New York State Department of Environmental Conservation

Final Engineering Report, C and F Plating

Division of Environmental Remediation

LOCATION: 406 N PEARL STREET, ALBANY

NEW YORK 12207

SITE NUMBER: 401057

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-Containing Material
bgs	below ground surface
COC	Contaminants of Concern
FS	Feasibility Study
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
PCB	Polychlorinated biphenyl
PES	Precision Environmental Services
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
SCO	Soil Cleanup Objective
Site	C and F Plating Inactive Hazardous Waste Site
Spectrum	Spectrum Environmental Associates
TAL	Target Analyte List
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank

1.0 INTRODUCTION

The C and F Plating Inactive Hazardous Waste Site (the Site) (New York State [NYS] Site No. 401057) is located at 406 North Pearl Street in the City of Albany, Albany County, New York (See Figure 1: Site Map). The Site is located adjacent to Patroon Creek. The City of Albany site section/lot/block number is 65.16-1-25. The Site, an approximately 0.34 acre parcel, is located in a mixed commercial/industrial area. The Site and the surrounding area is located at approximately 30 feet above mean sea level. Access to the Site is restricted on three sides by fencing and a locked gate. Access is restricted from the north by Patroon Creek.

1.1 SITE GEOLOGY/HYDROLOGY

The Site is located within the Hudson Mohawk Lowland Physiographic Province. The overburden soils in the surrounding area have been characterized as lacustrine sand, which are composed of well sorted, stratified sand deposits, or lacustrine silt and clay, which are composed of generally laminated silt and clay. The bedrock geology identified in the vicinity of the Site is the Normanskill Shale, which is of Middle Ordovician origin. Subsurface soils encountered at the Site are generally composed of silty sand, silt, silty clay, and some gravel. Groundwater is approximately eight feet below grade and generally flows southeast toward Patroon Creek. Groundwater at the Site is not used for drinking or other purposes as the property is serviced by public water (NYS Department of Environmental Conservation [NYSDEC], 2014).

1.2 LAND USE AND SITE HISTORY

Based on review of Sanborn Fire Insurance Maps for the city of Albany, development was present at the Site beginning in 1892 or earlier. Chrome plating operations occurred on the property from the 1920s or earlier, and continued until 1985. The Site included a 6,600-square foot two-story brick building, which originally consisted of industrial/warehouse space in the northern portion and office space in the southern portion. Since 1985, the facility stored miscellaneous equipment, household items, municipal waste, and debris. Prior to the remedial action described in this report, the northern portion of the building had partially fallen into Patroon Creek.

Surrounding lots are currently used for commercial and light industrial uses. The area surrounding the Site includes Patroon Creek and an automotive spring business to the north, a heating and air conditioning company and medical dispensary to the south, a boiler tank and welding company to the west, and North Pearl Street and a health and fitness club to the east. The Site, currently vacant, is zoned commercial/industrial.

1.3 PREVIOUS INVESTIGATIONS AND REMEDIAL HISTORY

On June 27, 2003, the United States Environmental Protection Agency (USEPA) conducted a Removal Site Evaluation, which included a limited onsite inventory of over 40 containers and several vats. Labeling on these materials indicated the presence of strong acids and bases including chromic acid, sodium hydroxide, and zinc solutions. An estimated 2,000 gallons of hazardous wastes were present throughout the building, stored in an unsafe manner. The USEPA conducted an emergency removal at the Site between November 3, 2003 and July 20, 2004 to address the hazardous waste materials stored in drums, canisters, and vats onsite (NYSDEC, 2014).

A Limited Subsurface Investigation performed in May 2008 included the installation of five groundwater monitoring wells and six soil borings. Surface soil, subsurface soil, groundwater, and sediment samples were collected during the investigation. The results of the limited investigation indicated relatively high concentrations of metals, particularly cadmium, chromium, and nickel, in onsite soil and groundwater. Polychlorinated biphenyls (PCBs) were detected at concentrations less than NYSDEC Part 375 Residential Soil Cleanup Objectives (SCOs). PCBs were not detected in groundwater samples, and no impact from the Site was identified in Patroon Creek sediments (NYSDEC, 2014).

A Remedial Investigation (RI) was conducted at the Site from September 2011 through July 2012. Results from the RI showed relatively high concentrations of metals in surface and subsurface soil. Contaminants of concern (COCs) for the Site were identified as barium, chromium, cadmium, copper, lead, mercury, nickel, and zinc.

Figure 2 of Appendix A shows concentrations of cadmium, chromium, lead, and nickel in soil samples exceeding Commercial SCOs. SCO exceedances were reported in surface soil samples collected on the northeast portion of the Site behind and under the building, and in subsurface soils to a depth of primarily two to four feet below ground surface (bgs), and ten to fifteen feet bgs under

the building. The inferred extent of soils exceeding Commercial SCOs is also shown on Figure 2 of Appendix A.

Sediment sampling results from the RI suggested that sediments in the adjacent Patroon Creek had not been adversely impacted by site operations. The COCs did not appear to be contributing to offsite environmental impacts requiring additional investigation or remedial action.

2.0 REMEDIAL ACTION SCOPE OF WORK

Remedial action objectives (RAOs) to protect public health and the environment were identified for the Site. The site RAOs are as follows:

Groundwater:

- Prevent ingestion of groundwater with contaminant concentrations exceeding drinking water standards
- Remove the source of ground or surface water contamination

Soil:

- Prevent ingestion/direct contact with contaminated soil
- Prevent migration of contaminants that would result in groundwater or surface water contamination
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Based on results of the RI and subsequent Feasibility Study (FS), the NYSDEC prepared a Record of Decision (ROD) in March 2014 that identified the selected remedy for the Site (NYSDEC, 2014). The ROD is included as Appendix B to this report.

According to the ROD, the objective of the selected remedy (Alternative 5 from the FS Report) was to return the Site to Part 375 Commercial SCOs by performing the following elements:

- Evaluation and possible demolition of the building
- Excavation of the floor drain area and the area immediately north and south of HRP-SB-4 to approximately five feet below grade or to the groundwater interface
- Application of calcium polysulfide to the bottom of the excavation(s) prior to backfilling
- Disposal of fill materials and contaminated soils

Remedial activities were conducted by Precision Environmental Services (PES) and its subcontractors in accordance with the March 2014 ROD. The remainder of this section summarizes the remedial activities conducted at the Site between June 2014 and November 2015. Additional details can be found in the PES *ROD Implementation Report of Findings* (PES report) (PES, 2016), which is included as

Appendix A to this report. Daily Inspection Reports completed by the NYSDEC are included as Appendix C.

2.1 SITE CLEARING AND BUILDING DEMOLITION

In June 2014, PES and its subcontractor, The Davey Tree Expert Company, performed site clearing work to remove trees and woody vegetation from the Site to facilitate access. Next, PES and subcontractor Spectrum Environmental Associates (Spectrum) attempted a pre-demolition asbestos inspection of the onsite building; however, the building was deemed structurally unsafe to occupy or enter. Hennessey Engineering and Consulting performed an inspection and determined the building was unsafe for human occupation, and that it represented a danger to the life, health, property, and safety of the general public.

To facilitate full site assessment and contaminant mitigation, it was determined that the building must be razed. Since asbestos content could not be assessed in the building due to its dilapidated state, Spectrum petitioned the NYS Department of Labor to receive a variance relief from Code Rule 56 to allow for Controlled Demolition Removal of Friable Asbestos-Containing Material (ACM). The variance is provided in Attachment B of the PES report.

Dan's Demolition and Hauling, Inc. performed ACM abatement and building demolition work from October 6 to October 17, 2014, during which time the structures and buildings were demolished in place. Debris was excavated from the basement area of the former building to a depth of approximately five feet bgs. Spectrum performed air monitoring during the ACM abatement work (see PES Report Attachment B). Debris and building materials were either disposed of as ACM at the City of Albany landfill (approximately 450 tons), or cleaned and recycled (non-porous steel).

2.2 DRUM AND PRODUCT REMOVAL

During building demolition, workers encountered two 30-gallon plastic drums of liquid with original manufacturer labels intact. Samples from each drum were sent to the manufacturer of the drums (Luster-On Products, Inc. of Springfield, MA) to confirm product identification (see PES report Attachment D). After confirmation of the liquids as Luster-On chromic and formic acid solutions, both drums were transported by Precision Industrial Maintenance, Inc. and disposed of as hazardous liquid waste at Cycle Chem, Inc. of Elizabeth, NJ. Waste disposal documentation is provided in PES report Attachment E.

