demolition debris. Layers of ash/cinders have been observed to be 3 to 4 feet thick with scattered deposits of coal, slag, coal tar and petroleum impacted soil.

12.2.2 Native Soil

Two soil samples were collected from the native clay material (EB-1-5ft and EB-10-6ft). Except for the chromium exceedance above Unrestricted Use, no other analytes exceeded SCOs.

12.3 Soil Contamination

Soil contamination was limited to the top 3 to 4 feet of fill material which was observed throughout the Subject Properties. Fill material consists of a mix of variable amount of sand, silt, clay, gravel and coal. Due to the heterogeneous nature of the fill material, no defined point sources of contamination can be identified. General sources of contamination are numerous and are related to previous commercial and industrial activities and unregulated depositions of urban fill across the site. Contamination was observed to be limited to the fill material and laboratory analysis indicates the fill material has not impacted the native material underneath.

13.0 PHASE II ESA SUMMARY

This section summarizes the results of the Phase II Environmental Site Assessment of the Subject Properties.

13.1 Findings

Based on the results of this Phase II ESA, the following findings are made:

1. Fill material was encountered across the Subject Properties from just below the asphalt and gravel sub-base to 3-4 feet bgs. Native clay material was observed directly beneath the fill.

2. Fill material had exceedances above Commercial and Industrial Use SCOs for PAH compounds, copper, lead and arsenic. Samples from native clay exceeded for total chromium above Unrestricted Use SOCs.

3. PCBs were detected above Commercial Use criteria from the sample collected at EB-19, location adjacent to 1318 Niagara Street (Site Number E915213). Two samples collected along the western property line between 1360 Niagara Street and the railroad line (EB-21 and EB-22) exceeded Commercial and Unrestricted Use criteria for PCBs. .

4. Groundwater appeared to be perched in the soils at intervals that suggest the water was isolated in previously disturbed layers. Significant amounts of groundwater were not encountered during the boring program. Therefore, no groundwater analysis was completed.

13.2 Impacts to the Subject Properties

Soil contamination appears to be limited to the top 3 to 4 feet of fill material that was observed throughout the Subject Properties. Currently, the area of contamination is covered with a layer of asphalt and gravel sub-base or concrete slabs; however, due to the shallow depth of the contamination exposure to impacted soil is likely if any site improvement (i.e. earthwork) is conducted.

13.3 Recommendations

Based on soil conditions and the location of contamination, C&S recommends the following:

1. The removal of impacted material to a depth of 4 feet bgs for off-site disposal.

2. Once impacted material is removed, the collection of confirmatory soil samples for comparison to NYSDEC cleanup standards.

3. The placement of clean backfill in the excavation in compacted lifts up to the existing grade.

14.0 DISCLAIMER

C&S's conclusions are based on conditions that existed on the Subject Properties on August 28, 2015. Past and present conditions that could not be observed were established on the basis of documents. C&S cannot attest to the completeness of accuracy of these materials.

This report was prepared by C&S expressly and exclusively for use by Ciminelli Real Estate Corporation, its successors and/or assigns. Except where specifically stated to the contrary, the information contained herein was provided to C&S by others and has not been verified independently or otherwise examined to determine its accuracy, completeness, or feasibility. In addition, C&S may have had to rely upon the assumptions, especially as to future conditions and events. Accordingly, neither C&S nor any person acting on its behalf (a) makes any warranty or representation, whether expressed or implied, concerning the usefulness of the information contained in this report, or (b) assumes liabilities with respect to the use of or for damages resulting from the use of any information contained in this Environmental Site Assessment (ESA) report. Further, C&S cannot promise that any assumed conditions will come to pass.

No one is authorized to rely on this report for any purpose, except to the extent that such reliance is specifically authorized in writing by C&S. Any person who intends to take action, which is in any way related to or affected by the information contained herein, should independently verify all such information. The report speaks only as of the date issued. C&S has no responsibility for updating the information herein, and therefore, it should not be assumed that any information contained herein in this ESA continues to be accurate subsequent to 180 days from the date of the site inspection.

It would be extremely expensive, and perhaps not possible, to conduct an investigation that would ensure the detection of environmental impacts at the subject site, which now are, or in the future might be, considered hazardous. This investigation does not guarantee that C&S discovered all the environmental impacts at the Subject Properties. Similarly, a property which, in fact, is unaffected by environmental impacts at the time of the assessment may later, due to natural phenomena or other intervention, become contaminated.

Except where stated to be the contrary, this ESA has been prepared solely on the basis of readily available visual observation. Except where stated to be the contrary, no demolition or removal by C&S has been accomplished to reveal hidden conditions. No testing such as the testing of materials, equipment, or systems has been performed to verify current conditions or to predict future conditions.

Future regulatory modifications, agency interpretation, or policy changes may affect the compliance status of the property.

A title search, indoor air quality, and wetland surveys were not requested as part of this project. These topics require specialized expertise. A specialty survey can be performed upon request.

ENVIRONMENTAL PROFESSIONAL STATEMENT AND QUALIFICATIONS

To the best of our professional knowledge and belief, C&S meets the definition of "environmental professional" as defined in §312.10 of 40 CFR 312.

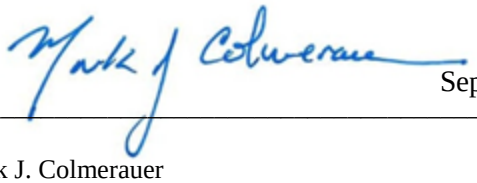
We have the specific qualifications based on education, training, and experience to assess the nature, history, and setting of the Subject Properties. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Author: Mr. Riker, BA Geology and MS in Hydrogeology, possesses 21 years of professional experience in environmental assessment, investigation, and remediation. He has extensive knowledge of Phase I Environmental Assessments.

Author's Signature:  September 22, 2015

Daniel E. Riker, P.G. Date

Project Manager: Mark Colmerauer, BS Geophysics, has 20 years of experience serving as project manager, geologist, and technician for a variety of environmental studies including Phase I/II investigations, environmental remediation, permitting, planning and GIS projects. For the last four years, Mr. Colmerauer's experience also includes coordination of SEQRA studies, GIS management, preparation and completion of Environmental Impact Statements, SHPO coordination, wetland delineation, and topographic and boundary surveys.

Project Manager's Signature:  September 22, 2015

Mark J. Colmerauer Date

APPENDIX B
CITIZEN PARTICIPATION PLAN

New York State Department of Environmental Conservation

Brownfield Cleanup Program

Citizen Participation Plan

for

Garrett Leather Site

1.83-acres of 1336, 1340 and 1360 Niagara Street

1336, 1340, and 1360 Niagara Street
Buffalo, Erie County, New York
Site No. C915302

April 2016

Contents

* * * * *

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 site's investigation and cleanup process.

Applicant: **Ciminelli Real Estate Corporation**
Site Name: **Garrett Leather (Site)**
Site Address: **1336, 1340 and 1360 Niagara Street**
Site County: **Erie**
Site Number: **C915302**

1. What is New York's Brownfield Cleanup Program?

New York's Brownfield Cleanup Program (BCP) works with private developers to encourage the voluntary cleanup of contaminated properties known as "brownfields" so that they can be reused and developed. These uses include recreation, housing, and business.

A *brownfield* is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. 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 a 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 (NYSDEC) which oversees Applicants that conduct brownfield site investigation and cleanup activities. An Applicant is a person who has requested to participate in the BCP and has been accepted by NYSDEC. The BCP contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. When NYSDEC 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/8450.html .

2. Citizen Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision makers form or adopt final positions.

Involving citizens affected and interest in site investigation and cleanup programs is important for many reasons. These include:

- Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment

- Improving public access to, and understanding of, issues and information related to a particular site and that site's investigation and cleanup process

- Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process

- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community

- Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision making.

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

Project Contacts

Appendix A identifies NYSDEC project contact(s) to whom the public should address questions or request information about the site's investigation and cleanup 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.

Locations of Reports and Information

The locations of the reports and information related to the site's investigation and cleanup program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC web site. If this occurs, NYSDEC will inform the public in fact sheets distributed about the site and by other means, as appropriate.

Site Contact List

Appendix B contains the site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and cleanup 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 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 planning board chairperson 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;
- location(s) of reports and information.

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 NYSDEC project contact(s) identified in Appendix A. Other additions to the site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

CP Activities

The table at the end of this section identifies the CP activities, at a minimum, that have been and will be conducted during the site's investigation and cleanup program. The flowchart in Appendix D shows how these CP activities integrate with the site investigation and cleanup process. The public is informed about these CP activities through a CP website, fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup process that match up with the CP activities are explained briefly in Section 5.

- **CP Website, 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 clean up 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 cleanup.

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

This CP Plan may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the site contact list and changes in planned citizen participation activities.

Technical Assistance Grant

NYSDEC must determine if the site poses a significant threat to public health or the environment. This determination generally is made using information developed during the investigation of the site, as described in Section 5.

If the site is determined to be 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 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 interests 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 site.

For more information about TAGs, go online at http://www.dec.ny.gov/regulations/2590.html

Note: The table identifying the citizen participation activities related to the site's investigation and cleanup program follows on the next page:

Citizen Participation Requirements (Activities)	Timing of CP Activity(ies)
Application Process:	
• Prepare site contact list • Establish document repositories	At time of preparation of application to participate in the BCP.
• Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day public comment period • Publish above ENB content in local newspaper • Mail above ENB content to site contact list • Conduct 30-day public comment period	When NYSDEC determines that BCP application is complete. The 30-day public comment period begins on date of publication of notice in ENB. End date of public comment period is 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:	
• Prepare Citizen Participation (CP) Plan	Before start of Remedial Investigation
Before NYSDEC Approves Remedial Investigation (RI) Work Plan:	
• Distribute fact sheet to site contact list about proposed RI activities and announcing 30-day public comment period about draft RI Work Plan • Conduct 30-day public comment period • Conduct Public Meeting	Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, public comment periods will be combined and public notice will include fact sheet. Thirty-day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 30-day public comment period
After Applicant Completes Remedial Investigation:	
• Distribute fact sheet to site contact list that describes RI results • Conduct Public Meeting	Before NYSDEC approves RI Report.
Before NYSDEC Approves Remedial Work Plan (RWP):	
• Distribute fact sheet to site contact list about proposed RWP and announcing 30-day public comment period • Public meeting by NYSDEC about proposed RWP • Conduct 30-day public comment period	Before NYSDEC approves RWP. Thirty day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 30-day public comment period.
Before Applicant Starts Cleanup Action:	
• Distribute fact sheet to site contact list that describes upcoming cleanup action • Conduct Public Meeting	Before the start of cleanup action.

Citizen Participation Requirements (Activities)	Timing of CP Activity(ies)
After Applicant Completes Cleanup Action:	
• Distribute fact sheet to site contact list that announces that cleanup action has been completed and that summarizes the Final Engineering Report • Conduct Public Meeting • Distribute fact sheet to site contact list announcing issuance of Certificate of Completion (COC)	At the time NYSDEC approves Final Engineering Report. These two fact sheets are combined if possible if there is not a delay in issuing the COC.

3. Major Issues of Public Concern

This section of the CP Plan identifies major issues of public concern that relate to the site. Additional major issues of public concern may be identified during the course of the site's investigation and cleanup process.

BCP Site soils consist of three to four feet of urban fill material. Based on investigations conducted to date, the known contaminants of concern in the soil include PAHs at depths of up to four feet, metals including arsenic, copper, lead, mercury, zinc, etc. at depths of up to four feet, total chromium located in native clay, several chlorinated solvents at depths of up to four feet and a few PCBs at depths of up to four feet.

Groundwater at the Site was investigated due to current remedial monitoring at the ChemCore property to the adjacent north. Groundwater contamination exists at the site at 30 to 50 feet below grade within the bedrock due to a migrating groundwater plume containing chlorinated solvents emanating from ChemCore. Out of six monitoring wells located on Site, one exceeded NYS Ambient Water Quality Standards and Guidance Values (TOGS 1.1.1 for all four of the contaminants of concern, the following chlorinated solvents: cis-1,2-dichloroethene (DCE), tetrachloroethene (PCE), trichloroethene (TCE) and vinyl chloride (VC). Additionally, five of the six monitoring wells exceeded TOGS 1.1.1 for one or more of the contaminants above and one well did not contain concentrations of chlorinated solvents of TOGS 1.1.1.

The variation in analyte concentrations across the Site indicates that the source of contamination is the variable urban fill material and no discrete source is located on-site or off-site. Contaminated soil is expected to be limited to the top three to four feet of fill material. The Site is 1.83 acres.

The presence of the contamination is limiting the future use and re-investment opportunities on the parcel. Stakeholders in the remediation of the Site include the City of Buffalo, local residents and users of adjacent buildings. See Appendix B for a contact list of stakeholders.

4. Site Information

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

Site Description

Location: 1336, 1340 and 1360 Niagara Street, Buffalo, Erie County

Setting: Urban

Site size: 1.83 acres

Adjacent properties:

- **East** (Buffalo Sewer Authority Metering Station and Auto Repair Shops)
- **South** (Commercial Building and Vacant Lot)
- **West** (Railroad and NYS Thruway)
- **North** (Vacant Lot)

History of Site Use, Investigation, and Cleanup

The land comprising the Site was first developed as multiple residential properties and a lubricating factory by 1889. According to historical Sanborn Maps, from 1889 to 1986 the Site was occupied by a planing mill. In 1919, the Mentholatum Building was constructed, which operated as a health and wellness company that manufactured various pharmaceutical and skin care products until 1998. Garrett Leather purchased the property in 2001, with operations including treatment and warehousing of bulk leather products.

Aboveground storage tanks and underground storage tanks for the Mentholatum Building historically used for fuel at a former planing mill were all located on Site. In addition to the presence of contaminants in on-Site urban fill, groundwater contamination at the Site appears to be migrating from ChemCore (located north of the Site). Past uses of the Site, use of fill throughout the Site and groundwater effects from the ChemCore Site have all contributed to contamination

Urban fill is present at the Site at depths ranging from about three to four feet below grade. Urban fill is defined as material coming from anthropogenic sources of the material re-worked to build a site to a defined grade. The urban fill material at the Site contains:

- Crushed Rock
- Sand
- Silt
- Clay
- Plastics
- Construction Debris
- Lumber Ash/Cinders
- Ceramics
- Bricks
- Metal

Native soil encountered beneath the fill consisted of Silty Clay – organic clays of medium to high plasticity and variable silt content with a reddish brown clay appearance.

Groundwater migration on site is limited due to fine-grained nature of the soil. Based on a review of NYSDEC data, the Site is not underlain by any mapped principal or primary aquifers. Groundwater at and in the vicinity of the Site is not used for public drinking water supply.

5. Investigation and Cleanup Process

Application

The Applicants have applied for and been accepted into New York's Brownfield Cleanup Program as a Volunteer. This means that the Applicants were 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 Applicants in its Application proposed that the site will be used for commercial and residential purposes.

To achieve this goal, the Applicants will conduct cleanup activities at the site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement executed by NYSDEC and the Applicants set forth the responsibilities of each party in conducting these activities at the site.