2.3 SUPPLEMENTAL SUBSURFACE INVESTIGATION

PES conducted supplemental soil sampling after building demolition and excavation of debris. The purpose of the supplemental soil sampling was to fill data gaps from previous investigations and guide excavation activities by delineating the extent of soils exceeding commercial SCOs. On October 17, 2014, four shallow soil samples were collected from the top 6 inches of the former basement's dirt floor (approximately five feet below relative site grade). Samples were sent to Test America in Edison, NJ for analysis of Target Analyte List (TAL) metals. Cadmium was detected above the commercial SCO in two of the basement soil samples (see PES Attachments F and G).

On November 14, 2014, 18 soil samples were collected onsite using a skid steer with a GeoProbe attachment. Soil samples were collected at intervals of 0-1 foot, 1-2 feet, and 2-4 feet. Samples were sent to Test America in Amherst, NY for analysis of TAL metals. Cadmium, chromium, lead, and nickel were detected above commercial SCOs from soil samples collected to a depth of up to 4 feet, as shown on Figure 3 of the PES report (also see Attachments F and G of PES report). Exceedances of commercial SCOs were present in soil in areas beyond the inferred limit of SCO exceedances delineated prior to the supplemental subsurface investigation. The results of the supplemental sampling were the basis for the soil excavation and removal activities described in Subsection 2.6 of this report.

2.4 CREEK BANK STABILIZATION

Prior to the soil excavation, the bank of Patroon Creek was stabilized with a permanent retaining wall installed along a 50 to 60 linear feet length of the creek bank. Dente Engineering designed the retaining wall, which consisted of geogrid-reinforced shoring with crushed stone retained in fabricated geogrid baskets (see PES report Attachment H). PES constructed the retaining wall from August 19 through 21, 2015. Additionally, the concrete foundation that had served as structural support and embankment for the creek was repaired and replaced, and the new retaining wall was tied into the remaining improved foundation.

2.5 ABANDONED UNDERGROUND STORAGE TANK CLOSURE

During installation of the retaining wall, a 1,000-gallon single wall steel underground storage tank (UST) was encountered. The cover material was removed to expose piping access points for the purpose of assessing the volume and type of fluid content. The UST contained 850 gallons of mixed water/fuel, which was removed under manifest by Mac-Son Industrial Services of Selkirk, NY on August 27, 2015 and disposed of at Industrial Tank Services in Oriskany, NY (Attachment I of PES report).

PES extracted the UST and examined it for evidence of leakage, holes, pitting, or areas of weakness. The UST was observed to be in fair condition and did not appear to contain visible holes or perforations. PES cleaned and cut the UST and transported it to Upstate Shredding Albany for recycling.

2.6 CONTAMINATED SOIL EXCAVATION AND REMOVAL

Based on historic data and the results from the supplemental subsurface investigation, areas targeted for excavation were identified as the former floor drain areas, shallow soils north of the former building, and the former building's footprint.

2.6.1 Soil Excavation

PES performed excavation of contaminated soil to meet commercial SCOs to the extent feasible within the physical constraints of the Site and/or in accordance with pre-determined horizontal and vertical extents based on investigation results. The excavation was divided into five zones, as shown on Figure 4 of the PES report. The excavation depths and estimated soil volume removed from each zone are presented in the table below.

Zone	Maximum Depth of Excavation (feet)	Estimated Volume of Soil Removed (tons)
1	2-3	250
2	2-3	459
3	5-6	338
4	2-3	315
5	2-3	35

Excavation activities began on August 24, 2015 in Zone 1 at the northwest corner of the Site, and generally continued to the southeast, concluding with Zone 4 on November 10, 2015. Excavation was performed using a tracked excavator and loader to remove and stage impacted soils.

Community and personal air monitoring/screening were performed during all invasive site work, and clean water was applied to surfaces within the construction zone to control dust. Removed soils were poly-encapsulated and staged onsite for characterization before disposal. Equipment was decontaminated on designated containment pads before leaving the Site.

2.6.2 In-Situ Treatment

After excavation to approximately 5 feet bgs, soil in the phreatic zone within the footprint of the most contaminated area (Zone 3, beneath the floor drain network) was treated with 500 gallons of a 15% calcium polysulfide solution. This solution induces chemical reduction, causing metals to precipitate out of solution and bind with soil rather than migrating with groundwater.

2.6.3 Backfill and Site Surface Cover System

Orange polyethylene fencing was placed along the floor of each excavation area as a physical demarcation layer. This layer was then covered with imported clean fill and "borrow" concrete slabs removed from the surface. Backfilling activities were conducted after excavation of each zone was completed, before beginning excavation of the next zone.

The upper one-foot surface of the excavations was filled with imported clean select fill as a cover system, pursuant to the ROD. The imported material consisted of clean crushed stone supplied by Larned & Sons, sourced from their Rotterdam, NY location. The material was compacted using walk-behind vibratory equipment.

Although not included as an excavation zone, the former building's basement area underwent excavation of building debris prior to sampling in October 2014. The basement was backfilled on November 19, 2014 with five to six feet of clean select fill to within 6 inches of finish grade.

2.6.4 Transportation and Disposal of Excavated Soil

The total volume of soil excavated from the Site was 1,397 tons. Characterization of the stockpiles was performed using sampling and laboratory analysis. 744 tons of soil were classified as non-hazardous and transported by MC Environmental Services to the City of Albany Landfill. The remaining 653 tons of soil were transported by Capitol Environmental Services, Inc. of Baltimore, MD and disposed of as D006 hazardous waste at the Stericycle Environmental Solutions facility in Hatfield, PA. Attachment E of the PES report includes waste manifests followed by a summary table of materials transported off-site and brought on site (fill).

3.0 CONCLUSIONS

The remedial action performed by PES achieved the RAOs for the Site by removing contaminated soil to the extent feasible, remediating remaining contamination in the source area with in-situ chemical reduction, and covering the Site surface with clean fill to prevent exposure to contaminated soil. Human exposure to concentrations of contaminants above commercial SCOs is not expected based on current Site use and Site controls.

4.0 ENGINEER'S CONSTRUCTION CERTIFICATION

I, Gerard Burke certify that I am currently a New York State licensed professional engineer. I had primary direct responsibility for the implementation of the subject construction program. I certify that the C and F Plating Site remedial action was implemented and that all construction activities were completed in substantial conformance with the ROD.

Signature: _____

Date: 4-25-2017

5.0 REFERENCES

New York State Department of Environmental Conservation (NYSDEC) 2014. Record of Decision, C and F Plating State Superfund Project, Albany, Albany County, Site No. 401507. March 2014.

Precision Environmental Services (PES), Inc. 2016. ROD Implementation Report of Findings, C and F Plating Site. October 2016.

TABLE 1 Soil Results Remaining

Boring Code	Depth (ft)	Cd	Cr	Pb	Ni	Depth of Excavation (ft)
HRP SB-10A	5.0-10.0	140	68	18	87	5-6
HRP SB-10	5.0-10.0	451	65	15	168	2-3
HRP SB-11	5.0-15.0	20-3,500	10-520	8-1,540	20-627	5-6
HRP MW-9	7.5-10.0	54	14	10	16	2-3
HRP MW-10	10.0-12.5	37	37	16	64	2-3
HRP SB-6	10.0-15.0	204	107	14	76	5-6
PSB-4	2.0-4.0	1.2	25.6	264	35.7	2-3
PSB-5	2.0-4.0	ND	43	11.2	24.4	2-3
PSB-6	2.0-4.0	1.7	26.9	27	1,910	2-3
PSB-10	2.0-4.0	ND	22.1	421	25.8	2-3
PSB-11	2.0-4.0	10.8B	16.8	64.5	26.6	2-3
PSB-12	2.0-4.0	0.047JB	16.5	12.7	62.8	2-3
PSB-13	2.0-4.0	0.35B	15	82.8	20.3	2-3
PSB-14	2.0-4.0	0.36	14.8	33.4	26.9	2-3
PSB-15	2.0-4.0	0.36	15	19.6	52.3B	2-3

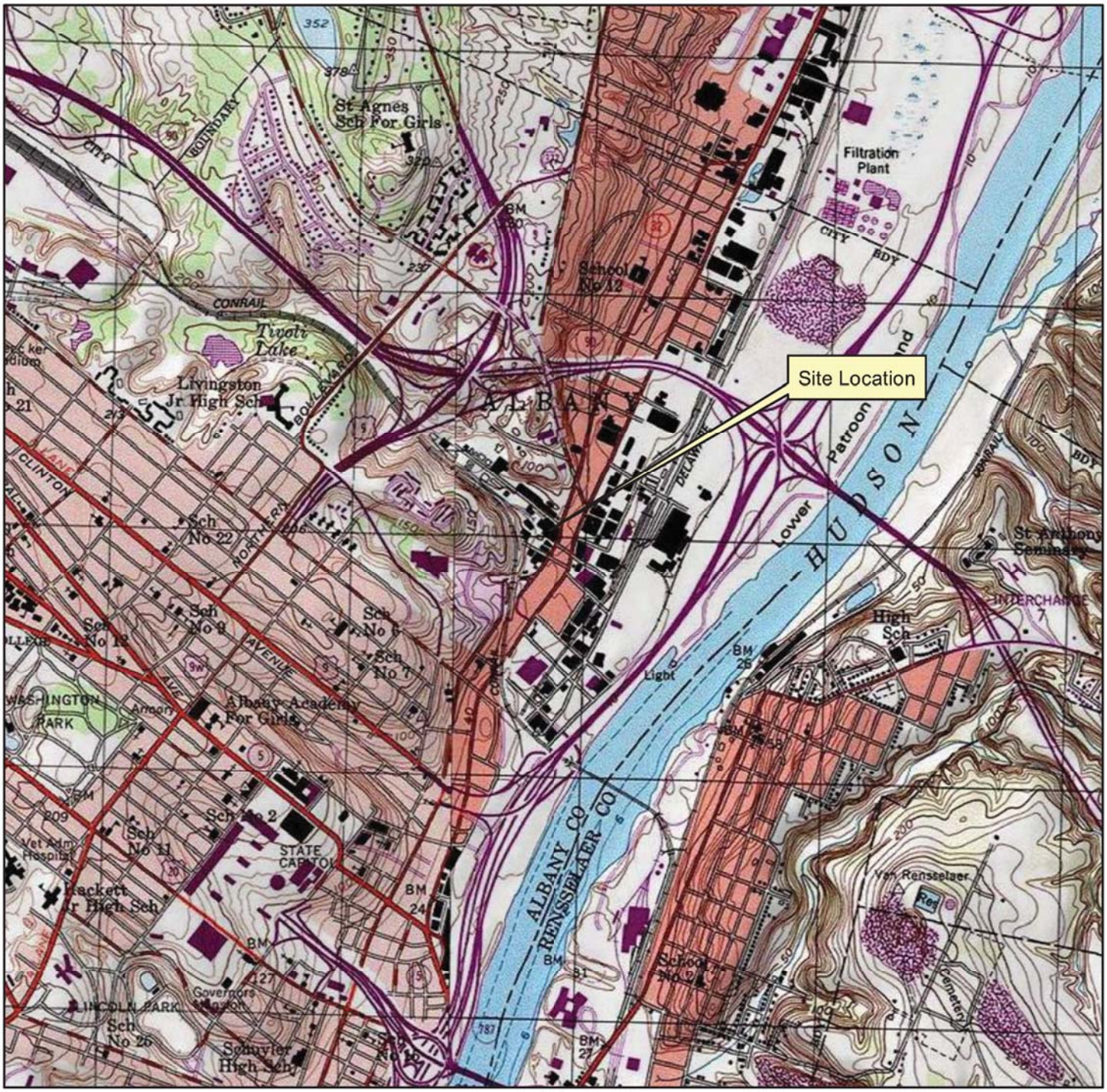
key:

Exceeds Part 375 Industrial

Exceeds Part 375 Commercial Limit

** TCLP Conc Exceeds RCRA Toxicity Limit

FIGURE



USGS Quadrangle data Copyright:
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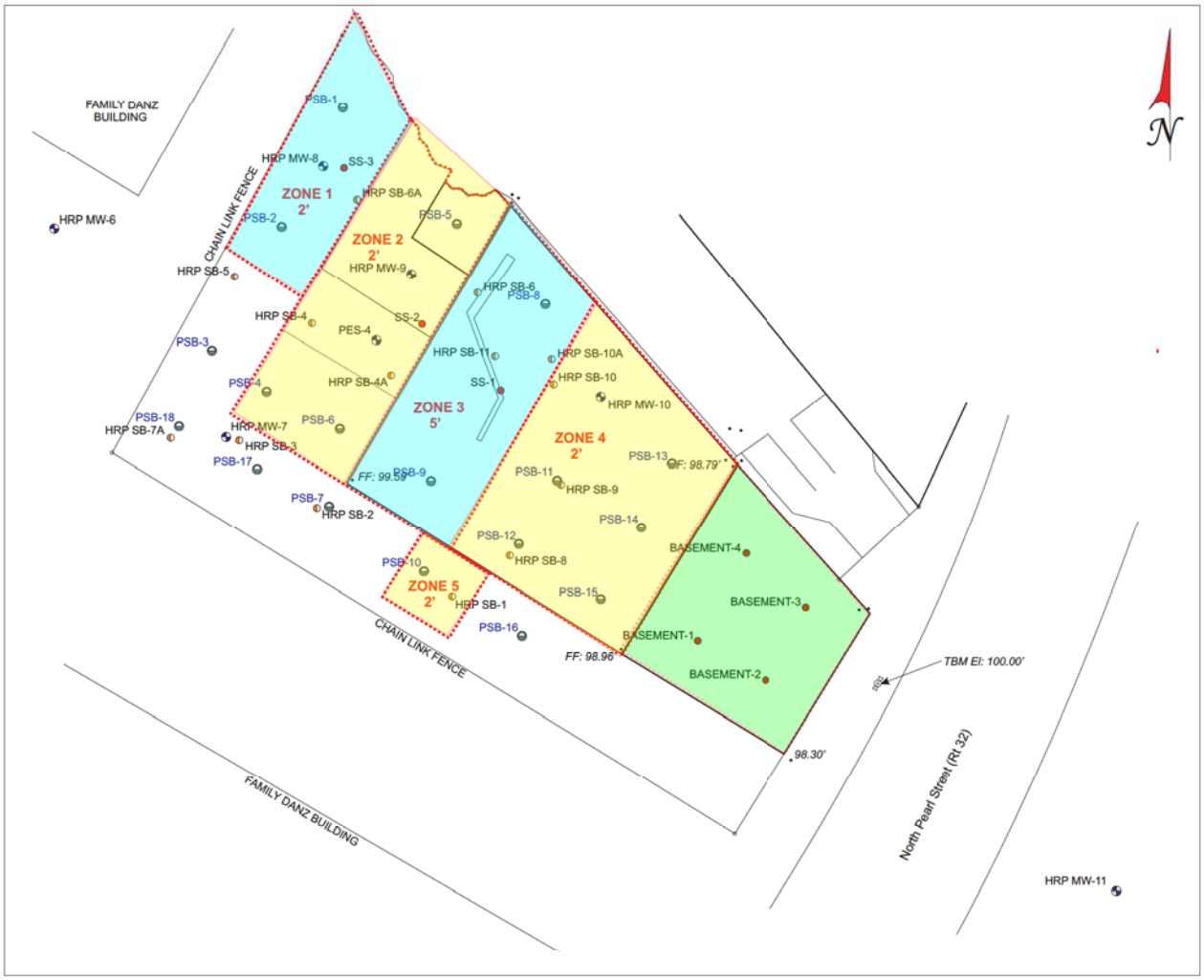
USGS Quad ID: 42073-F7
Quad Name: Albany, New York
Publish Date: 1983

Figure 1
Site Location
CF Plating Facility
406 North Pearl Street
Albany, New York
Scale 1"=2,000'



PRECISION
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CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

EXCAVATION AREAS AND DEPTHS

C&F PLATING SITE

PROJECT #: NYSDEC SITE NO.: 401057

LOCATION: 406 NORTH PEARL ST., ALBANY, NY

FIGURE: 2 **SCALE:** 1:20

LEGEND

- MW-6 — EXISTING MONITORING WELL
- SB-1 — EXISTING SOIL BORING
- SS-1 — EXISTING SURFACE SOIL SAMPLE
- PSB-A — PROPOSED SOIL BORING WITH SOIL SAMPLES COLLECTED AT FOLLOWING INTERVALS:
  - 8 feet demarcation zone
  - 5-6 feet demarcation zone
  - 2-3 feet demaraction zone

0 20 40
Feet

NOTES:

All Locations are approximate

APPENDIX A

CONTRACTOR REMEDIAL ACTION REPORT

1.0 INTRODUCTION

Precision Environmental Services, Inc. (PES) has prepared this report of findings to document remedial work implemented at the C & F Plating site (hereafter referred to as the "site"). Based on historical use and contaminant assessment, the subject property was classified as a Class 2 inactive hazardous waste disposal site (NYSDEC Site No.: 401057). The site is physically located at 406 North Pearl St., City of Albany, Albany County, NY. Figure 1 located in Attachment A provides additional site location detail.