Remedy Selection

When the investigation of the Site has been determined to be complete, the project likely would proceed in one of two directions:

1. The Applicants may recommend in its investigation report that no action is necessary at the Site. In this case, NYSDEC would make the investigation report available for public comment for 30 days. NYSDEC then would complete its review, make any necessary revisions, and, if appropriate, approve the investigation report. NYSDEC would then issue a Certificate of Completion (described below) to the Applicants.

or

2. The Applicants may recommend in its investigation report that action needs to be taken to address Site contamination. After NYSDEC approves the investigation report, the Applicants may then develop a cleanup plan, officially called a Remedial Work Plan. The Remedial Work Plan describes the Applicants' proposed remedy for addressing contamination related to the Site.

When the Applicants submit a proposed Remedial Work Plan for approval, NYSDEC would announce the availability of the proposed plan for public review during a 30-day public comment period.

Cleanup Action

NYSDEC will consider public comments, and revise the draft cleanup plan if necessary, before approving the proposed remedy. The New York State Department of Health (NYSDOH) must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy.

The Applicants may then design and perform the cleanup action to address the site contamination. NYSDEC and NYSDOH oversee the activities. When the Applicants complete cleanup activities, they will prepare a final engineering report that certifies that cleanup requirements have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the cleanup is protective of public health and the environment for the intended use of the Site.

Certificate of Completion

When NYSDEC is satisfied that cleanup requirements have been achieved or will be achieved for the Site, it will approve the final engineering report. NYSDEC then will issue a Certificate of Completion (COC) to the Applicant. The COC states that cleanup goals have been achieved, and relieves the Applicants from future liability for Site-related contamination, subject to certain conditions. The Applicants would be eligible to redevelop the Site after it receives a COC.

Site Management

Site management is the last phase of the Site cleanup program. This phase begins when the COC is issued. Site management may be conducted by the Applicants under NYSDEC oversight, if contamination will remain in place. Site management incorporates any institutional and engineering controls required to ensure that the remedy implemented for the Site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan.

An institutional control is a non-physical restriction on use of the Site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup 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. Examples include: caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that is pumping and treating groundwater. Site management continues until NYSDEC determines that it is no longer needed.

Appendix A
Project Contacts and Locations of Reports and Information

Project Contacts

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

New York State Department of Environmental Conservation (NYSDEC):

Anthony Lopes
Project Manager
NYSDEC Region 9
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, NY 14203-2999
716.851.7220

Kristen Davidson
Citizen Participation Specialist
NYSDEC Region 9
270 Michigan Avenue
Buffalo, NY 14203-2915
716.851.7220

New York State Department of Health (NYSDOH):

Harolyn Hood
Project Manager
NYSDOH
Empire State Plaza – Corning Tower,
RM 1787
Albany, NY 12237
(518) 402-7860

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Buffalo and Erie County Central Library
1 Lafayette Square
Buffalo, NY 14203
Attn: April Tompkins
Phone: 716.858.7180

NYSDEC 9
270 Michigan Avenue
Buffalo, NY 14203
Attn: David Locey
Phone: 716.851.7220
Hours: Monday to Friday 9 am to 5 pm
(call for appointment)

The citizen participation website is under construction. A URL will be provided when the website is functional. The website provides information for the interested and affected public to

help understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.

Appendix B Site Contact List

1. Local Government - City of Buffalo

Erie County Executive:

Mark Poloncarz
Edward A. Rath County Office Building
95 Franklin Street
Buffalo, NY 14202
http://www2.erie.gov/exec/index.php?q=email-mark

Chief Executive Officer – City of Buffalo:

Mayor Byron W. Brown
City of Buffalo
201 City Hall, 65 Niagara Square
Buffalo, New York 14202
Mayor@city-buffalo.com

City of Buffalo Planning Board Chairman:

James A Morrell, Chairman
City of Buffalo Planning Board
901 City Hall, 65 Niagara Square
Buffalo, NY 14202
(716) 851-5035
mgrunzweig@city-buffalo.com

Erie County Department of Environment and Planning Commissioner

Maria R. Whyte
Erie County Department of Environment and Planning
95 Franklin Street, 10th Floor
Buffalo, NY 14202
maria.whyte@erie.gov

2. Residents, Owners and Occupants of Property and Property Adjacent to Site:

HJM Enterprises, LLC.
198 Potomac Avenue
Buffalo, NY 14213

Thomas G. Decarlo
1351 Niagara Street
Buffalo, NY 14213

City of Buffalo Perfecting Title
65 Niagara Square, Room 907
Buffalo, NY 14202

City of Buffalo Sewer Authority
1343 Niagara Street
Buffalo, NY 14213

Marlene Z. Decarlo
37 Gatehouse Lane
East Amherst, NY

Pecoraro Holdings LLC
1379 Niagara Street
Buffalo, NY 14213

Martin Pecoraro
1379 Niagara Street
Buffalo, NY 14213

Phyllis Brands
1329 Niagara Street
Buffalo, NY 14213

3. Local Media:

Local Newspaper:

Buffalo News
1 News Plaza
Buffalo NY 14240
(716) 849-3434
http://www.buffalonews.com/classifieds/

Local Television:

WGRZ – TV Channel 2
259 Delaware Avenue
Buffalo, NY 14202
(716) 849-2200

http://www.wgrz.com/news/default.aspx

WIVB – TV Channel 4
2077 Elmwood Avenue
Buffalo, NY 14207
(716) 874-4410
http://www.wivb.com/subindex/news

WKBW – TV Channel 7
7 Broadcast Plaza
Buffalo, NY 14202
(716) 840-7777
http://www.wkbw.com/

Radio:

WBEN 930 AM Radio
500 Corporate Parkway
Amherst, NY 14226
(716) 843-0600
http://www.wben.com

WBFO 88.7 FM Radio
Horizons Plaza
P.O. Box 1263
Buffalo, NY 14240
716-845-7000
http://www.wbfo.org/

Websites:

City of Buffalo website:
http://www.ci.buffalo.ny.us/

4. Local Water Supplier:

Buffalo Water Authority
281 Exchange Street
Buffalo, NY 14204
(716) 847-1065

5. Persons Requesting to be Placed on Contact List:

City of Buffalo Environmental Management Commission
Attn: Dr. Joseph Gardella
920 City Hall, 65 Niagara Square
Buffalo, NY 14202

6. School and Day Care Facilities:

Schools:

Valerie Kent, Principal
Buffalo Elementary School 18
750 West Avenue
Buffalo, NY 14213

Dawn DiNatale, Principal
Buffalo Public School 30
21 Lowell Street
Buffalo, NY 14213

Florence Krieter, Principal
PS 212 Leonardo daVinci High School
320 Porter Avenue
Buffalo, NY 14201

Jen Marino
EduKids at Rich's Family Center
1200 Niagara Street
Buffalo, NY 14213

Jones and Duncan's Daycare
258 Breckenridge Street
Buffalo, NY 14213

Judy Frizlen
Rose Garden Early Childhood
257 Lafayette Avenue
Buffalo, NY 14213

Nannys Group Family Daycare
205 Parkdale Avenue

Buffalo, NY 14213

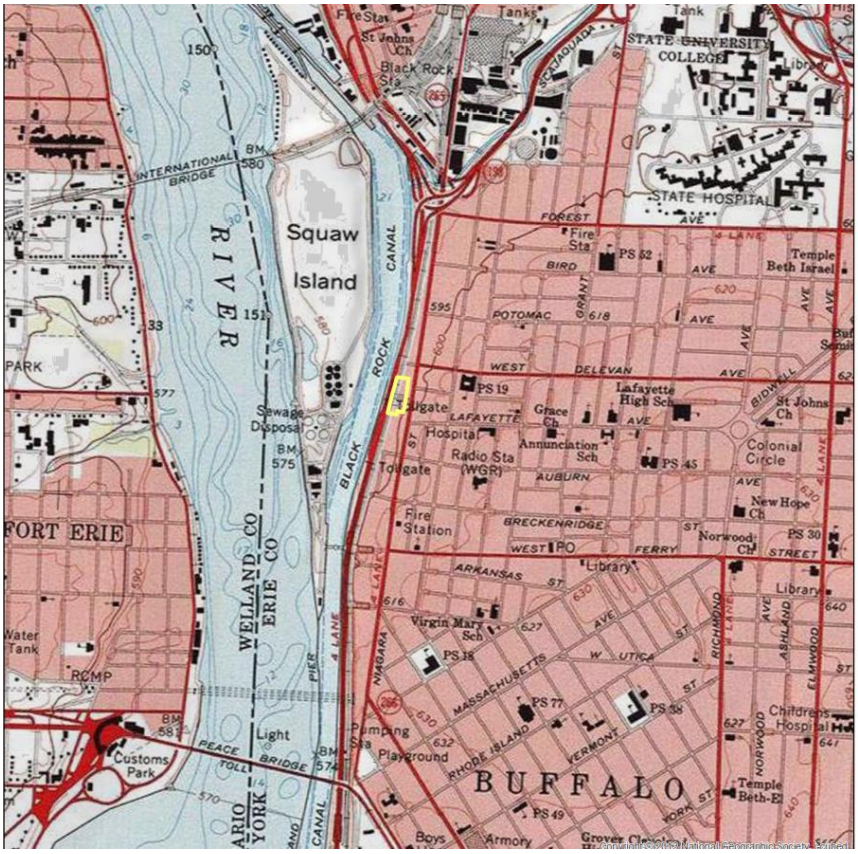
Kiddie Kampus Day Care
72 Chenango Street
Buffalo, NY 14213

Grow With Us Day Care
1792 Niagara Street
Buffalo NY 14207

Jerome Piwko
Native American Magnet School
97 West Delavan Ave
Buffalo, NY 14213

Lynn Piccirillo
International School 45
141 Hoyt Street
Buffalo, NY 14213

Appendix C- Site Location Map

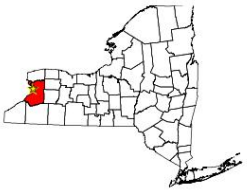


LEGEND

PROPOSED BCP BOUNDARY

BCP SITE PARCELS

LOCATION MAP



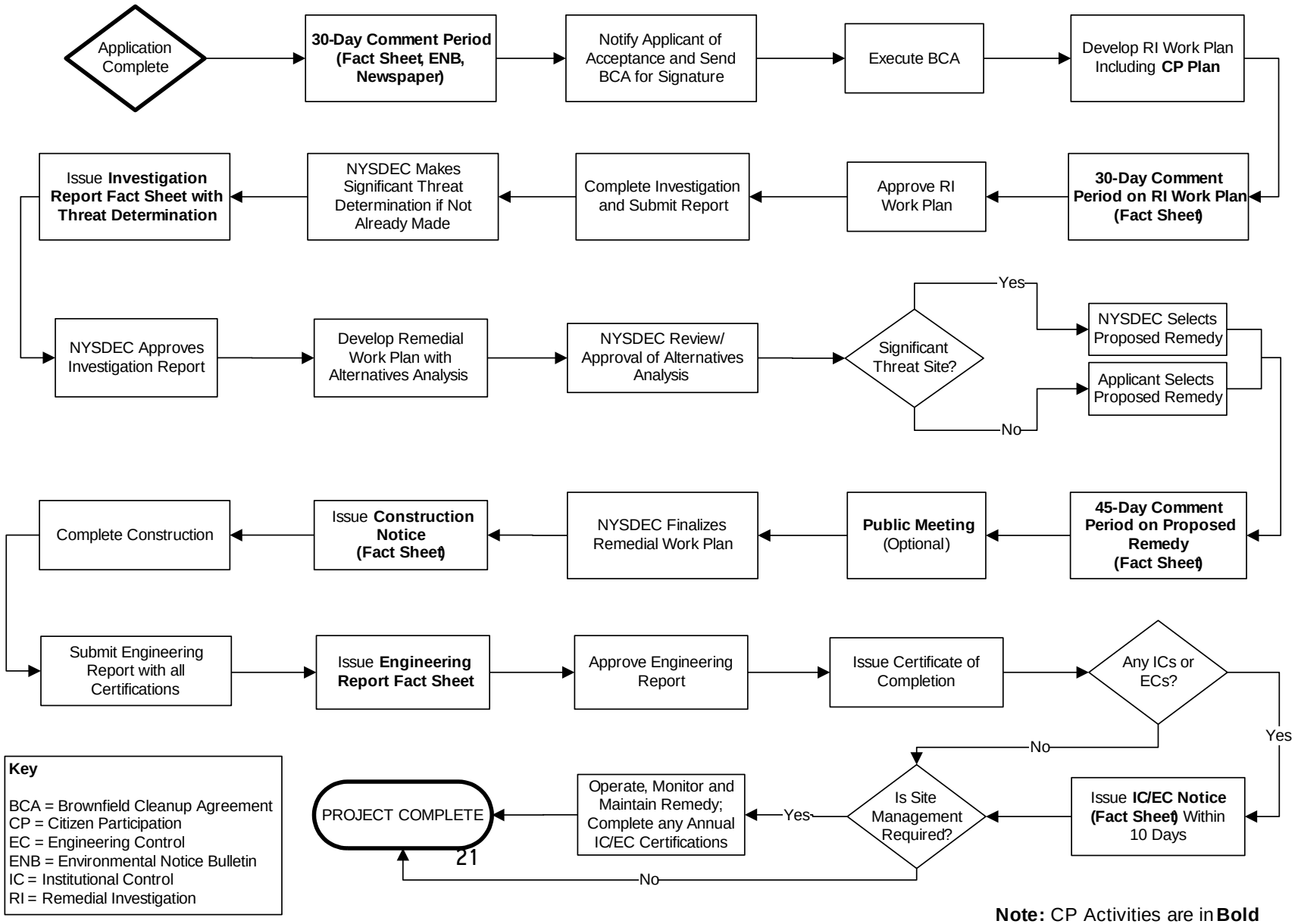
NOTES

1) BASE LAYER IS USGS 7.5 MINUTE QUADRANGLE PROVIDED BY ESRI.

2) COORDINATE SYSTEM: NAD 1983 STATEPLANE NY WEST FIPS 3103
PROJECTION: TRANSVERSE MERCATOR
DATUM: NORTH AMERICAN 1983
UNITS: FOOT US

0 625 1,250 2,500
Feet

Appendix D– Brownfield Cleanup Program Process



APPENDIX C
COMMUNITY AIR MONITORING PLAN

Community Air Monitoring Plan

for

Garrett Leather Site
1336, 1340, 1360 Niagara Street
Buffalo, Erie County, New York

Site No. C915302

April 2016

Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

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

<u>VOC Monitoring, Response Levels and Actions</u>

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate

surrogate, such as isobutylene. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

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

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

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

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

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/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 mcg/m^3 above the upwind level, work must be

stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number;
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;

(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50$_o$ C (14 to 122$_o$ F); and
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record-keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM-10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

APPENDIX D
HEALTH AND SAFETY PLAN

Health and Safety Plan for Brownfield Site Investigation And Interim Remedial Measures

Garrett Leather Site
1336, 1340, 1360 Niagara Street
Buffalo, NY 14213

Site ID # C915302

Prepared by

C&S Engineers, Inc.
141 Elm Street, Suite 100
Buffalo, New York 14203

April 2016

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APPENDICES

SECTION 1 – GENERAL INFORMATION

The Health and Safety Plan (HASP) described in this document will address health and safety considerations for all those activities that personnel employed by C&S Engineers, Inc., may be engaged in during site investigation and remediation work at the Garrett Leather Site located on three parcels at 1336, 1340 and 1360 Niagara Street in Buffalo, Erie County, New York (Site). Figure 1 shows the approximate location of the Site. This HASP will be implemented by the Health and Safety Officer (HSO) during site work.