PES was contracted to implement the remedy of choice pursuant to and in conformance with the March 2014 Record of Decision (ROD). The selected mitigation response was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375, and is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

A description of the major work elements of the remedy along with a brief executive summary of their implementation are as follows:

1. Site Clearing and Building Demolition – Existing trees and woody vegetation was cleared from the site to facilitate access. The existing and dilapidated buildings were then razed. The structures were condemned, and were demolished in place. All building materials and existing solid waste was handled and disposed of as asbestos containing material (ACM). Approximately 449 tons of ACM construction and demolition debris were removed and disposed of off-site at the City of Albany Landfill (AL). All asbestos abatement and demolition work was completed pursuant to NYSDOL Code Rule 56 and petition for Variance No. 14-0815. Spectrum Environmental Associates, Inc. (Spectrum) drafted the petition for Variance from Code Rule 56 and performed all 3rd party air and project monitoring during the abatement work. Their final report has been included as Attachment B.

2. Drum and Product Removal – Two drums of product (formic and chromic acid solutions) used in previous plating operations were encountered during building demolition. The liquid products were found in their original containers with manufacturer labels still partially intact. The drums were characterized through sampling and laboratory analysis. Supplemental information was acquired through discussions with representatives of the chemical manufacturer. The drums were placed into over pack containers in the field by PES and were ultimately transported and disposed as D001, D002 and D007 hazardous waste liquids at Cycle Chem, Inc. in Elizabeth, NJ.

3. Supplemental Subsurface Investigation – PES completed a supplemental subsurface investigation (SSI) to: 1) -to refine excavation boundaries, 2) – collect additional delineation data related to hazardous vs non-hazardous soil distribution and 3) collect additional soil for analytical analysis. This SI work was performed to supplement previous work done by others. Following building demolition, surface soil samples were collected from the dirt floor of the former basement. These sample areas of concern were previously inaccessible to investigative efforts. Four (4) samples were collected as depicted on attached Figure 2. PES also implemented direct push drilling methods to collect soil samples to further characterize the horizontal and vertical extent of hazardous and non-hazardous contaminants. Eighteen (18) shallow soil borings (SBs) were installed at strategic locations to further define contaminant impacts. At each boring location discrete soil samples were

collected at discrete intervals to define vertical extent of contaminants. The data collected was used to assist in planning and logistically implementing the proposed excavation work. Figure 3 details the location of the PES installed SBs.

4. Excavation – The selected remedy called for excavation and off-site disposal of contaminant source areas, including: 1) the former floor drain areas, 2) shallow soils located north of the former structure as well as 3) a large area of the former building's footprint (see Figure 4 for detail). These areas were targeted for remediation based on information collected during PES's SSI as well as data generated during the remedial investigation and feasibility studies (RI/FSs). Prior to the excavation process, engineering controls were required to facilitate safe and sound soil removal and backfill activities occurring immediately adjacent to the Patroon Creek, as the creek borders the property to the north-northeast. The existing creek bank was visibly eroded and deemed unstable. Engineering controls consisted of:

    - Installation of a permanent retaining wall along approximately 50-60 linear feet of creek bank and
    - Repair and replacement of a portion of concrete foundation and associated footer for the former building. The building foundation served the dual purpose of structural support as well as an integral component of the creek embankment and bridge abutment (where North Pearl Street overpasses the Creek).

    The retaining wall, which was designed by Dente Engineering of Watervliet, NY, consisted of geogrid reinforced shoring whereby no. 1 and no. 2 washed crushed stone are retained within fabricated baskets. The wall consists of four (4) courses of baskets each at 18-inches tall. The width of the wall is 6 to 8-feet.

    Completed engineering controls allowed for safe and practical excavation of contaminated soil. Impacted soils were excavated to meet Commercial Soil Cleanup Objectives (SCOs) to extent feasible and pursuant to pre-determined horizontal and vertical limits as established by previous investigative efforts by PES and others. Soils were excavated, stockpiled and characterized via sampling and laboratory analysis and were then transported off site and disposed of as non-hazardous waste at the City of Albany Landfill (AL) or as a D006 hazardous waste solid at Stericycle Environmental Solutions (SES) facility in Hatfield, PA.

    Once termination depth was reached a physical demarcation layer consisting of orange polyethylene fencing was placed along the floor of the excavation area prior to placement of imported clean fill and concrete slabs removed from surface and then cover system.

5. UST Closure - During installation of the retaining wall a 1,000-gallon underground storage tank (UST) was encountered. The UST was subsequently removed and closed as per 6 NYCRR Part 613.

6. In-Situ Treatment – Post excavation soil existing in the phreatic zone (below the water table interface) within the footprint of the most contaminated area (beneath floor drain network – Zone 3) were further remediated with in-situ chemical reduction (ISCR). A Calcium Polysulfide (CaSx) solution was applied to the floor of the excavation to treat metals in soil and groundwater. CaSx is intended to create conditions that cause the metals to precipitate

out of solution such that they bind with soil particles rather than migrate with the localized groundwater flow. The byproducts of the ISCR process are non-toxic.

250 gallons of liquid CaSx were mixed with 250 gallons of potable water to provide a concentration of 15% CaSx placement mixture. Once mixed the compound was spread along the floor of the excavation via gravity flow.

7. Cover System – Pursuant to specific requirements of the ROD, the surfaces of the excavated areas were covered with a minimum of 1 foot of imported select fill. The cover was constructed of two (2) 6-inch lifts of compacted crushed stone. The stone cover completed the excavation areas to grade.

PES was issued a Call Out to perform the remedial work at the site on June 12, 2014. Site work was carried out and/or overseen by PES from April 9, 2014 to December 11, 2015 in accordance with NYSDEC Prime Standby Remedial Services Contract No.: C100906. Additional detail regarding the implementation of each remedial element have been included below.

1.1 Background/History:

Historical chrome plating operations reportedly took place on the property from the 1920s or before, and continued until 1985. In 2003 and 2014 the Environmental Protection Agency (EPA) conducted a Removal Site Evaluation. The evaluation resulted in a removal action of an estimated 2,000 gallons of hazardous wastes that were present throughout the building and were reportedly stored in an unsafe manner. The wastes were improperly stored in drums, canisters and open vats. Waste was found to be co-mingled with solid waste debris that had been stored or dumped at the site following the 1985 shut down of operations.

Subsequent to the EPA removal effort a limited subsurface investigation (SI) was conducted that resulted in documented impacts to the shallow soil and groundwater regimes. As a result of the documented impacts, the site was listed on the state's registry system as an inactive hazardous waste disposal facility (NYSDEC Site No.: 401057). To further characterize the impacts, additional investigation efforts were performed. The collected site specific data was used to formulate a remedial corrective action plan (CAP) and associated record of decision (ROD). Following public review and comment, in March 2014 the ROD was published by the Department. PES was called out to perform work at the site by DER in June 2014 to begin ROD implementation. All work performed by PES was in accordance with Prime NYS DEC contract No. C100906.

1.2 Site Description:

The Site is located at 406 North Pearl Street in the City of Albany, Albany County, NY (see Figure 1 for detail). The parcel is 0.34 acres in size and is located in a mixed commercial and industrial urban setting. According to information provided by the City of Albany Code Enforcement Supervisor, the site is zoned for commercial/industrial usage. The Site is bound to the north-northeast by the Patroon Creek and then light industrial business (Albany Spring Services) beyond. A commercial plumbing and heating company (Family Danz) occupy land occurring west and south of the subject site. North Pearl Street comprises the eastern boundary. A commercial health and fitness business (Cross Fit Beyond) exists further east across North Pearl. A chain link fence surrounds the property to the west, south and east.

The existing buildings at the site were dilapidated and deemed structurally unsafe for entry and/or interior work. Upon PES's initial mobilization to the site, it was documented that much of ground surface within and outside of the building was covered with solid waste, trash and debris that appeared to have been dumped at the site or left by previous owners.

Land surfaces were 90 to 95% covered with concrete or asphalt. Land surfaces at the site are generally flat with slight slope to the east towards North Pearl Street.

The site structure was observed to have been supplied with overhead power and telecommunications. Water and sanitary sewer needs were met by connections to publicly supplied services. Natural gas was previously provided to the building via underground service.

1.3 Site Geology/Hydrogeology:

The site is located within the Hudson Mohawk Lowland Physiographic Province. The overburden soils in the surrounding area have been characterized as lacustrine sand, which are composed of well sorted, stratified sand deposits, or lacustrine silt and clay, which are composed of generally laminated silt and clay (Cadwell et al, 1987). The bedrock geology identified in the vicinity of the property is the Normanskill Shale, which is of Middle Ordovician origin. Subsurface soils encountered at the site were generally composed of silty sand, silt, silty clay and some gravel. Urban fill consisting of concrete, brick and imported materials was commonly encountered in the first 1-2 feet of excavation. Groundwater is approximately 8 feet below grade and reportedly generally flows southeast toward the Patroon Creek. The first water bearing zone occurs under unconfined conditions. The close proximity of Patroon Creek, likely influences the localized groundwater elevation and flow patterns.

1.4 Surface Water:

The nearest surface water body is the Patroon Creek, which borders the Study Area to the north-northeast. (see Figure 1 for detail). The Patroon Creek maintains a constant annual flow from north to south. The Patroon Creek discharges to the Hudson River.

2.0 SITE PREPARATION FOR REMEDY IMPLEMENTATION:

2.1 Site Clearing and Building Demolition:

2.1.1 Site Clearing

On June 13, 2014 PES and subcontractor The Davey Tree Expert Company of Latham, NY (Davey) performed site clearing work including cutting down and removing trees and woody vegetation. Davey removed and chipped all accessible trees within the site boundary to allow for access to the building by the demolition contractor. All trees were cut off above grade and stumps were left in place for removal by PES during the excavation work. All cuttings, chipping waste and woody debris and vegetation was hauled off site and recycled or composted
By Davey.

2.1.2 Pre Demolition Building Assessment

Prior to building demolition PES and subcontractor Spectrum Environmental Associates, Inc., of Schenectady, NY (Spectrum) attempted to perform a pre-demolition asbestos inspection of the building. At the time of the inspection it was deemed structurally unsafe to occupy or otherwise enter to collect samples of building materials to determine the presence of asbestos containing

materials. In response to concerns related to the stability of the site structure, PES retained Hennessy Engineering and Consulting of Voorheesville, NY (Hennessy) to perform an inspection and formulate an opinion related to the building integrity. On April 25, 2014 Hennessy visited the property and determined that the building was unsafe for human occupation. In addition, it was determined that the structure represented a danger to the life, health, property and safety of the general public (see Attachment C for further detail).

2.1.3 Asbestos Abatement and Demolition

In order to facilitate full site assessment and subsequent contaminant mitigation, it was determined that the existing dilapidated structure needed to be razed. The fact that the structure was deemed unsafe for entry prevented collection of building material samples to assess asbestos content. To remedy this impasse Spectrum petitioned the New York State Department of Labor (NYSDOL) to receive variance relief from Code Rule 56 to allow for Controlled Demolition Removal of Friable ACM. On August 11, 2014 NYSDOL granted the variance and filed the petition as File No.: 14-0815. A copy of the variance has been included in Attachment B.

Dan's Demolition and Hauling Inc., of Troy, NY (Dan's) performed the subsequent ACM abatement and demolition work from 10/6/2014 to 10/17/2014. Dan's utilized wet methods to control dust and prevent air borne release of ACM. The building was systematically razed and all debris and building materials were either disposed of as ACM or were cleaned and recycled (non-porous steel). A total of 448.88 tons of ACM was disposed at City of Albany landfill (AL).

Spectrum provided third party air monitoring for the duration of the abatement/demolition work. Their Air Sampling Report documenting the work has also been included in Attachment B.

2.1.4 Drum and Product Removal

During the demolition work two (2) 30-gallon plastic drums of liquid were discovered beneath debris at the rear of the main building. The drums were in fair condition in original containers with partial labels still intact. The manufacturer of the drums (Luster-On Products, Inc. of Springfield, MA) was

contacted and samples from each drum were sent to them for testing to confirm product identification.

Through correspondence from October 29, 2014 (see Attachment D for detail) Luster On Products, Inc. confirmed that the liquid within the drums was their chromic and formic acid solutions referred to as Luster-On 66A and Luster-On 66B.

Both plastic drums were placed into 60-gallon plastic over pack drums by PES and were disposed of as D001 and D002 hazardous waste liquid and D002 and D007 hazardous waste liquid, respectively. Precision Industrial Maintenance, Inc., of Schenectady, NY (Precision) transported and disposed of the drums at Cycle Chem, Inc. of Elizabeth, NJ on December 3, 2014. Disposal documentation for the waste shipment has been provided in Attachment E.

3.0 Supplemental Subsurface Investigation:

3.1 Surface Soil Sampling:

Subsequent to the debris removal PES performed subsurface investigative work to further define the lateral and vertical extent of contaminants. The initial effort included the collection and analysis of shallow soil samples from the dirt floor basement that was exposed following the building removal. Four grab samples were collected from the existing surface to a depth of 6-inches below grade (BG). Each sample was discretely collected in laboratory supplied glassware and was submitted to Test America Lab, Inc. of Amherst, NY (Test America) to be analyzed for metals according to EPA Method 6010. Surface samples are identified in report appendices by Basement 1 - 4 designation. A summary of the laboratory data submitted by Test America has been included in Table 1 included in Attachment F. As Table 1 indicates, elevated levels of metals were documented at each location. In general analysis indicated the presence of site specific contaminants - cadmium (Cd), chromium (Cr), lead (Pb) and nickel (Ni) at concentrations that

exceeded the analytical methods detection limits in all four sample locations. Furthermore, locations Basement–1 and Basement-4 produced results that exceeded the 6 NYCRR Part 375 commercial and industrial soil cleanup objectives (SCOs).

3.2 Subsurface Investigation:

PES performed additional subsurface investigation via the installation of soil borings across the site (see Figure 3 for detail). Soil borings were installed utilizing PES's special access, direct push, geoprobe. In general, soil borings were advanced to a pre-determined depth to collect samples at three intervals: 0-1, 1-2, and 2-4. Maximum depth of exploration reached eight feet BG.

The equipment utilized retrieves relatively undisturbed soil samples across a four-foot stratigraphic interval. Continuous soil samples were collected during boring advancement for subsequent visual classification and field screened utilizing a calibrated photo-ionization detector (PID) to qualitatively determine the presence of volatile organic compounds (VOCs). Field screening was performed using head space methods whereby representative portions of the acquired sample were sealed in clean plastic bags, agitated, allowed time to equilibrate, and then the air space above the soil was scanned with the PID. Decontamination procedures were performed on all soil sampling equipment prior to and between each sample acquisition.

Collected soil samples were submitted for metals analysis according to EPA Method 6010. Samples were collected by PES geological staff, classified, field screened and placed in clean glass sample jars supplied by the analytical facility. Representative samples were labeled, sealed, and placed immediately in iced storage for transport to Test America Laboratories, Inc. (Test America) of Amherst, NY. The results of the soil boring samples are tabulated in Table 2. Resulting analytical reports are included as Attachment G. The results are graphically presented in Figure 3.

4.0 Excavation:

Results of the supplemental subsurface investigation confirmed the need to implement the recommended remedy of mass excavation and off-site disposal of contaminant source areas. Areas targeted for mitigation included:

- the former floor drain areas,
- shallow soils located north of the former structure and
- the large area of the former building's footprint.

Figure 4 graphically displays the targeted excavation areas.

4.1 Retaining Wall Design and Construction:

Prior to excavation process, engineering controls were required to facilitate safe and sound excavation and backfill activities occurring immediately adjacent to the Patroon Creek as the water body borders the property to the north-northeast. The existing creek bank and foundation of the removed building were visibly eroded and deemed unstable. Engineering controls consisted of:

- The installation of a permanent retaining wall along approximately 50-60 linear feet of creek bank and
- repair and replacement of a portion of concrete foundation and associated footer for the former building. The building foundation served the purpose of structural support as well as an integral component of the creek embankment and bridge abutment (where North Pearl Street overpasses the Creek).

PES contracted the services of Dente Engineering (Dente) of Watervliet, NY to design and provide specification for the construction of the retaining wall (see Attachment H). In general, the specification produced by Dente included the installation of geogrid reinforced shoring whereby no. 1 and no. 2 washed crushed stone was placed and retained within fabricated geogrid baskets.

During the installation phase, large capacity sand bags were strategically placed in Patroon Creek to prevent sediment erosion and loading within the stream. The hydro barriers were left in place until a construction elevation was reached that exceeded the surface elevation of the stream.

The required retaining wall was completed using PES equipment and personnel. Upon completion, the Department requested that PES perform additional bank stabilizing steps at the north and south ends of the newly installed retaining wall.

The additional work was performed to tie the new stabilizing feature into remaining foundation elements. This was accomplished by the construction of reinforced concrete forms and a monolithic pour of high strength concrete. All materials removed during the retaining wall work were staged on site and encapsulated in poly sheeting pending characterization and proper disposal. Subsequent to this phase, the site was scheduled for the soil excavation activities.