Compliance with this HASP is required of all C&S personnel who enter this Site. The content of the HASP may change or undergo revision based upon additional information made available to the health, safety, and training (H&S) committee, monitoring results or changes in the technical scope of work. Any changes proposed must be reviewed by the H&S committee.

Responsibilities

Project Manager…….	Daniel Riker Phone: (716) 847-1630 Cell: (716) 572-5312
Site Health and Safety Officer……....	Cody Martin Phone: (716) 847-1630 Cell: (716) 864-3752
Emergency Coordinator…….	Cody Martin Phone: (716) 847-1630 Cell: (716) 864-3752
Health and Safety Manager……	Cody Martin Phone: (716) 847-1630 Cell: (716) 864-3752

Emergency Phone Numbers

Emergency Medical Service.....911

Police: Buffalo Police Department (NYPD) 911

Hospital: Buffalo General Hospital.....(716) 859-5600

Fire: Buffalo Fire Department.....911

National Response Center .....(800) 424-8802

Poison Control Center .....(800) 222-1222
Center for Disease Control.....(800) 311-3435
NYSDEC Region 9 (Buffalo, New York) .....(716) 851-7220
C&S Engineers.....(716) 847-1630
Site Superintendent ..... TBD

Project Field Office Trailer .....(716) 847-1630

SECTION 2 - HEALTH AND SAFETY PERSONNEL

2.0 Health and Safety Personnel Designations

The following information briefly describes the health and safety designations and general responsibilities for this Site.

2.1 Project Manager (PM)

The PM is responsible for the overall project including the implementation of the HASP. Specifically, this includes allocating adequate manpower, equipment, and time resources to conduct Site activities safely.

2.2 Health and Safety Manager

- Has the overall responsibility for coordinating and reporting all health and safety activities and the health and safety of Site Workers.
- Must have completed, at a minimum, the OSHA 30-Hour Construction Safety Training, and either the 24-Hour training course for the Occasional Hazardous Waste Site Worker or the 40-Hour training course for the Hazardous Waste Operations Worker that meets OHSA 29 CFR 1910.
- Must have completed the 8-Hour Site supervisor/manager's course for supervisors and managers having responsibilities for hazardous waste Site operations and management.
- Directs and coordinates health and safety monitoring activities.
- Ensures that field teams utilize proper personal protective equipment (PPE).
- Conducts initial on-site specific training prior to Site Workers commencing work.

- Conducts and documents daily and periodic safety briefings.
- Ensures that field team members comply with this HASP.
- Immediately notifies the Construction Manager (CM) Project Manager and Superintendent of all accident/incidents.
- Determines upgrading or downgrading of PPE based on Site conditions and/or real time monitoring results.
- Ensures that monitoring instruments are calibrated daily or as the manufacturer's instructions determine.
- Reports to the CM Project Manager and Superintendent to provide summaries of field operations and progress.
- Submits and maintains all documentation required in this HASP and any other pertinent health and safety documentation.

2.3 Health and Safety Officer (HSO)

- Must be designated to the Health and Safety Manager by each Subcontractor as a Competent Person having, at a minimum, the OSHA 30-Hour Construction Safety Training
- Must schedule and attend a Pre-Construction Safety Meeting with the Health and Safety Manager to discuss the Subcontractor Safety Requirements and must attend the Weekly Subcontractor Coordination Meeting.
- Responsible for ensuring that their lower tier contractors comply with project safety requirements.
- Must make frequent and regular inspections of their work areas and activities and ensure hazards that are under their control are corrected immediately and all other hazards are reported to the Construction Manager's Project Manager and Health and Safety Manager.

- Must report all work related injuries, regardless of severity, to the Construction Manager's Project Manager and the Health and Safety Manager within 24 hours after they occur.

2.4 Emergency Coordinator

- The Emergency Coordinator or his on-site designee will, in coordination with Campus Square, LLC., implement the emergency response procedures whenever conditions at the Site warrant such action.

- The Emergency Coordinator or his on-site designee will be responsible for assuring the evacuation, emergency treatment, emergency transport of C&S personnel as necessary, and notification of emergency response units (refer to phone listing in the beginning of this HASP) and the appropriate management staff.

2.5 Site Workers

- Report any unsafe or potentially hazardous conditions to the Health and Safety Manager.

- Maintain knowledge of the information, instructions, and emergency response actions contained in the HASP.

- Comply with rules, regulations, and procedures as set forth in this HASP, including any revisions that are instituted.

- Prevent unauthorized personnel from entering work Site.

SECTION 3 - PERTINENT SITE INFORMATION

3.1 Site Location and General History

The Garrett Leather Site is located on 1336, 1340 and 1360 Niagara Street, Buffalo, Erie County, New York. The Site encompasses approximately 1.83 acres along Niagara Street. The Site lies in the northwestern portion of the City of Buffalo in a formerly industrial area. Further information concerning the Site is presented below. Figure 1 presents the Site's location.

Site Description

The Site is a portion of three tax parcels, at 1336, 1340 and 1360 Niagara Street. The Site is divided

from east to west by a "paper street', which is defined as a street that appears on maps but does not exist in reality. This feature appears as an asphalt parking lot. The Site includes a four-story, 80,000 square foot building located on the northern portion. The Site also contains vacant land that was previously the site of buildings and structures that have since been demolished with associated parking areas remaining.

The Site boundary is bordered by the following streets:

North- None

East- Niagara Street

South- None

West- NYS Thruway

Site History and Suspect Recognized Environmental Conditions

The land comprising the Site was first developed as multiple residential properties and a lubricating factory by 1889. According to historical Sanborn Maps, from 1889 to 1986 the Site was occupied by a planing mill. In 1919, the Mentholatum Building was constructed, which operated as a health and wellness company that manufactured various pharmaceutical and skin care products until 1998. Garrett Leather purchased the property in 2001, with operations including treatment and warehousing of bulk leather products.

Aboveground storage tanks and underground storage tanks for the Mentholatum Building historically used for fuel at a former planing mill were all located on Site. In addition to the presence of contaminants in on-Site urban fill, groundwater contamination at the Site appears to be migrating from ChemCore (located north of the Site). Past uses of the Site, use of fill throughout the Site and groundwater effects from the ChemCore Site have all contributed to contamination.

Heterogeneous urban fill is present at the Site at depths ranging from three to four below grade. Urban fill is defined as material coming from anthropogenic sources of the material re-worked to build a site to a defined grade. The urban fill material at the Site contains:

- Crushed Rock
- Sand

- Silt
- Clay
- Plastics
- Construction Debris
- Lumber
- Ash/Cinders
- Ceramics
- Bricks
- Metal

Native soil encountered beneath the fill consisted of Silty Clay – organic clays of medium to high plasticity and variable silt content with a reddish brown clay appearance.

Site soils consist of three to four feet of urban fill material. Based on investigations conducted to date, the known contaminants of concern in the urban fill include SVOCs and metals including arsenic, copper, lead, mercury and zinc. Additionally, several chlorinated solvents and a few polychlorinated biphenyls at depths of up to four feet.

NYSDEC Restricted Residential Use SCOs were exceeded in 10 of the 18 subsurface sample locations within the Site boundaries. SVOCs at concentrations ranging from 0.34 ppm to 46 ppm significantly exceeded Restricted Residential Use SCOs in the northern and southern areas of the Site.

Metals marginally to significantly exceeded SCOs in fill throughout the entire Site. Concentrations of copper were detected above Restricted Residential Use SCOs of 270 ppm in the northern and south western portions of the Site at 490 ppm to 3800 ppm. Concentrations of arsenic were detected above Restricted Residential Use SCOs of 16 ppm in the northern and south western portions of the Site at 17 ppm to 32 ppm. Concentrations of lead were detected above Restricted Residential Use SCOs of 400 ppm in the northern portions of the Site at 520 to 2200 ppm. Mercury was detected (1.7 ppm) above Restricted Residential Use SCOs in one boring at the northern property boundary.

Other than chromium exceedance above Unrestricted Use, no other analytes exceeded SCOs. The variation in analyte concentrations across the Site indicates that the source of contamination in soil samples is the variable urban fill material and no discrete source is located on-site or off-site. Contaminated soil is expected to be limited to the top three to four feet of fill material.

Groundwater at the Site was investigated due to current remedial monitoring at the ChemCore property to the adjacent north. Groundwater contamination exists at the site at 30 to 50 feet below grade within the bedrock due to a migrating groundwater plume containing chlorinated solvents emanating from ChemCore. One of six monitoring wells located on Site exceeded NYS Ambient Water Quality Standards and Guidance Values (TOGS 1.1.1 for all four of the contaminants of concern, the following chlorinated solvents: cis-1,2-dichloroethene (DCE), tetrachloroethene (PCE), trichloroethene (TCE) and vinyl chloride (VC). Additionally, groundwater samples in five of six monitoring wells exceeded TOGS 1.1.1 for one or more of the contaminants above and one well did not contain concentrations of chlorinated solvents of TOGS 1.1.1.

SECTION 5 - TRAINING

5.1 Site-specific Training

Training will be provided that specifically addresses the activities, procedures, monitoring, and equipment for the Site operations prior to going on site. Training will include familiarization with Site and facility layout, known and potential hazards, and emergency services at the Site, and details all provisions contained within this HASP. This training will also allow Site Workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity.

5.2 Safety Briefings

C&S project personnel will be given briefings by the HSO on a daily or as needed basis to further assist Site Workers in conducting their activities safely. Pertinent information will be provided when new operations are to be conducted. Changes in work practices must be implemented due to new information made available, or if Site or environmental conditions change. Briefings will also be given to facilitate conformance with prescribed safety practices. When conformance with these practices is not occurring or if deficiencies are identified during safety audits, the project manager will be notified.

SECTION 6 - ZONES

Four types of Site activity zones are identified for the Brownfield investigation activities, including the Exclusion Zone, Contamination Reduction Zone, Remediation Zone and the Support Zone.

Prior to commencement of field work a further definition of where these zones will be set up will be established.

6.1 Exclusion Zone

The area where the unexpected condition is discovered would be considered the Exclusion Zone (EZ). All excavation and handling of contaminated materials generated as a result of the discovery of an unexpected condition would take place within the EZ. This zone will be clearly delineated by hay bales, jersey barriers, and/or similar methods. Safety tape may be used as secondary delineation within the EZ. The zone delineation markings may be opened in areas for varying lengths of time to accommodate equipment operation or specific construction activities. The Site Safety Manager/Director may establish more than one EZ where different levels of protection may be employed or where different hazards exist. Site Workers will not be allowed in the EZ without:

- A buddy (co-worker);
- Appropriate PPE in accordance with OSHA regulations;
- Medical authorization; and
- Training certification in accordance with 29 CFR 1910.120.

6.2 Contamination Reduction Zone

A Contamination Reduction Zone (CRZ) will be established between the EZ and the property limits. The CRZ contains the Contamination Reduction Corridor (CRC) and provides an area for decontamination of Site equipment. The CRZ will be used for general Site entry and egress, in addition to access for heavy equipment and emergency support services. Site Workers will not be allowed in the CRZ without:

- A buddy (co-worker);
- Appropriate PPE in accordance with OSHA regulations;
- Medical authorization; and
- Training certification in accordance with 29 CFR 1910.120.

In addition, the CRZ will include a Site Worker Cleaning Area that will include a field wash station for Site Workers, equipment, and PPE to allow Site Workers to wash their hands, arms, neck, and face after exiting areas of grossly contaminated soil or hazardous materials. All Site Workers will be required to pass through the Site Worker Cleaning Area and wash their hands and remove any loose fill and soils from their clothing and boots prior to exiting the CRZ.

6.3 Remediation Zone

A Remediated Zone (RZ) will be established in portions of the Site where the remediation has been completed and only general construction work will be performed. Setup of the RZ will consist of implementing several measures designed to reduce the risk of workers' exposure and prevent non-trained workers from entering the non-remediated zone. Non-trained workers will work only in areas where the potential for exposure has been minimized by removal of all hazardous materials. The remediated zone will then be separated from the non-remediated zone by installing and maintaining temporary plywood or other construction fences along the boundary between the two zones. If potentially impacted material is uncovered in the RZ, all non-trained workers will be removed and the Site Safety Manager/Director will assess the potential risks. If, at any other time, the risk of exposure increases while non-trained workers are present in the RZ, the non-trained workers will be removed. At all times, when non- trained workers are present in the RZ, air monitoring for the presence of VOCs will be conducted in the RZ, as well as at the fence line of the non-remediated zone.

6.4 Support Zone

The Support Zone (SZ) will be an uncontaminated area that will be the field support area for the Site operations. The SZ will contain the temporary project trailers and provide for field team communications and staging for emergency response. Appropriate sanitary facilities and safety equipment will be located in this zone. Potentially contaminated equipment or materials are not allowed in this zone. The only exception will be appropriately packaged/decontaminated and labeled samples. Meteorological conditions will be observed and noted from this zone, as well as those factors pertinent to heat and cold.

SECTION 7 - PERSONAL PROTECTIVE EQUIPMENT

7.1 General

The level of protection to be worn by field personnel will be defined and controlled by the HSO. Depending upon the type and levels of material present or anticipated at the site, varying degrees of protective equipment will be needed. If the possible hazards are unknown, a reasonable level of protection will be taken until sampling and monitoring results can ascertain potential risks. The levels of protection listed below are based on USEPA Guidelines. A list of the appropriate clothing for each level is also provided.

Level A protection must be worn when a reasonable determination has been made that the highest available level of respiratory, skin, eye, and mucous membrane protection is needed. It should be noted that while Level A provides maximum available protection, it does not protect against all possible hazards. Consideration of the heat stress that can arise from wearing Level A protection should also enter into the decision making process. Level A protection includes:

- Open circuit, pressure-demand self-contained breathing apparatus (SCBA)
- Totally encapsulated chemical resistant suit
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level B protection must be used when the highest level of respiratory protection is needed, but hazardous material exposure to the few unprotected areas of the body (e.g., the back of the neck) is unlikely. Level B protection includes:

- Open circuit, pressure-demand SCBA or pressure airline with escape air bottle
- Chemical protective clothing: Overalls and long sleeved jacket; disposal chemical resistant coveralls; coveralls; one or two piece chemical splash suit with hood
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level C must be used when the required level of respiratory protection is known, or reasonably assumed to be, not greater than the level of protection afforded by air purifying respirators; and

hazardous materials exposure to the few unprotected areas of the body (e.g.., the back of the neck) is unlikely. Level C protection includes:

- Full or half face air-purifying respirator
- Chemical protective clothing: Overalls and long-sleeve jacket; disposable chemical resistant coveralls; coveralls; one or two piece chemical splash suit
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level D is the basic work uniform. It cannot be worn on any site where respiratory or skin hazards exist. Level D protection includes:

- Safety boots/shoes
- Safety glasses
- Hard hat with optional face shield

Note that the use of SCBA and airline equipment is contingent upon the user receiving special training in the proper use and maintenance of such equipment.