4.2 Soil Excavation, Staging, Backfilling and Disposal:

Completed engineering controls allowed for safe and practical excavation of contaminated soil. Impacted soils were excavated to meet Commercial Soil Cleanup Objectives (SCOs) to extent feasible and pursuant to pre-determined horizontal and vertical extents as determined by previous investigative efforts by PES and others.

PES utilized a tracked excavator and loader to remove and stage impacted soils. A "cut and fill" method was deployed to accomplish removal from target areas. Air monitoring and dust control continued throughout the excavation work. All removed soils were poly-encapsulated and staged on site for characterization and latter disposal.

The complete excavation area was divided in five zones based on delineation of the contaminant impacts as documented by past investigations as well as perceived former site activities (see Figure 4 for detail).

Excavation work was initiated in the northwest corner of the site (Zone 1) and was generally propagated to the southeast. In general soil encountered consisted of a mixture of urban fill 0-2.5 feet overlying a mixture of fluvial deposits of sand, silt and occasional cobbles. Groundwater was encountered at an elevation that corresponded to the level of Patroon Creek. The processing of groundwater was not required to facilitate the predesigned removal action. Estimates of the volume of soil removed from each of the five zones are as follows.

Zone Identification	Maximum Depth	Estimated Volume Removed
Zone-1	2-3 Feet	250 Tons
Zone-2	2-3 Feet	459 Tons
Zone-3	5-6 Feet	338 Tons
Zone-4	2-3 Feet	315 Tons
Zone-5	2-3 Feet	35 Tons

In general, soil was removed within the physical constraints of the site and/or until the predetermined end of excavation point was reached. A physical demarcation layer consisting of orange polyethylene fencing was placed along the floor of each excavation area once the limits of excavation were reached. The demarcation layer was covered with imported clean fill and "borrow" concrete slabs removed from the surface. A cover system finished the excavation areas to grade and will be discussed in further detail in latter sections.

Zone 1

Zone 2

Zones 3 & 4

Zone 5

Soil samples were collected during the pre-excavation subsurface investigation at pre-determined depths and locations to characterize the vertical and horizontal contaminant extent. For this reason, end of excavation samples were not required or collected subsequent to the soil removal action.

Soils were excavated, stockpiled and characterized via sampling and laboratory analysis and were then transported off site and disposed of as non-hazardous waste at City of Albany Landfill (AL) or as a D006 hazardous waste solid at Stericycle Environmental Solutions (SES) facility in Hatfield, PA.

MC Environmental Services, Inc. (MCES) of Fort Edward NY provided transportation services for the non-hazardous soil. A total of 744.09 tons of non-hazardous soil were manifested and transported to AL.

Capitol Environmental Services. Inc. (CES) of Baltimore MD performed all hazardous waste soil transport and disposal. During the course of the project, a total of 653.03 tons of soil were processed by CES at the SES facility.

PES performed decontamination of all equipment prior to demobilization from the site. Decontamination involved the physical removal of all sediment from machinery surfaces followed

by an alconox/potable water rinse. Rinse process water was contained, containerized and disposed of under manifest at Waste Recovery Solutions, Inc. Meyerstown, PA.

Manifesting and Summary of Totals for all off-site soil disposal and decontamination fluids are included as Attachment E and Table 3 respectively.

Community and personal air monitoring/screening was performed during all invasive site work. Dust control measures were implemented that consisted of the application of clean water to surfaces within the construction zone.

4.3 Abandoned Underground Storage Tank (UST) Closure:

During installation of the retaining wall a 1,000-gallon underground storage tank (UST) was encountered. The UST was located within the footprint of Zone 2. Upon discovery of the vessel, the cover material was removed to expose piping access points for the purpose of assessing the volume and type of fluid content.

The assessment revealed a mixture of water and No. 2 fuel oil. A total of 850 gallons of mixed groundwater/fuel were removed (see Attachment I). The contents of the UST were removed by MacSon of Selkirk, NY under manifest. MacSon performed proper disposal of the processed fluids at Industrial Tank Services, Inc. in Oriskany, NY.

PES construction crew extracted the UST from its grave and placed it above grade on poly sheeting for cleaning.

A PES representative examined the outer surfaces for evidence of product leakage, holes, pitting, or areas of weakness. The single wall, bare steel, UST was recorded as being in fair condition. Surficial rust and minor pitting was observed; however, the vessel did not contain any visible holes or perforations.

Following cutting and cleaning of the undocumented UST, the tank was loaded for transport to Upstate Shredding Albany, located in the Port of Albany for recycling. A copy of the scrap steel receipt provided by the recycling facility is included in Attachment I.

5.0 In-Situ Treatment:

Post excavation soil existing in the phreatic zone (below the water table interface) within the footprint of the most contaminated area (beneath floor drain network- Zone 3) were further remediated with in-situ chemical reduction (ISCR). A Calcium Polysulfide (CaSx) solution was applied to the floor the excavation to treat metals in soil and groundwater. CaSx is intended to create conditions that cause the metals to precipitate out of solution such that they bind with soil particles rather than migrate with the localized groundwater flow. The byproducts of the ISCR process are non-toxic.

250 gallons of liquid CaSx were mixed with 250 gallons of potable water to provide a concentration of 15% CaSx placement mixture. Once mixed the compound was spread along the floor of the excavation via gravity flow.

6.0 Site Surface Cover System:

Pursuant to the ROD, PES imported clean select fill for application as cover over the upper 1-foot surface of all excavations (Zones 1-5). The imported material consisted of clean crushed stone and was supplied by Larned & Sons, of Rotterdam, NY. The material was sourced from their Rotterdam, NY location. In general, the material was placed in a maximum of 6" vertical lifts and compacted using walk behind vibratory equipment.

In general, the surface completion was performed in accordance with the minimum of one-foot placement of material as set forth in 6 NYCRR Part 375-6.7(d).

7.0 DISCLAIMER:

Any statement or opinion contained in this Report prepared by Precision Environmental Services, Inc. (PES) shall not be construed to create any warranty or representation that the real or personal property on which the investigation was conducted is free of pollution or complies with any or all applicable regulatory or statutory requirements, or that the property is fit for any particular purpose. Unless otherwise indicated in this Report, PES did not independently determine the compliance of present or past owners of the site with federal, state or local laws and regulations. The conclusions presented in this Report were based upon the services described, within the time and budgetary constraints imposed by the client, and not on scientific tasks or procedures beyond the scope of those described services. PES shall not be responsible for conditions or consequences arising from any facts that were concealed, withheld or not fully disclosed by any person at the time the evaluation was performed.

Any person or entity considering the acquisition, use or other involvement or activity concerning the property that is the subject of this Report shall be solely responsible for determining the adequacy of the property for any and all such purposes. The person or entity should enter into any such acquisition or use relying solely on its own judgment and personal investigation of the property, and not upon reliance of any representation by PES regarding the property or the character, quality or value thereof.