7.2 Personal Protective Equipment – Site Specific

Level D with some modification will be required when working in the work zone on this Site. In addition to the basic work uniform specified by Level D protection, Nitrile gloves will be required when contact with soil or ground water is likely. Hearing protection will be worn when power equipment is used to perform subsurface investigation work. An upgrade to a higher level (Level C) of protection may occur if determined necessary by the HSO.

SECTION 8 - MONITORING PROCEDURES

8.1 Monitoring During Site Operations

All Site environmental monitoring should be accompanied by periodic meteorological monitoring of appropriate climatic conditions.

8.1.1 Drilling Operations (Monitoring Well Installation and Subsurface Borings) and Test

Pit Excavations

Monitoring will be performed by the HSO or drilling observer during the conduct of work. A photoionization detector (PID) equipped with a 10.0 eV lamp will be utilized to monitor for the presence of volatile organic vapors within the breathing zone, the borehole, and subsurface samples upon their retrieval. Drill cuttings and excavation spoils will also be monitored by use of the PID. The PID will be field checked for calibration accuracy three times per day (morning, lunch, and end of day. If subsurface conditions warrant, a combustible gas indicator (CGI) with oxygen alarm may also be used to monitor the borehole for the presence of combustible gases. Similar monitoring of fluids produced during well development will also be conducted.

8.1.2 Interim Remedial Measures

If future Interim Remedial Measures (IRM) occurs, monitoring will be performed during excavation and sampling operations when C&S personnel are within the work zone. Although historical information previously obtained at the Site indicates low level of volatile organic vapors and compounds, a photoionization detector (PID) will be used during subsurface activities. If an IRM is performed, the, the remedial contractor will be required to employ dust control practices during work.

8.2 Action Levels

If readings on the PID exceed 10 ppm for more than fifteen minutes consecutively, then personal protective equipment should be upgraded to Level C. The air purifying respirator used with Level C protective equipment must be equipped with organic vapor cartridges. If readings on the explosive gas meter are within a range of 10%-25% of the LEL then continuous monitoring will be implemented. Readings above 25% of the LEL indicate the potential for an explosive condition. Sources of ignition should be removed and the Site should be evacuated.

8.3 Personal Monitoring Procedures

Personal monitoring shall be performed as a contingency measure in the event that VOC concentrations are consistently above the 10 ppm action level as detected by the PID. If the concentration of VOCs is above this action level, then amendments to the HASP must be made before work can continue at the Site.

SECTION 9 - COMMUNICATIONS

A phone will be located on Site to be utilized by personnel conducting investigation and IRM efforts. Cell phones will be the primary means of communicating with emergency support services/facilities.

SECTION 10 - SAFETY CONSIDERATIONS FOR SITE OPERATIONS

10.1 General

Standard safe work practices that will be followed include:

- Do not climb over/under drums, or other obstacles.
- Do not enter the work zone alone.
- Practice contamination avoidance, on and off-site.
- Plan activities ahead of time, use caution when conducting concurrently running activities.
- No eating, drinking, chewing or smoking is permitted in work zones.
- Due to the unknown nature of waste placement at the Site, extreme caution should be practiced during excavation activities.
- Apply immediate first aid to any and all cuts, scratches, abrasions, etc.
- Be alert to your own physical condition. Watch your buddy for signs of fatigue, exposure, etc.
- A work/rest regimen will be initiated when ambient temperatures and protective clothing create a potential heat stress situation.
- No work will be conducted without adequate natural light or without appropriate supervision.
- Task safety briefings will be held prior to onset of task work.
- Ignition of flammable liquids within or through improvised heating devices (barrels, etc.) or space heaters is forbidden.
- Entry into areas of spaces where toxic or explosive concentrations of gases or dust may exist without proper equipment is prohibited.
- Any injury or unusual health effect must be reported to the Site health and safety officer.
- Prevent splashing or spilling of potentially contaminated materials.
- Use of contact lenses is prohibited while on site.
- Beards and other facial hair that would impair the effectiveness of respiratory protection are prohibited if respiratory protection is necessary.

- Field crew members should be familiar with the physical characteristics of investigations, including:
  - Wind direction in relation to potential sources
  - Accessibility to co-workers, equipment, and vehicles
  - Communication
  - Hot zones (areas of known or suspected contamination)
  - Site access
  - Nearest water sources
- The number of personnel and equipment in potentially contaminated areas should be minimized consistent with site operations.

10.2 Field Operations

10.2.1 Intrusive Operations

The HSO or designee will be present on-site during all intrusive work, e.g., drilling operations, excavations, trenching, and will provide monitoring to oversee that appropriate levels of protection and safety procedures are utilized by C&S Engineers, Inc., personnel. The use of salamanders or other equipment with an open flame is prohibited and the use of protective clothing, especially hard hats and boots, will be required during drilling or other heavy equipment operations.

10.2.2 Excavations and Excavation Trenching

Guidance relating to safe work practices for C&S employees regarding excavations and excavating/trenching operation is presented in Appendix A of this HASP.

SECTION 11 - DECONTAMINATION PROCEDURES

Decontamination involves physically removing contaminants and/or converting them chemically into innocuous substances. Only general guidance can be given on methods and techniques for decontamination. Decontamination procedures are designed to:

- Remove contaminant(s).
- Avoid spreading the contamination from the work zone.
- Avoid exposing unprotected personnel outside of the work zone to contaminants.

Contamination avoidance is the first and best method for preventing spread of contamination from a hazardous site. Each person involved in site operations must practice the basic methods of contamination avoidance listed below. Additional precautions may be required in the HASP.

- Know the limitations of all protective equipment being used.
- Do not enter a contaminated area unless it is necessary to carry out a specific objective.
- When in a contaminated area, avoid touching anything unnecessarily.
- Walk around pools of liquids, discolored areas, or any area that shows evidence of possible contamination.
- Walk upwind of contamination, if possible.
- Do not sit or lean against anything in a contaminated area. If you must kneel (e.g., to take samples), use a plastic ground sheet.
- If at all possible, do not set sampling equipment directly on contaminated areas. Place equipment on a protective cover such as a ground cloth.
- Use the proper tools necessary to safely conduct the work.

Specific methods that may reduce the chance of contamination are:

- Use of remote sampling techniques.
- Opening containers by non-manual means.
- Bagging monitoring instruments.
- Use of drum grapplers.
- Watering down dusty areas.

Equipment which will need to be decontaminated includes tools, monitoring equipment, and personal protective equipment. Items to be decontaminated will be brushed off, rinsed, and dropped into a plastic container supplied for that purpose. They will then be washed with a detergent solution and rinsed with clean water. Monitoring instruments may be wrapped in plastic bags prior to entering the field in order to reduce the potential for contamination. Instrumentation that is contaminated during field operations will be carefully wiped down. Heavy equipment, if utilized for operations where it may be contaminated, will have prescribed decontamination procedures to prevent contaminant materials from potentially leaving the Site. On-site contractors, such as drillers or backhoe operators, will be responsible for decontaminating all construction equipment prior to demobilization.

SECTION 12 – DISPOSAL PROCEDURES

All discarded materials, waste materials, or other objects shall be handled in such a way as to reduce or eliminate the potential for spreading contamination, creating a sanitary hazard, or causing litter to be left on-site. All potentially contaminated materials, e.g., clothing, gloves, etc., will be bagged or drummed as necessary and segregated for proper disposal. All contaminated waste materials shall be disposed of as required by the provisions included in the contract and consistent with regulatory provisions. All non-contaminated materials shall be collected and bagged for appropriate disposal. Investigation derived waste will be managed consistent with the work plan for this Site and DER-10 Technical Guidance for Site Investigation and Remediation dated May 2010.

SECTION 13 - EMERGENCY RESPONSE PROCEDURES

As a result of the hazards at the Site, and the conditions under which operations are conducted, there is the possibility of emergency situations. This section establishes procedures for the implementation of an emergency plan.

13.1 Emergency Coordinator

Emergency Coordinator: ..... Cody Martin .....Work Phone: (716) 847-1630

The Emergency Coordinator or his on-site designee will, in concert with Campus Square LLC, implement the emergency response procedures whenever conditions at the Site warrant such action. The Emergency Coordinator or his on-site designee will be responsible for assuring the evacuation, emergency treatment, emergency transport of C&S personnel as necessary, and notification of emergency response units (refer to phone listing in the beginning of this HASP) and the appropriate management staff.

13.2 Evacuation

In the event of an emergency situation, such as fire, explosion, significant release of toxic gases, etc., all personnel will evacuate and assemble in a designated assembly area. The Emergency Coordinator or his on-site designee will have authority to contact outside services as required. Under no circumstances will incoming personnel or visitors be allowed to proceed into the area

once the emergency signal has been given. The Emergency Coordinator or his on-site designee must see that access for emergency equipment is provided and that all ignition sources have been shut down once the emergency situation is established. Once the safety of all personnel is established, the Fire Department and other emergency response groups will be notified by telephone of the emergency.

13.3 Potential or Actual Fire or Explosion

Immediately evacuate the Site and notify local fire and police departments, and other appropriate emergency response groups, if LEL values are above 25% in the work zone or if an actual fire or explosion has taken place.

13.4 Environmental Incident (spread or release of contamination)

Control or stop the spread of contamination if possible. Notify the Emergency Coordinator and the Project Manager. Other appropriate response groups will be notified as appropriate.

13.5 Personnel Injury

Emergency first aid shall be applied on-site as necessary. Then, decontaminate (en route if necessary) and transport the individual to nearest medical facility if needed. The ambulance/rescue squad shall be contacted for transport as necessary in an emergency. The directions to the hospital are shown in Section 1 of this HASP and a map is shown in Attachment A.

13.6 Personnel Exposure

- *Skin Contact*: Use copious amounts of soap and water. Wash/rinse affected area thoroughly, and then provide appropriate medical attention. Eyes should be thoroughly rinsed with water for at least 15 minutes.
- *Inhalation*: Move to fresh air and/or, if necessary, decontaminate and transport to emergency medical facility.
- *Ingestion*: Decontaminate and transport to emergency medical facility.
- *Puncture Wound/Laceration*: Decontaminate, if possible, and transport to emergency medical facility.

13.7 Adverse Weather Conditions

In the event of adverse weather conditions, the HSO will determine if work can continue without sacrificing the health and safety of field workers.

13.8 Incident Investigation and Reporting

In the event of an incident, procedures discussed in the Medical Emergency/Incident Response Protocol, presented in Appendix B of this HASP, shall be followed.

SECTION 14 - COMMUNITY RELATIONS

14.1 Community Health and Safety Plan

14.1.1 Community Health and Safety Monitoring

As part of the site work, three general types of efforts are scheduled, including, non-intrusive reconnaissance tasks, sampling or monitoring tasks (monitoring point sampling), and intrusive tasks (test trenching, subsurface borings, monitoring well installation). During completion of general reconnaissance and sampling or monitoring tasks, potential for health and safety risks to off-site landowners or the local community are not anticipated.

During completion of intrusive efforts at or adjacent to the Site, health and safety monitoring efforts will be concentrated on the area or areas in which intrusive efforts are being completed. Since the air pathway is the most available and likely avenue for the release of potential contaminants to the atmosphere at or near the Site, in addition to limiting public or community access to the areas in which intrusive efforts are completed, health and safety measures will primarily consist of monitoring the air pathway for worker exposure.

14.1.2 Community Air Monitoring Plan

Efforts will be taken to complete field work in a manner which will minimize the creation of airborne dust or particulates. Under dry conditions, work areas may be wetted to control dust. During periods of extreme wind, intrusive field work may be halted until such time as the potential for creating airborne dust or particulate matter as a result of investigation activities is limited. Periodic monitoring following the guidelines of the site's Community Air Monitoring Plan (see Appendix C of the IRM) will be implemented during all non-intrusive Site investigation activities,

including surface soil and sediment sampling, and collection of groundwater samples from groundwater monitoring wells.

During completion of Site investigation, a community air monitoring plan meeting the requirements of the site's Community Air Monitoring Plan (see Appendix C of the IRM) will be implemented for the duration of intrusive activities. These additional air monitoring activities will include establishment of background conditions, continuous monitoring for volatile organic compounds and/or particulates at the downwind work area (exclusion zone) perimeter, recording of monitoring data, and institution and documentation of Response Levels and appropriate actions in accordance with NYSDOH guidance.

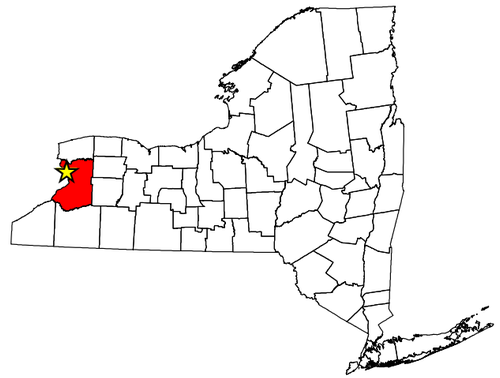
SECTION 15 - AUTHORIZATIONS

Personnel authorized to enter the Site while operations are being conducted must be approved by the HSO. Authorization will involve completion of appropriate training courses, medical examination requirements, and review and sign-off of this HASP. No C&S personnel should enter the work zone alone. Each site visitor should check in with the HSO or Project Manager prior to entering the work zones.

FIGURE 1

SITE LOCATION MAP

C&S ENGINEERS



Legend

BCP BOUNDARY

0 200 400 800

Feet

SITE LOCATION

FIGURE 1

Document Path: F:\Project\E67 - Ciminelli Development\E67.018.001 - Garrett Leather BCP Application\Planning-Study\Reports\RI-IRM Work Plan\GIS\Maps\FIGURE 1_SITE_LOCATION.mxd

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Buffalo, New York 14203
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Fax: 716-847-1454
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N

GARRETT LEATHER
REMEDIAL INVESTIGATION-
INTERIM REMEDIAL MEASURES
WORK PLAN
BUFFALO, NEW YORK
APRIL 2016

MARK	DATE	DESCRIPTION

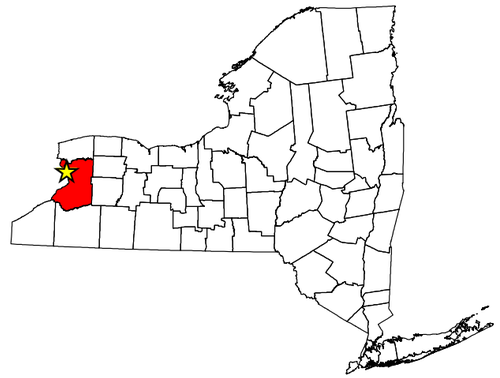
REVISIONS

PROJECT NO: E67.018.001
DATE: APRIL 2016
DRAWN BY: S. HERBERGER
DESIGNED BY: S. HERBERGER
CHECKED BY:

FIGURE 2

SITE AERIAL PHOTO

C&S ENGINEERS



Legend

BCP BOUNDARY

0 50 100 200 Feet

Document Path: F:\Project\E67 - Ciminelli Development\E67.018.001 - Garrett Leather BCP Application\Planning-Study\Reports\RI-IRM Work Plan\GIS\Maps\FIGURE 2_SITE_DETAIL.mxd

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GARRETT LEATHER
REMEDIAL INVESTIGATION-
INTERIM REMEDIAL MEASURES
WORK PLAN
BUFFALO, NEW YORK
APRIL 2016

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO: E67.018.001
DATE: APRIL 2016
DRAWN BY: S. HERBERGER
DESIGNED BY: S. HERBERGER
CHECKED BY:

SITE DETAIL

FIGURE 2

ATTACHMENT A

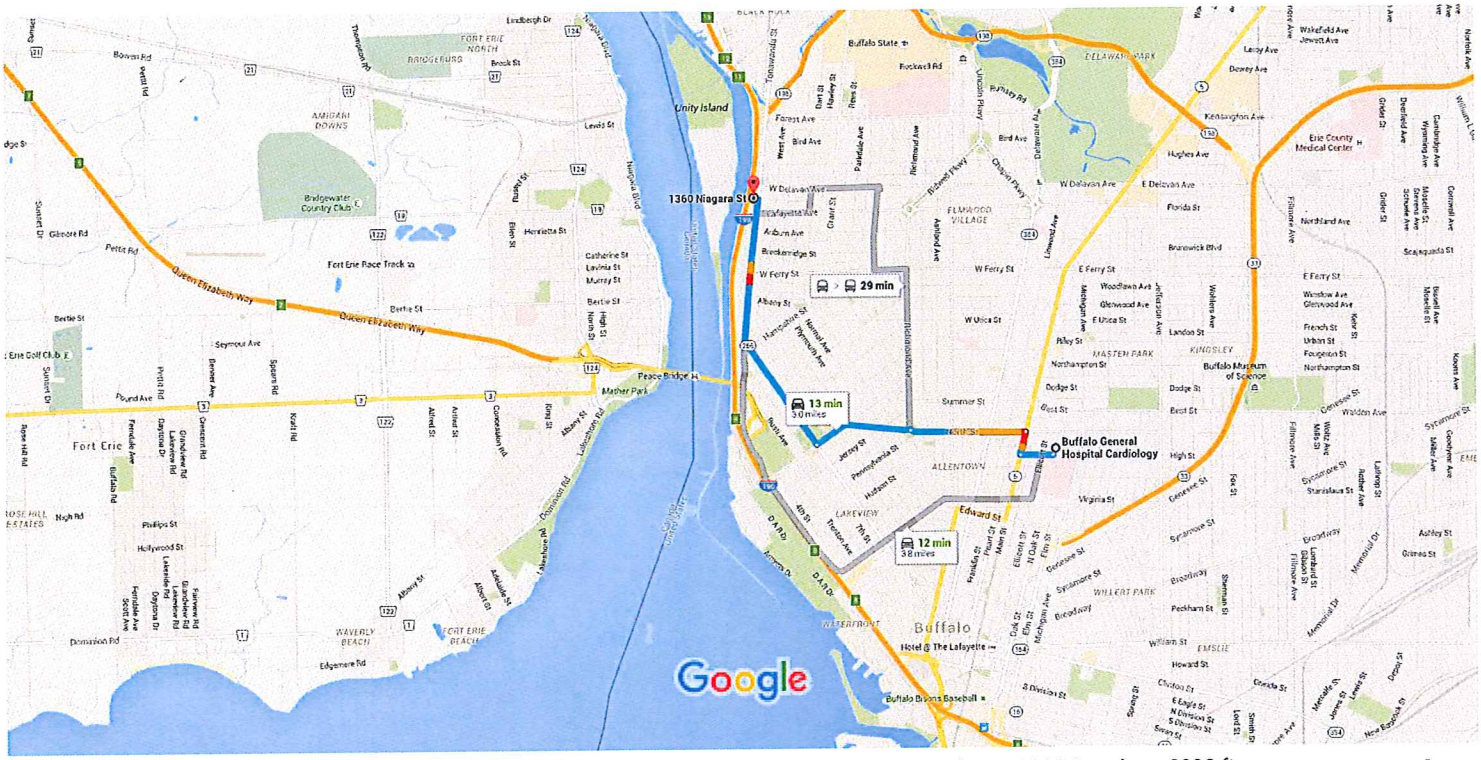
MAP TO HOSPITAL

C&S ENGINEERS

Google Maps

Buffalo General Hospital Cardiology to 1360 Niagara St, Buffalo, NY 14213

Drive 3.0 miles, 13 min



Map data ©2016 Google 2000 ft

Buffalo General Hospital Cardiology

100 High Street, Buffalo, NY 14203

1. Head west on High St toward Ellicott St — 0.2 mi
2. Turn right onto Main St — 0.1 mi
3. Turn left onto North St — 0.6 mi
4. At the traffic circle, continue straight onto Porter Ave — 0.6 mi
5. Turn right onto Niagara St
   Destination will be on the left — 1.5 mi

1360 Niagara St

Buffalo, NY 14213

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Appendix A

EXCAVATION/TRENCHING GUIDELINE

C&S ENGINEERS

C&S ENGINEERS, INC. HEALTH & SAFETY GUIDELINE #14
EXCAVATION/TRENCHING OPERATIONS

TABLE OF CONTENTS

C&S ENGINEERS, INC.
EXCAVATION/TRENCHING OPERATIONS

1.0 PURPOSE

To establish safe operating procedures for excavation/trenching operations at C&S work sites.

2.0 SCOPE

Applies to all C&S activity where excavation or trenching operations take place.

3.0 DEFINITIONS

Excavation — Any manmade cavity or depression in the earth's surface, including its sides, walls, or faces, formed by earth removal and producing unsupported earth conditions by reasons of the excavation.

Trench — A narrow excavation made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet.

4.0 RESPONSIBILITY EMPLOYEES

Employees — All employees must understand and follow the procedures outlined in this guideline during all excavation and trenching operations.

Health and Safety Coordinator/Officer (HSC/HSO) - The HSC/HSO is responsible for ensuring that these procedures are implemented at each work site.

5.0 GUIDELINES

5.1 Hazards Associated With Excavation/Trenching

The principal hazards associated with excavation/trenching are:

- Suffocation, crushing, or other injury from falling material.
- Damage/failure of installed underground services and consequent hazards.
- Tripping, slipping, or falling.
- Possibility of explosive, flammable, toxic, or oxygen-deficient atmosphere in excavation.

5.2 Procedures Prior to Excavation

1. Underground Utilities

   - Determine the presence and location of any underground chemical or utility pipes, electrical, telephone, or instrument wire or cables.
   - If the local DigSafely NY is unable to locate private/domestic or plant utilities, then an independent utility locating service must be contacted and mobilized to the site.
   - Identify the location of underground services by stakes, markers or paint.
   - Arrange to de-energize or isolate underground services during excavation. If not possible, or if location is not definite, method of excavation shall be established to minimize hazards by such means as:

     a) Use of hand tools in area of underground services.
     b) Insulating personnel and equipment from possible electrical contact.
     c) Use of tools or equipment that will reduce possibility of damage to underground services and hazard to worker.

2. Identify Excavation Area — Areas to be excavated shall be identified and segregated by means of barricades, ropes, and/or signs to prevent access of unauthorized personnel and equipment. Suitable means shall be provided to make barriers visible at all times.
3. Surface Water Provide means of diverting surface water from excavation.
4. Shoring/Bracing — Shoring or bracing that may be required for installed equipment adjacent to the excavation shall be designed by a competent person.
5. Structural Ramps — Structural ramps that are used solely by employees as a means of access to or egress from the excavation shall be designed by a competent person.

5.3 Procedures For Doing The Excavation

1. **Determine the need for shoring/sloping** — the type of soil will establish the need for shoring, slope of the excavation, support systems, and equipment to be used. The soil condition may change as the excavation proceeds. Appendices A, B, C, D, E, and F of the OSHA Excavation Regulation, 29 CFR 1926 Subpart P, are to be used in defining shoring and sloping requirements.

2. **Mobile equipment** — For safe use of mobile industrial equipment in or near the excavation, the load carrying capacity of soil shall be established and suitable protection against collapse of soil provided by the use of mats, barricades, restricting the location of equipment, or shoring.

3. Excavated material (spoil) shall be stored at least two (2) feet from the edge of the excavation.

4. All trench (vertical sides) excavations greater than five (5) feet deep shall be shored.

5. The excavation shall be inspected daily for changes in conditions, including the presence of ground water, change in soil condition, or effects of weather such as rain or freeze. A safe means of continuing the work shall be established based on changes in condition. Typically test trench excavations made as part of an environmental subsurface nvestigation are made and backfilled the same day.

6. Appropriate monitoring for gas, toxic, or flammable materials will be conducted to establish the need for respiratory equipment, ventilation, or other measures required to continue the excavation safely.

7. Adequate means of dewatering the excavation shall be provided by the contractor as required.

8. A signal person shall be provided to direct powered equipment if working in the excavation with other personnel.

9. A signal person shall be provided when backfilling excavations to direct powered equipment working in the excavation with other personnel.

10. Warning vests will be worn when employees are exposed to public vehicular traffic.

11. Employees shall stand away from vehicles being loaded or unloaded, and shall not be permitted underneath loads handled by lifting or dragging equipment.

12. Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available if hazardous atmospheric conditions exist or may be expected to develop. The specifics will be determined by the HSC/HSM.

13. Walkways or bridges with standard guardrail shall be provided where employees or equipment are required or permitted to cross over excavations.

5.4 Entering the Excavation

No C&S Engineers, Inc., employee shall enter an excavation which fails to meet the requirements of Section 5.3 of this guideline.

6.0 REFERENCES

29 CFR 1926, Subpart P - Excavations

7.0 ATTACHMENTS

29 CFR 1926 Subpart P - Appendices A, B, F

• **Part Number:**	1926
• **Part Title:**	Safety and Health Regulations for Construction
• **Subpart:**	P
• **Subpart Title:**	Excavations
• **Standard Number:**	1926 Subpart P App A
• **Title:**	Soil Classification

(a) Scope and application - (1) Scope. This appendix describes a method of classifying soil and rock deposits based on site and environmental conditions, and on the structure and composition of the earth deposits. The appendix contains definitions, sets for requirements, and describes acceptable visual and manual tests for use in classifying soils.

(2) Application. This appendix applies when a sloping or benching system is designed in accordance with the requirements set fo 1926.652(b)(2) as a method of protection for employees from cave-ins. This appendix also applies when timber shoring for excav designed as a method of protection from cave-ins in accordance with appendix C to subpart P of part 1926, and when aluminum shoring is designed in accordance with appendix D. This Appendix also applies if other protective systems are designed and selec from data prepared in accordance with the requirements set forth in 1926.652(c), and the use of the data is predicated on the us classification system set forth in this appendix.

(b) Definitions. The definitions and examples given below are based on, in whole or in part, the following; American Society for T Materials (ASTM) Standards D653-85 and D2488; The Unified Soils Classification System; The U.S. Department of Agriculture (US Textural Classification Scheme; and The National Bureau of Standards Report BSS-121.

"Cemented soil" means a soil in which the particles are held together by a chemical agent, such as calcium carbonate, such that a hand-size sample cannot be crushed into powder or individual soil particles by finger pressure.

"Cohesive soil" means clay (fine grained soil), or soil with a high clay content, which has cohesive strength. Cohesive soil does not crumble, can be excavated with vertical sideslopes, and is plastic when moist. Cohesive soil is hard to break up when dry, and exhibits significant cohesion when submerged. Cohesive soils include clayey silt, sandy clay, silty clay, clay and organic clay.

"Dry soil" means soil that does not exhibit visible signs of moisture content.

"Fissured" means a soil material that has a tendency to break along definite planes of fracture with little resistance, or a material that exhibits open cracks, such as tension cracks, in an exposed surface.

"Granular soil" means gravel, sand, or silt (coarse grained soil) with little or no clay content. Granular soil has no cohesive strength. Some moist granular soils exhibit apparent cohesion. Granular soil cannot be molded when moist and crumbles easily when dry.

"Layered system" means two or more distinctly different soil or rock types arranged in layers. Micaceous seams or weakened planes in rock or shale are considered layered.

"Moist soil" means a condition in which a soil looks and feels damp. Moist cohesive soil can easily be shaped into a ball and rolled into small diameter threads before crumbling. Moist granular soil that contains some cohesive material will exhibit signs of cohesion between particles.

"Plastic" means a property of a soil which allows the soil to be

deformed or molded without cracking, or appreciable volume change.
"Saturated soil" means a soil in which the voids are filled with water. Saturation does not require flow. Saturation, or near saturation, is necessary for the proper use of instruments such as a pocket penetrometer or sheer vane.
"Soil classification system" means, for the purpose of this subpart, a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits and the characteristics of the deposits and the environmental conditions of exposure.
"Stable rock" means natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.
"Submerged soil" means soil which is underwater or is free seeping.
"Type A" means cohesive soils with an unconfined, compressive strength of 1.5 ton per square foot (tsf) (144 kPa) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A. However, no soil is Type A if:
(i) The soil is fissured; or
(ii) The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or
(iii) The soil has been previously disturbed; or
(iv) The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater; or
(v) The material is subject to other factors that would require it to be classified as a less stable material.
"Type B" means:
(i) Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48 kPa) but less than 1.5 tsf (144 kPa); or
(ii) Granular cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.
(iii) Previously disturbed soils except those which would otherwise be classed as Type C soil.
(iv) Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
(v) Dry rock that is not stable; or
(vi) Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H:1V), but only if the material would otherwise be classified as Type B.
"Type C" means:
(i) Cohesive soil with an unconfined compressive strength of 0.5 tsf (48 kPa) or less; or
(ii) Granular soils including gravel, sand, and loamy sand; or
(iii) Submerged soil or soil from which water is freely seeping; or
(iv) Submerged rock that is not stable, or
(v) Material in a sloped, layered system where the layers dip into the excavation or a slope of four horizontal to one vertical (4H:1V) or steeper.
"Unconfined compressive strength" means the load per unit area at which a soil will fail in compression. It can be determined by laboratory testing, or estimated in the field using a pocket penetrometer, by thumb penetration tests, and other methods.
"Wet soil" means soil that contains significantly more moisture than moist soil, but in such a range of values that cohesive material will slump or begin to flow when vibrated. Granular material that would exhibit cohesive properties when moist will lose those cohesive properties when wet.

(c) Requirements - (1) Classification of soil and rock deposits. Each soil and rock deposit shall be classified by a competent perso Rock, Type A, Type B, or Type C in accordance with the definitions set forth in paragraph (b) of this appendix.

(2) Basis of classification. The classification of the deposits shall be made based on the results of at least one visual and at least analysis. Such analyses shall be conducted by a competent person using tests described in paragraph (d) below, or in other reco methods of soil classification and testing such as those adopted by the American Society for Testing Materials, or the U.S. Depart Agriculture textural classification system.

(3) Visual and manual analyses. The visual and manual analyses, such as those noted as being acceptable in paragraph (d) of thi shall be designed and conducted to provide sufficient quantitative and qualitative information as may be necessary to identify prc properties, factors, and conditions affecting the classification of the deposits.

(4) Layered systems. In a layered system, the system shall be classified in accordance with its weakest layer. However, each laye classified individually where a more stable layer lies under a less stable layer.