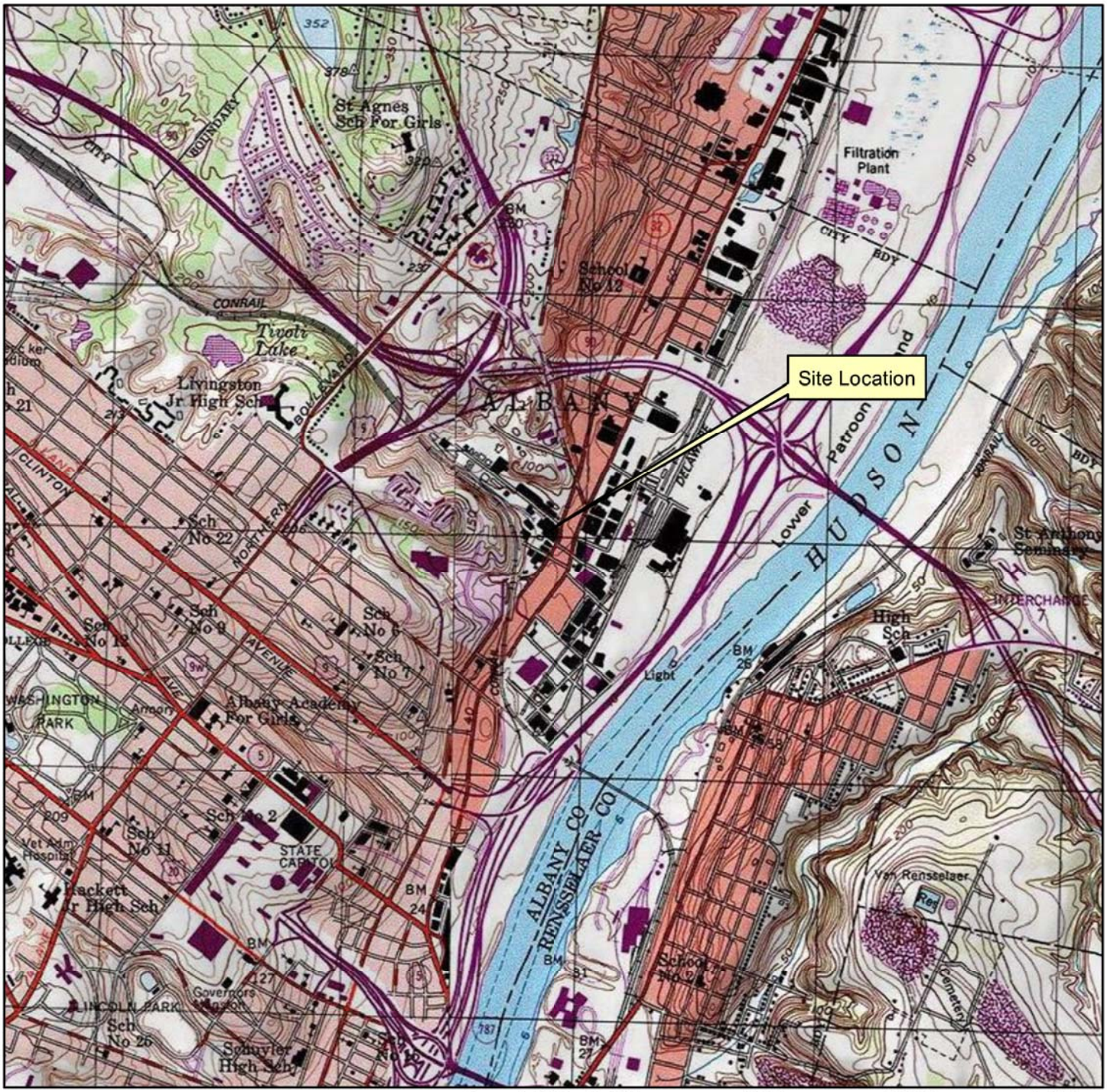
John Johnson
Senior Hydrogeologist

Stephen M. Phelps
Project Manager

Attachments

A. Figures
B. Spectrum Variance and Final Air Monitoring Report
C. Hennessy Engineering and Consulting Letter
D. Drum Characterization Report
E. Waste Disposal Documentation
F. Laboratory Analytical Summary Tables
G. Laboratory Analytical Reports.
H. Dente Engineering – Retaining Wall Design.
I. UST Closure Documentation

ATTACHMENT A



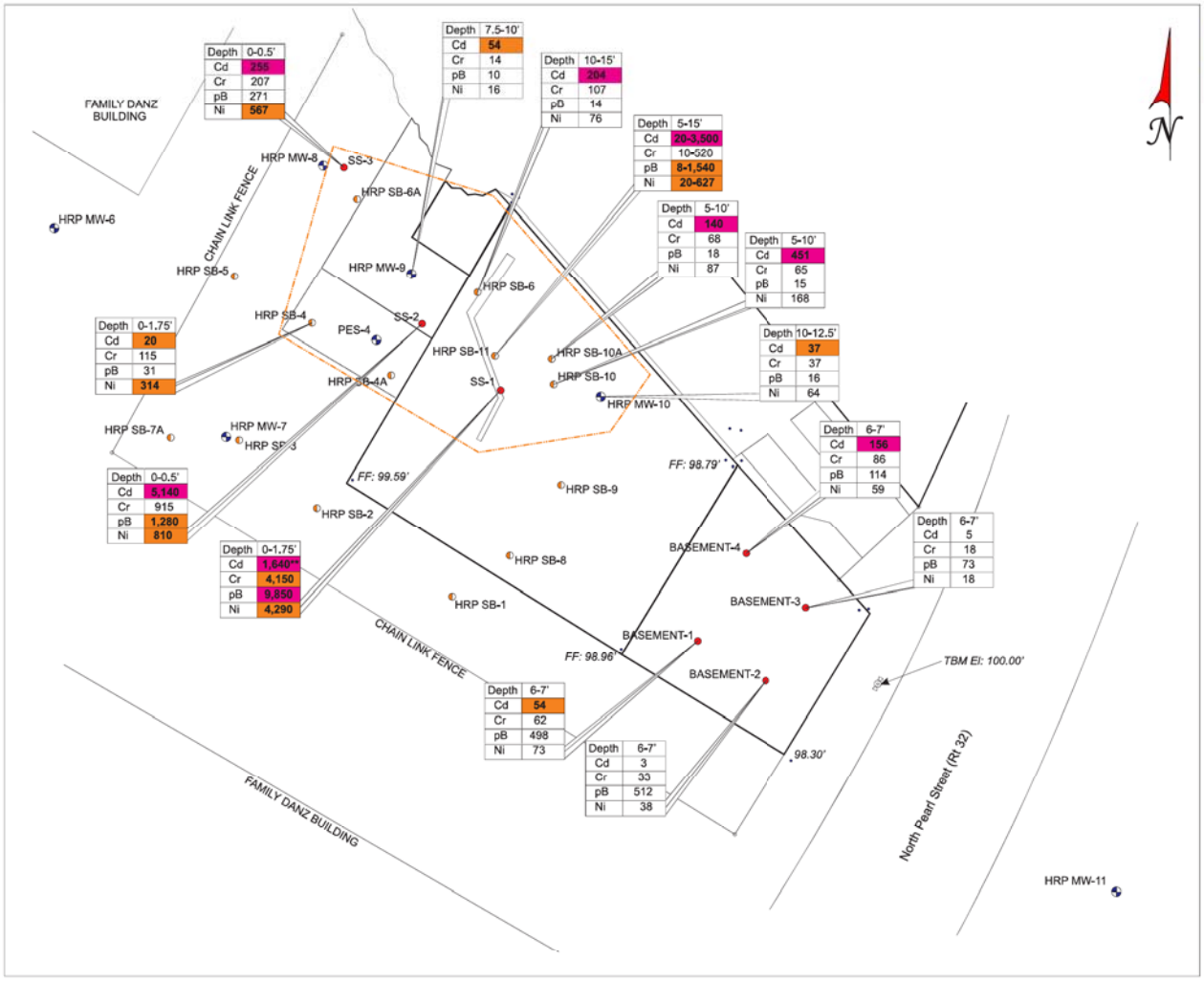
USGS Quadrangle data Copyright:
© 2009 National Geographic Society, i-cubedxt
USGS Quad ID: 42073-F7
Quad Name: Albany, New York
Publish Date: 1983

0 1,000 2,000 4,000 6,000 8,000 Feet

1 inch = 2,000 feet

N

Figure 1
Site Location
CF Plating Facility
406 North Pearl Street
Albany, New York
Scale 1"=2,000'



PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67,LOT 28
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