(5) Reclassification. If, after classifying a deposit, the properties, factors, or conditions affecting its classification change in any w changes shall be evaluated by a competent person. The deposit shall be reclassified as necessary to reflect the changed circumst

(d) Acceptable visual and manual tests. - (1) Visual tests. Visual analysis is conducted to determine qualitative information regarc excavation site in general, the soil adjacent to the excavation, the soil forming the sides of the open excavation, and the soil take samples from excavated material.

(i) Observe samples of soil that are excavated and soil in the sides of the excavation. Estimate the range of particle sizes and the amounts of the particle sizes. Soil that is primarily composed of fine-grained material material is cohesive material. Soil composec of coarse-grained sand or gravel is granular material.

(ii) Observe soil as it is excavated. Soil that remains in clumps when excavated is cohesive. Soil that breaks up easily and does nc clumps is granular.

(iii) Observe the side of the opened excavation and the surface area adjacent to the excavation. Crack-like openings such as tens could indicate fissured material. If chunks of soil spall off a vertical side, the soil could be fissured. Small spalls are evidence of m ground and are indications of potentially hazardous situations.

(iv) Observe the area adjacent to the excavation and the excavation itself for evidence of existing utility and other underground s and to identify previously disturbed soil.

(v) Observed the opened side of the excavation to identify layered systems. Examine layered systems to identify if the layers slop the excavation. Estimate the degree of slope of the layers.

(vi) Observe the area adjacent to the excavation and the sides of the opened excavation for evidence of surface water, water see the sides of the excavation, or the location of the level of the water table.

(vii) Observe the area adjacent to the excavation and the area within the excavation for sources of vibration that may affect the s the excavation face.

(2) Manual tests. Manual analysis of soil samples is conducted to determine quantitative as well as qualitative properties of soil a provide more information in order to classify soil properly.

(i) Plasticity. Mold a moist or wet sample of soil into a ball and attempt to roll it into threads as thin as 1/8-inch in diameter. Cohe material can be successfully rolled into threads without crumbling. For example, if at least a two inch (50 mm) length of 1/8-inch be held on one end without tearing, the soil is cohesive.

(ii) Dry strength. If the soil is dry and crumbles on its own or with moderate pressure into individual grains or fine powder, it is g combination of gravel, sand, or silt). If the soil is dry and falls into clumps which break up into smaller clumps, but the smaller clu only be broken up with difficulty, it may be clay in any combination with gravel, sand or silt. If the dry soil breaks into clumps wh break up into small clumps and which can only be broken with difficulty, and there is no visual indication the soil is fissured, the s considered unfissured.

(iii) Thumb penetration. The thumb penetration test can be used to estimate the unconfined compressive strength of cohesive so test is based on the thumb penetration test described in American Society for Testing and Materials (ASTM) Standard designatior "Standard Recommended Practice for Description of Soils (Visual - Manual Procedure).") Type A soils with an unconfined compre strength of 1.5 tsf can be readily indented by the thumb; however, they can be penetrated by the thumb only with very great eff soils with an unconfined compressive strength of 0.5 tsf can be easily penetrated several inches by the thumb, and can be molde finger pressure. This test should be conducted on an undisturbed soil sample, such as a large clump of spoil, as soon as practicat excavation to keep to a minimum the effects of exposure to drying influences. If the excavation is later exposed to wetting influe flooding), the classification of the soil must be changed accordingly.

(iv) Other strength tests. Estimates of unconfined compressive strength of soils can also be obtained by use of a pocket penetron using a hand-operated shearvane.

(v) Drying test. The basic purpose of the drying test is to differentiate between cohesive material with fissures, unfissured cohesi and granular material. The procedure for the drying test involves drying a sample of soil that is approximately one inch thick (2.5 six inches (15.24 cm) in diameter until it is thoroughly dry:

(A) If the sample develops cracks as it dries, significant fissures are indicated.

(B) Samples that dry without cracking are to be broken by hand. If considerable force is necessary to break a sample, the soil ha cohesive material content. The soil can be classified as an unfissured cohesive material and the unconfined compressive strength determined.

(C) If a sample breaks easily by hand, it is either a fissured cohesive material or a granular material. To distinguish between the t pulverize the dried clumps of the sample by hand or by stepping on them. If the clumps do not pulverize easily, the material is cc fissures. If they pulverize easily into very small fragments, the material is granular.

Next Standard (1926 Subpart P App B)

Regulations (Standards - 29 CFR) - Table of Contents

U.S. Department of Labor | Occupational Safety & Health Administration | 200 Constitution Ave., NW, Washington, D
Telephone: 800-321-OSHA (6742) | TTY: 877-889-5627

www.OSHA.gov

• **Part Number:**	1926
• **Part Title:**	Safety and Health Regulations for Construction
• **Subpart:**	P
• **Subpart Title:**	Excavations
• **Standard Number:**	1926 Subpart P App B
• **Title:**	Sloping and Benching

(a) ***Scope and application***. This appendix contains specifications for sloping and benching when used as methods of protecting working in excavations from cave-ins. The requirements of this appendix apply when the design of sloping and benching protectiv is to be performed in accordance with the requirements set forth in § 1926.652(b)(2).

(b) ***Definitions***.

Actual slope means the slope to which an excavation face is excavated.

Distress means that the soil is in a condition where a cave-in is imminent or is likely to occur. Distress is evidenced by such phen the development of fissures in the face of or adjacent to an open excavation; the subsidence of the edge of an excavation; the slu material from the face or the bulging or heaving of material from the bottom of an excavation; the spalling of material from the fa excavation; and ravelling, i.e., small amounts of material such as pebbles or little clumps of material suddenly separating from the excavation and trickling or rolling down into the excavation.

Maximum allowable slope means the steepest incline of an excavation face that is acceptable for the most favorable site condi protection against cave-ins, and is expressed as the ratio of horizontal distance to vertical rise (H:V).

Short term exposure means a period of time less than or equal to 24 hours that an excavation is open.

(c) ***Requirements*** -- (1) ***Soil classification***. Soil and rock deposits shall be classified in accordance with appendix A to subpart I 1926.

(2) ***Maximum allowable slope***. The maximum allowable slope for a soil or rock deposit shall be determined from Table B-1 of tl appendix.

(3) ***Actual slope***. (i) The actual slope shall not be steeper than the maximum allowable slope.

(ii) The actual slope shall be less steep than the maximum allowable slope, when there are signs of distress. If that situation occur slope shall be cut back to an actual slope which is at least ½ horizontal to one vertical (½H:1V) less steep than the maximum allo slope.

(iii) When surcharge loads from stored material or equipment, operating equipment, or traffic are present, a competent person sh determine the degree to which the actual slope must be reduced below the maximum allowable slope, and shall assure that such achieved. Surcharge loads from adjacent structures shall be evaluated in accordance with § 1926.651(i).

(4) ***Configurations***. Configurations of sloping and benching systems shall be in accordance with Figure B-1.

TABLE B-1
MAXIMUM ALLOWABLE SLOPES

SOIL OR ROCK TYPE	MAXIMUM ALLOWABLE SLOPES (H:V)(1) FOR EXCAVATIONS LESS THAN 20 FEET DEEP(3)
STABLE ROCK	VERTICAL (90°)
TYPE A (2)	3/4:1 (53°)
TYPE B	1:1 (45°)
TYPE C	1 ½:1 (34°)

Footnote(1) Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angle rounded off.

Footnote(2) A short-term maximum allowable slope of 1/2H:1V (63°) is allowed in excavations in Type A soil that are 12 feed (3.67 m) or l depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67 m) in depth shall be 3/4H:1V (53°).

Footnote(3) Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

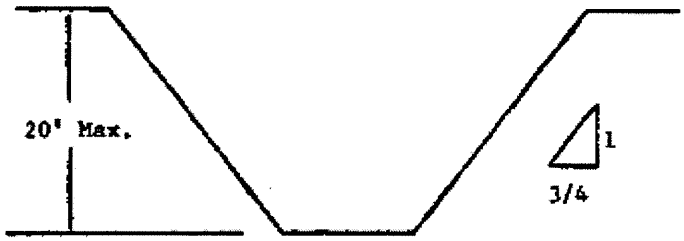
Figure B-1

Slope Configurations

(All slopes stated below are in the horizontal to vertical ratio)

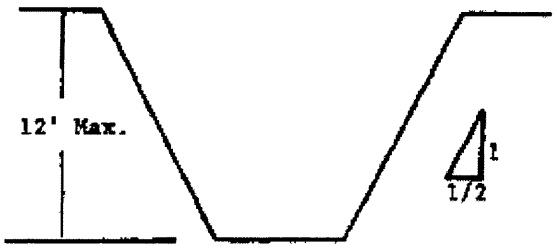
B-1.1 Excavations made in Type A soil.

1. All simple slope excavation 20 feet or less in depth shall have a maximum allowable slope of ¾:1.



SIMPLE SLOPE -- GENERAL

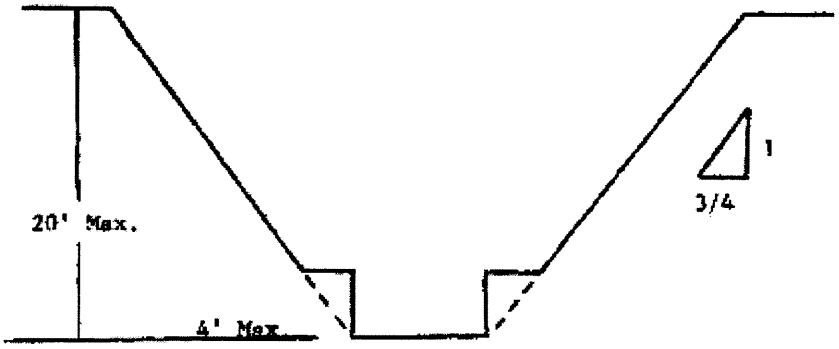
Exception: Simple slope excavations which are open 24 hours or less (short term) and which are 12 feet or less in depth shall have maximum allowable slope of ½:1.



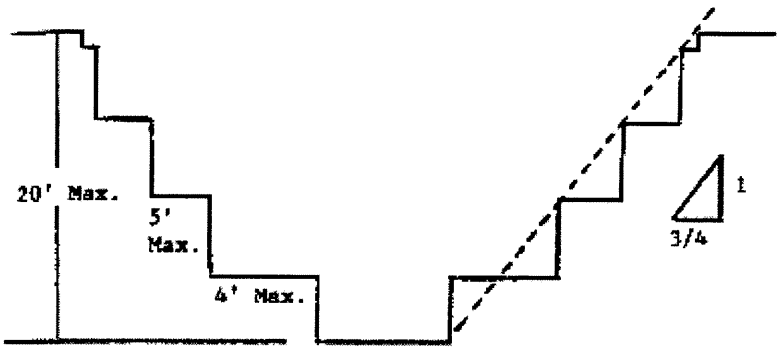
SIMPLE SLOPE -- SHORT TERM

2. All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 3/4 to 1 and maximum bench dimens

follows:

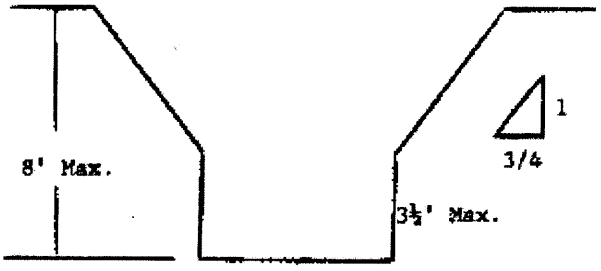


SIMPLE BENCH



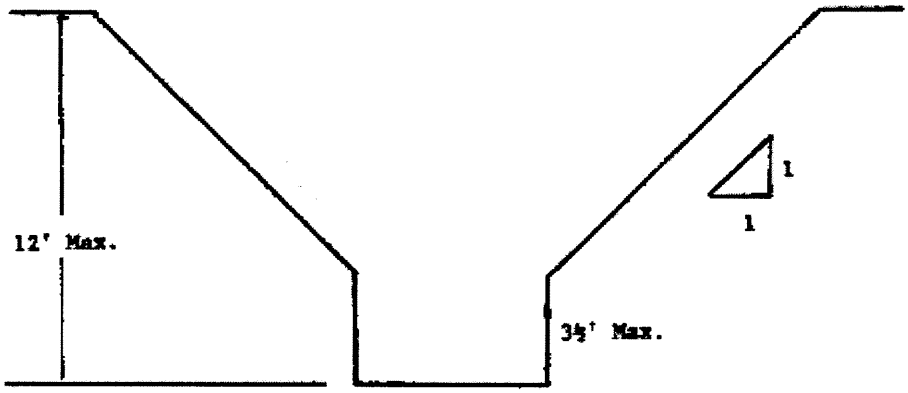
MULTIPLE BENCH

3. All excavations 8 feet or less in depth which have unsupported vertically sided lower portions shall have a maximum vertical sid feet.



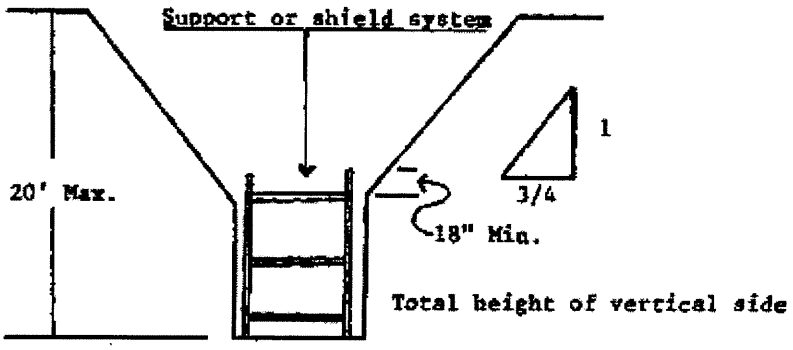
UNSUPPORTED VERTICALLY SIDED LOWER PORTION -- MAXIMUM 8 FEET IN DEPTH)

All excavations more than 8 feet but not more than 12 feet in depth with unsupported vertically sided lower portions shall have a r allowable slope of 1:1 and a maximum vertical side of 3½ feet.



UNSUPPORTED VERTICALLY SIDED LOWER PORTION -- MAXIMUM 12 FEET IN DEPTH)

All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maxi allowable slope of ¾:1. The support or shield system must extend at least 18 inches above the top of the vertical side.

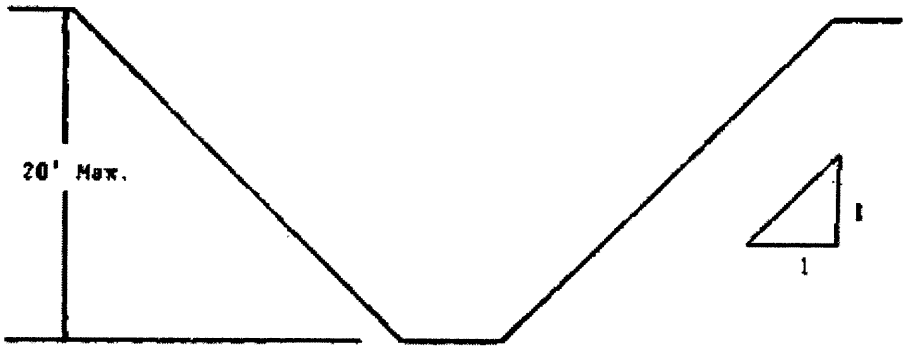


SUPPORTED OR SHIELDED VERTICALLY SIDED LOWER PORTION

4. All other simple slope, compound slope, and vertically sided lower portion excavations shall be in accordance with the other opt permitted under § 1926.652(b).

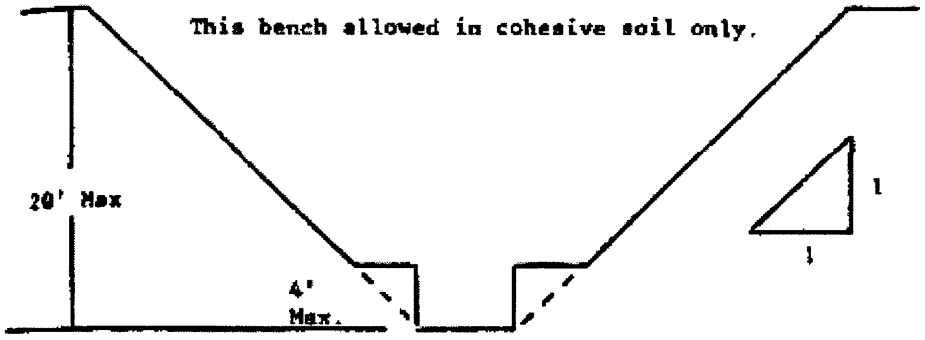
B-1.2 Excavations Made in Type B Soil

1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1.

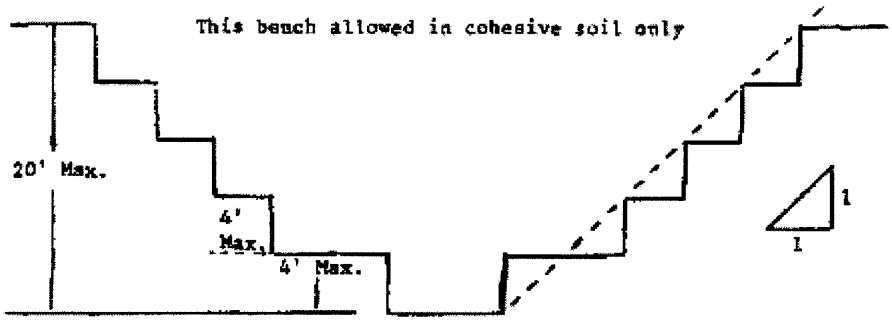


SIMPLE SLOPE

2. All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1 and maximum bench dimensions

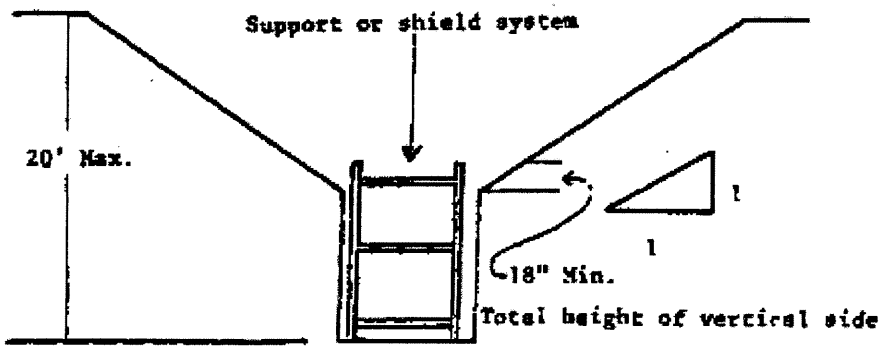


SINGLE BENCH



MULTIPLE BENCH

3. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at le inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of 1:1.

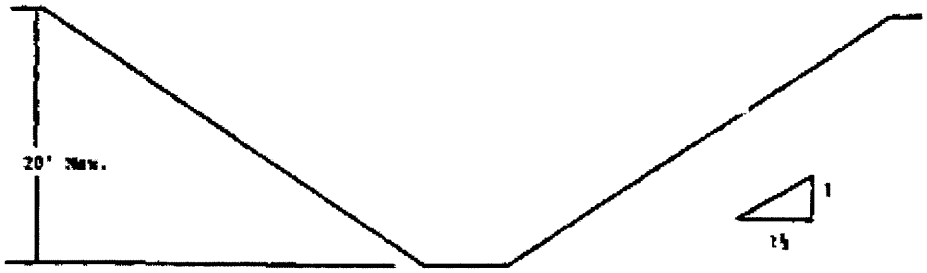


VERTICALLY SIDED LOWER PORTION

4. All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

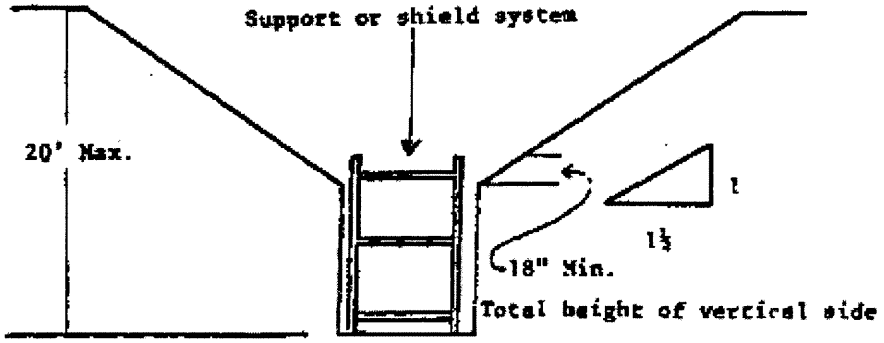
B-1.3 Excavations Made in Type C Soil

1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1½:1.



SIMPLE SLOPE

2. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at le inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of 1½:1.

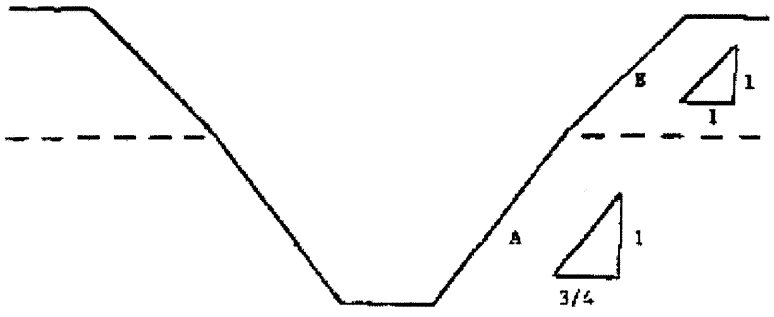


VERTICAL SIDED LOWER PORTION

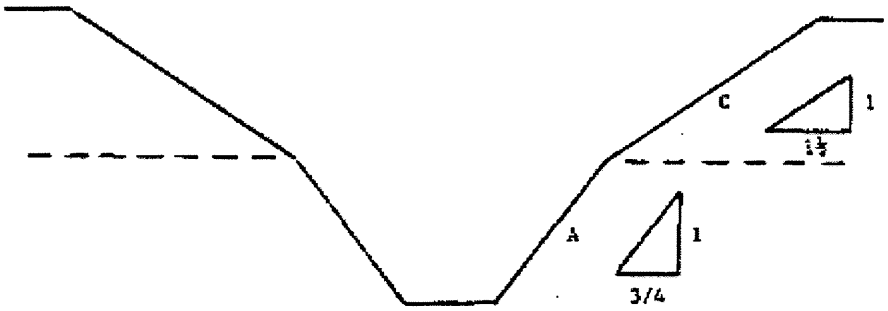
3. All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

B-1.4 Excavations Made in Layered Soils

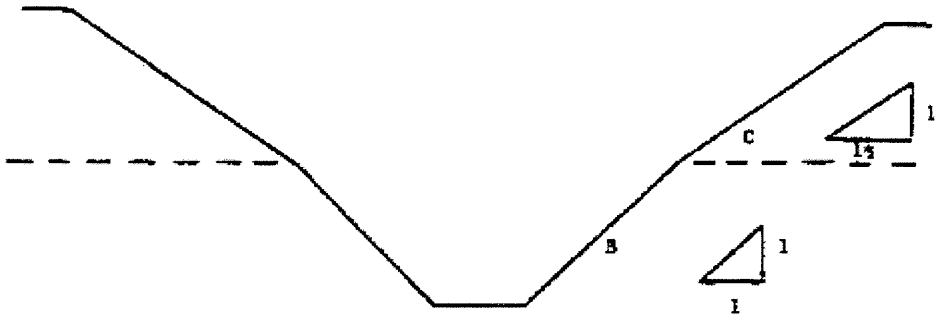
1. All excavations 20 feet or less in depth made in layered soils shall have a maximum allowable slope for each layer as set forth b



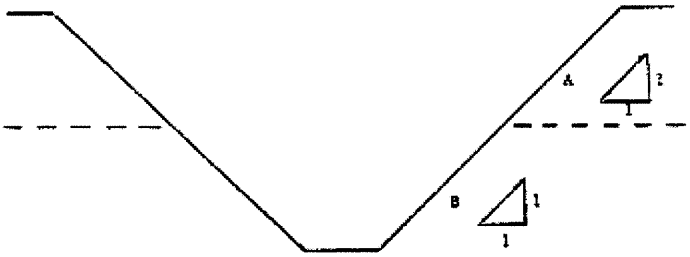
B OVER A



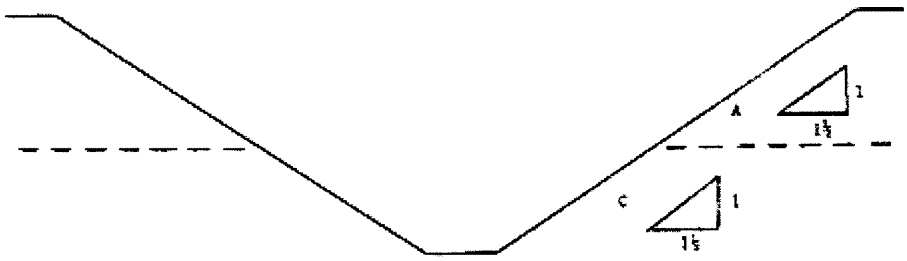
C OVER A



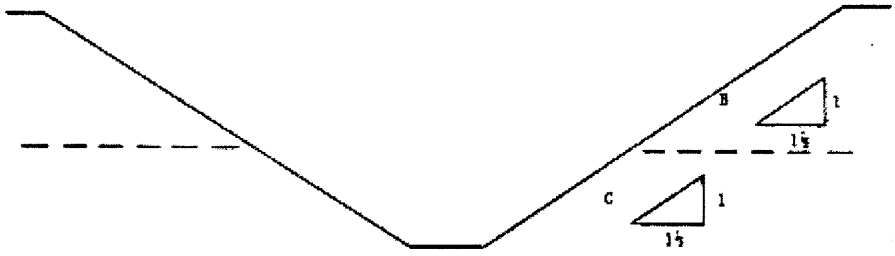
C OVER B



A OVER B



A OVER C



B OVER C

2. All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

Next Standard (1926 Subpart P App C)

Regulations (Standards - 29 CFR) - Table of Contents

• **Part Number:**	1926
• **Part Title:**	Safety and Health Regulations for Construction
• **Subpart:**	P
• **Subpart Title:**	Excavations
• **Standard Number:**	1926 Subpart P App F
• **Title:**	Selection of Protective Systems

The following figures are a graphic summary of the requirements contained in subpart P for excavations 20 feet or less in depth. Prc systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer in accordance wit 1926.652(b) and (c).

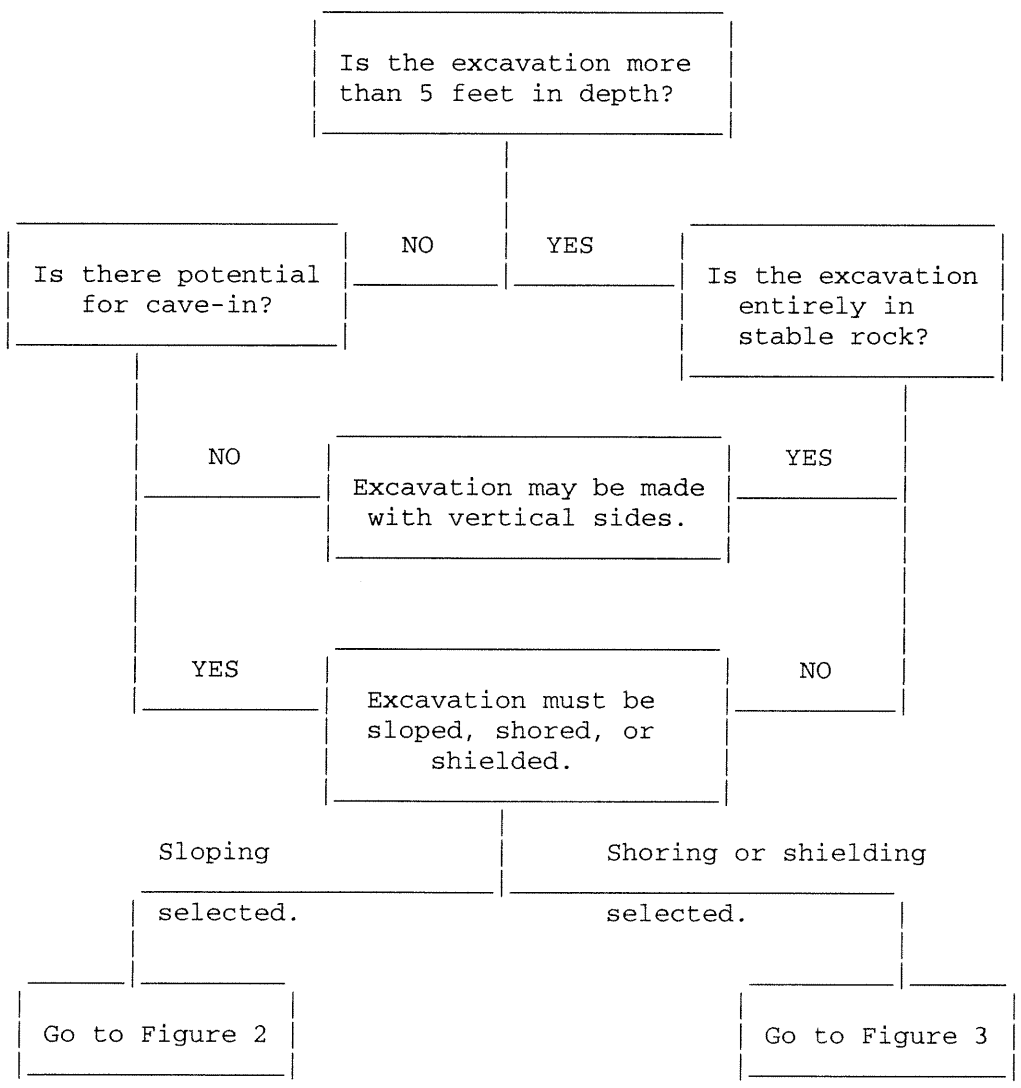


FIGURE 1 - PRELIMINARY DECISIONS

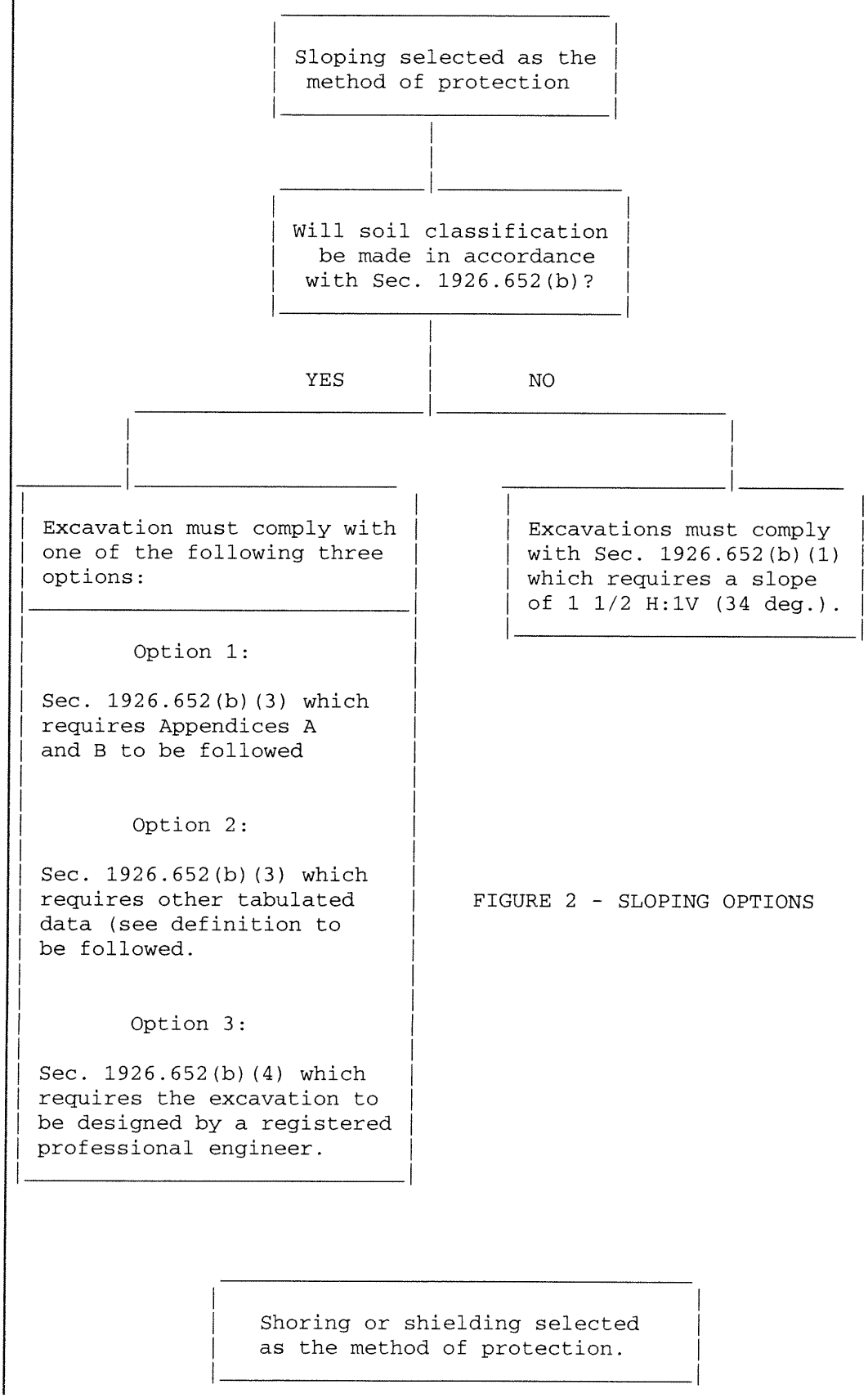


FIGURE 2 - SLOPING OPTIONS

Shoring or shielding selected as the method of protection.

Soil Classification is required when shoring or shielding is used. The excavation must comply with one of the following four options:

Option 1

Sec. 1926.652(c)(1) which requires Appendices A and C to be followed (e.g. timber shoring).

Option 2

Sec. 1926.652(c)(2) which requires manufacturers data to be followed (e.g. hydraulic shoring, trench jacks, air shores, shields).

Option 3

Sec. 1926.652(c)(3) which requires tabulated data (see definition) to be followed (e.g. any system as per the tabulated data).

Option 4

Sec. 1926.652(c)(4) which requires the excavation to be designed by a registered professional engineer (e.g. any designed system).

FIGURE 3 - SHORING AND SHIELDING OPTIONS

Next Standard (1926 Subpart Q)

Regulations (Standards - 29 CFR) - Table of Contents

Appendix B

GUIDANCE ON INCIDENT INVESTIGATION

AND REPORTING

C&S ENGINEERS

3. Following the treatment and care of the injured employee, the emergency coordinator or his on-site designee and the project manager will initiate the completion of the first injury report. The Health & Safety Manager will assist.

Project Manager

1. Upon notification of a personal injury or illness on the job site, will notify C & S Engineers, Inc, President and Corporate Legal and C&S Companies Health and Safety Manager.
2. Will report to the worksite to initiate the first injury report.
3. Will report to the treatment facility to check on the well being of the injured employee. The project manager will ensure that the treatment facility is aware that this is a workers compensation case.
4. Will assist the Health and Safety Manager in the analysis of the incident.

Health & Safety Manager

1. Upon notification of the personal injury will determined if it is necessary to report to the treatment facility or the accident site, depending on the nature of the injuries and the circumstances of the accident.
2. Will report to the worksite to begin a root cause analysis investigation of the accident. The investigation may include interview of witnesses, field crew , and project manager, the photographing of the scene, reconstruction of the accident scene, using test instruments and taking measurements. The Health and Safety Manager may draw diagrams from the information learned.
3. The Health and Safety Manager will work with the owner/client as necessary to investigate the accident.
4. The Health & Safety manager will ensure that the site is safe to resume work.
5. The Health & Safety Manager shall initiate the New York State Compensation form requirements (C-2) and forward a copy of the C-2 to the C & S Engineers, Inc. controller for transmittal to the Compensation Carrier within 8 hrs of notification of the incident or by the end of the next business day.
6. The Health and Safety manager, upon completion of the investigation, will provide the Project Manager with a written investigative report (copy to the President)
7. The accident will be reviewed at the next Project Managers meeting with the intent to prevent further or similar events on other projects.
8. The Health & Safety Manager will assess the incident to determine OSHA record ability and make record if necessary on the OSHA 300 form, within five working days.

Incident Response

1.0 PURPOSE

To prevent the occurrence of accidents on C&S Engineers, Inc., work sites and to establish a procedure for investigation and reporting of incidents occurring in, or related to C&S work activities.

2.0 SCOPE

Applies to all incidents related to C&S Engineers, Inc. work activities.

3.0 DEFINITIONS

Accident - An undesired event resulting in personal injury and/or property damage, and/or equipment failure.

Fatality - An injury or illness resulting in death of the individual.

Incident - Any occurrence which results in, or could potentially result in, the need for medical care or property damage. Such incidents shall include lost time accidents or illness, medical treatment cases, unplanned exposure to toxic materials or any other significant occurrence resulting in property damage or in "near misses."

Incidence Rate - the number of injuries, illnesses, or lost workdays related to a common exposure base of 100 full-time workers. The rate is calculated as:

N/EH x 200,000

N = number of injuries and illnesses or lost workday cases; EH = total hours worked by all associates during calendar year. 200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

Injury - An injury such as a cut, fracture, sprain, amputation, etc. which results from a work accident or from a single instantaneous event in the work environment.

Lost Workday Case - A lost workday case occurs when an injured or ill employee experiences days away from work beginning with the next scheduled work day. Lost workday cases do not occur unless the employee is effected beyond the day of injury or onset of illness.

Recordable Illness - An illness that results from the course of employment and must be entered on the OSHA 300 Log and Summary of Occupational Injuries and Illnesses. These illnesses require medical treatment and evaluation of work related injury. For example, dermatitis, bronchitis, irritation of eyes, nose, and throat can result from work and non-work related incidents.

Recordable Injury - An injury that results from the course of employment and must be entered on the OSHA 300 Log and Summary of Occupational Injuries and Illnesses. These injuries require medical treatment; may involve loss of consciousness; may result in restriction of work or motion or transfer to another job; or result in a fatality.

Near Miss - An incident which, if occurring at a different time or in a different personnel or equipment configuration, would have resulted in an incident.

4.0 RESPONSIBILITIES

Employees - It shall be the responsibility of all C&S Engineers, Inc. employees to report all incidents as soon as possible to the HSC, regardless of the severity.

Human Resources - has overall responsibility for maintaining accident/ incident reporting and investigations according to current regulations and recording injuries/ illness on the OSHA 300 log, and posting the OSHA 300 log.

Emergency Coordinator - It is the responsibility of the Emergency Coordinator to investigate and prepare an appropriate report of all accidents, illnesses, and incidents occurring on or related to C&S Engineers, Inc. work. The Emergency Coordinator shall complete Attachment A within 24 hours of the incident occurrence.

Health and Safety Manager (HSM) - It is the responsibility of the HSM to investigate and prepare an appropriate report of all lost time injuries and illnesses and significant incidents occurring on or related to C&S Companies. The HSM shall maintain the OSHA 300 form.

Project Managers (PM) - It shall be the PM's responsibility to promptly correct any deficiencies in personnel, training, actions, or any site or equipment deficiencies that were determined to cause or contribute to the incident investigated.

5.0 GUIDELINES

5.1 Incident Investigation

The Project Manager will immediately investigate the circumstances surrounding the incident and will make recommendations to prevent recurrence. The HSM shall be immediately notified by telephone if a serious accident/ incident occurs. The incident shall be evaluated to determine whether it is OSHA recordable. If the incident is determined to be OSHA 300 recordable, it shall be entered on the OSHA 300 form.

The Project Manager with assistance from the HSM must submit to the office an incident report form pertaining to any incident resulting in injury or property damage.

5.2 Incident Report

The completed incident report must be completed by the Project Manager within 12 hours of the incident and distributed to the HSM, and Human Resources. This form shall be maintained by Human Resources for at least five years for all OSHA recordable cases. This form serves as an equivalent to the OSHA 101 form.

5.3 Incident Follow-up Report

The Incident Follow-Up Report (Attachment B) shall be distributed with the Incident Report within one week of the incident. Delay in filing this report shall be explained in a brief memorandum.

5.4 Reporting of Fatalities or Multiple Hospitalization Accidents

Fatalities or accidents resulting in the hospitalization of three or more employees must be reported to OSHA verbally or in writing within 8 hours. The report must contain 1) circumstances surrounding the accident(s), 2) the number of fatalities, and 3) the extent of any injuries.

5.5 OSHA 300A Summary Form

Recordable cases must be entered on the log within six workdays of receipt of the information that a recordable case has occurred. The OSHA log must be kept updated to within 45 calendar days.
OSHA 300 forms must be updated during the 5 year retention period, if there is a change in the extent or outcome of an injury or illness which affects an entry on a log. If a change is necessary, the original entry should be lined out and a corrected entry made on that log. New entries should be made for previously unrecorded cases that are discovered or for cases that initially weren't recorded but were found to be recordable after the end of the year. Log totals should also be modified to reflect these changes.

5.5.1 Posting

The log must be summarized at the end of the calendar year and the summary must be posted from February 1 through May 31.

5.6 OSHA 300A

Facilities selected by the Bureau of Labor Statistics (BLS) to participate in surveys of occupational injuries and illnesses will receive the OSHA 300A. The data from the annual summary on the OSHA 300 log should be transferred to the OSHA 300A, other requested information provided and the form returned as instructed by the BLS.

5.7 Access to OSHA Records

All OSHA records (accident reporting forms and OSHA 300 logs) should be available for inspection and copying by authorized Federal and State government officials.

Employees, former employees, and their representatives must be given access for inspection and copying to only the log, OSHA No. 300, for the establishment in which the employee currently works or formerly worked.

6.0 REFERENCES

29 CFR Part 1904

7.0 ATTACHMENTS

Attachment A - Incident Investigation Form
Attachment B - Incident Follow-Up Report
Attachment C - Establishing Recordability

ATTACHMENT A

INCIDENT INVESTIGATION FORM

Accident investigation should include:

Location: _____

Time of Day: _____

Accident Type: _____

Victim: _____

Nature of Injury: _____

Released Injury: _____

Hazardous Material: _____

Unsafe Acts: _____

Unsafe Conditions: _____

Policies, Decisions: _____

_____

Personal Factors: _____

_____

Environmental Factors: _____

_____

_____

ATTACHMENT B

Date _____

Foreman: _____

INCIDENT FOLLOW-UP REPORT

Date of Incident: _____

Site: _____

Brief description of incident: _____

_____

_____

_____

_____

Outcome of incident: _____

_____

_____

_____

Physician's recommendations: _____

_____

_____

_____

Date the injured returned to work: _____

Project Manager Signature: _____

Date: _____

ATTACH ANY ADDITIONAL INFORMATION TO THIS FORM

ATTACHMENT C

ESTABLISHING RECORDABILITY

1. Deciding whether to record a case and how to classify the case.

   Determine whether a fatality, injury or illness is recordable.

   A fatality is recordable if:

   - Results from employment

   An injury is recordable if:

   - Results from employment and
   - It requires medical treatment beyond first aid or
   - Results in restricted work activity or job transfer, or
   - Results in lost work day or
   - Results in loss of consciousness

   An illness is recordable if:

   - It results from employment

2. Definition of "Resulting from Employment"

   Resulting from employment is when the injury or illness results from an event or exposure in the work environment. The work environment is primarily composed of: 1) The employer's premises, and 2) other locations where associates are engaged in work-related activities or are present as a condition of their employment.

   The employer's premises include company rest rooms, hallways, cafeterias, sidewalks and parking lots. Injuries occurring in these places are generally considered work related.

   The employer's premises EXCLUDES employer controlled ball fields, tennis courts, golf courses, parks, swimming pools, gyms, and other similar recreational facilities, used by associates on a voluntary basis for their own benefit, primarily during off work hours.

   Ordinary and customary commute, is not generally considered work related.

   Employees injured or taken ill while engaged in consuming food, as part of a normal break or activity is not considered work related. Employees injured or taken ill as the result of smoking, consuming illegal drugs, alcohol or applying make up are generally not considered work related. Employee injured by un authorized horseplay is generally not considered work related, however, an employee injured as a result of a fight or other workplace violence act, may be considered work related.

Associates who travel on company business are considered to be engaged in work related activities all the time they spend in the interest of the company. This includes travel to and from customer contacts, and entertaining or being entertained for purpose of promoting or discussing business. Incidents occurring during normal living activities (eating, sleeping, recreation) or if the associate deviates from a reasonably direct route of travel are not considered OSHA recordable.

3. Distinction between Medical Treatment and First Aid.

First aid is defined as any one-time treatment, and any follow up visit for the purpose of observation, of minor scratches, cuts, burns, splinters, etc., which do not ordinarily require medical care. Such one time treatment, and follow up visit for the purpose of observation, is considered first aid even though provided by a physician or registered professional personnel.

Medical Treatment (recordable)

a) They must be treated only by a physician or licensed medical personnel.

b) They impair bodily function (i.e. normal use of senses, limbs, etc.).

c) They result in damage to physical structure of a non superficial nature (fractures).

d) They involve complications requiring follow up medical treatment.