HISTORIC SOIL BORING - MONITORING WELL & PES SURFACE SAMPLE LOCATIONS

C&F PLATING SITE

PROJECT #: NYSDEC SITE NO.: 401057

LOCATION: 406 NORTH PEARL ST., ALBANY, NY

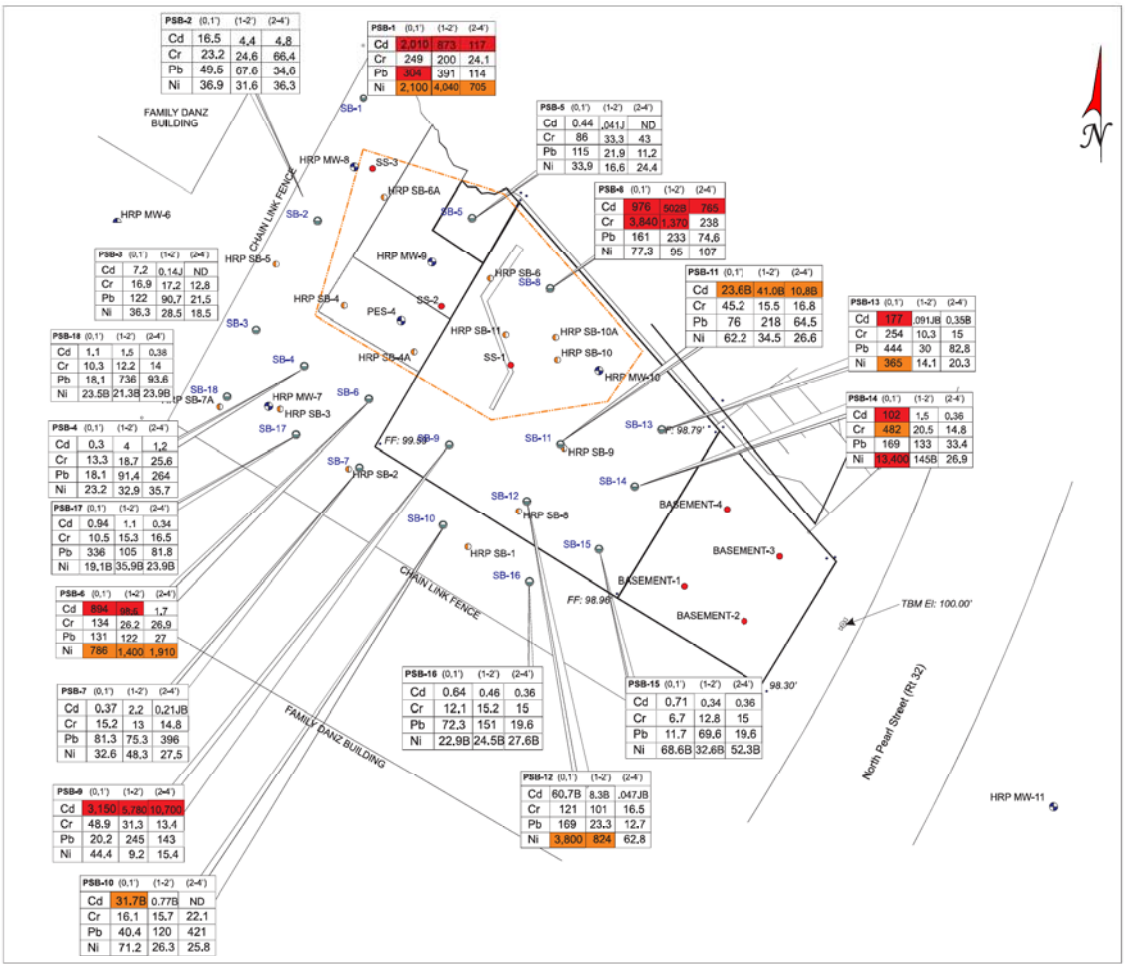
DATE: 11/6/2014	**REVISED BY:** SMP
FIGURE: 2	**SCALE:** 1:20

LEGEND

- MW-6 — EXISTING MONITORING WELL
- SB-1 — EXISTING SOIL BORING
- SS-1 — EXISTING SURFACE SOIL SAMPLE
- **BOLD** — EXCEEDS PART 375 INDUSTRIAL
- **BOLD** — EXCEEDS PART 375 COMMERCIAL
- ** TCLP CONC EXCEEDS RCRA TOXICITY LIMIT
- INFERRED LIMIT OF SOILS EXCEEDING PART 375 COMMERCIAL

0 20 40
Feet

NOTES:



PRECISION
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CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

SOIL BORINGS CONTAMINATE DATA

C&F PLATING SITE

PROJECT #: NYSDEC SITE NO.: 401057

LOCATION: 406 NORTH PEARL ST., ALBANY, NY

DATE: 12/8/2014	**REVISED BY:** KNL
FIGURE: 3	**SCALE:** 1:20

LEGEND

- MW-6 — EXISTING MONITORING WELL
- SB-1 — EXISTING SOIL BORING
- SS-1 — EXISTING SURFACE SOIL SAMPLE
- BOLD — EXCEEDS PART 375 INDUSTRIAL
- BOLD — EXCEEDS PART 375 COMMERCIAL
- ** TCLP CONC EXCEEDS RCRA TOXICITY LIMIT
- INFERRED LIMIT OF SOILS EXCEEDING PART 375 COMMERCIAL
- SB-1 — SOIL BORING WITH SOIL SAMPLES COLLECTED AT FOLLOWING INTERVALS:
  - 0-1' TAL METALS
  - 1-2' TAL METALS
  - 2-4' TAL METALS

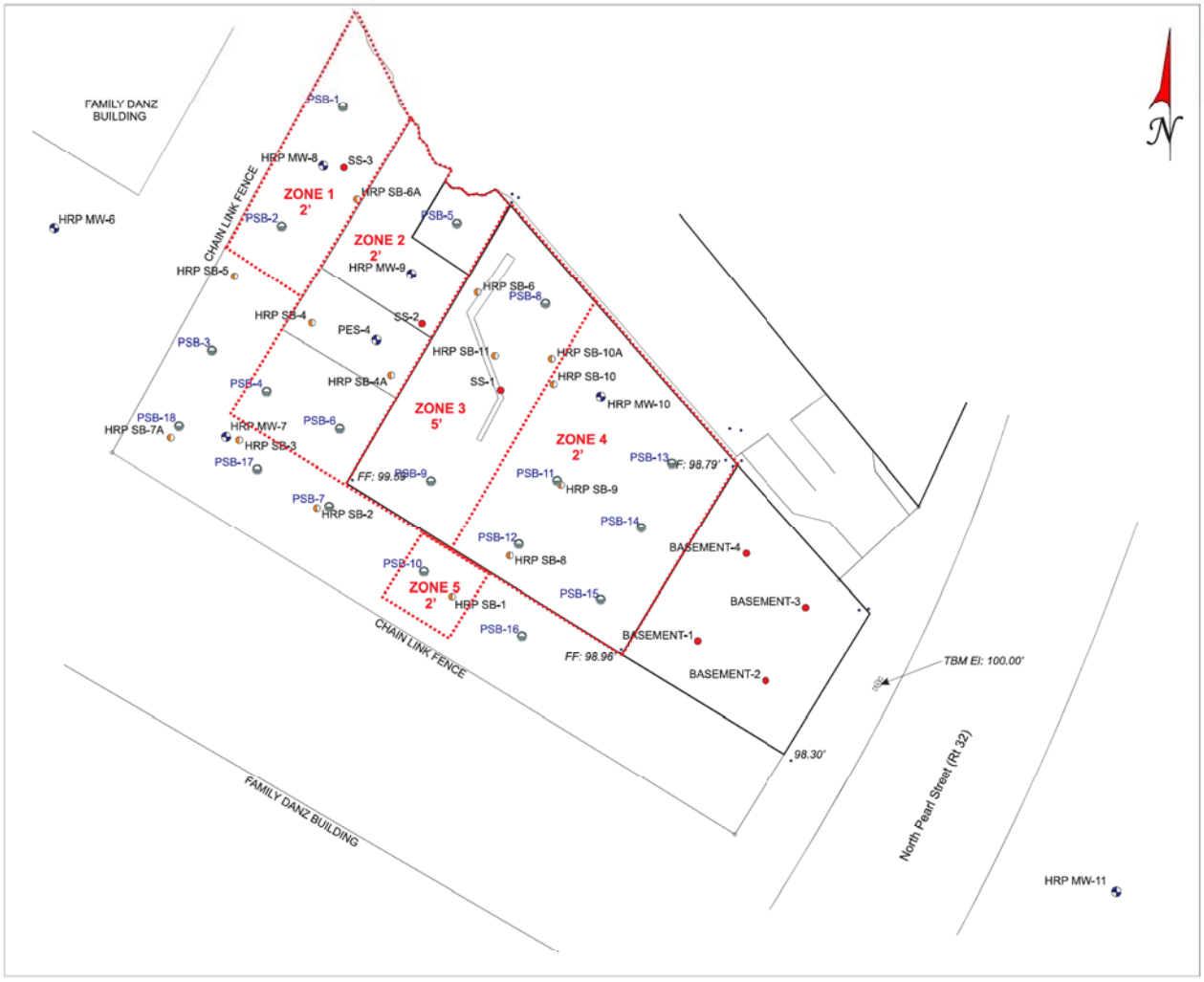
0 20 40
Feet

NOTES:

B= Compound was found in the blank and sample

J= Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

ND = Not detected below the laboratories method detection limit



PRECISION
ENVIRONMENTAL SERVICES, INC.
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TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

EXCAVATION AREAS AND DEPTHS

C&F PLATING SITE

PROJECT #: NYSDEC SITE NO.: 401057	
LOCATION: 406 NORTH PEARL ST., ALBANY, NY	
DATE: 2/6/2015	**REVISED BY :**KNL
FIGURE: 4	**SCALE:** 1:20

LEGEND

- MW-6 — EXISTING MONITORING WELL
- SB-1 — EXISTING SOIL BORING
- SS-1 — EXISTING SURFACE SOIL SAMPLE
- SB-A — PES - SOIL BORING WITH SOIL SAMPLES

0 20 40
Feet

NOTES:

*All Locations are approximate

ATTACHMENT B

New York State Department of Labor
Andrew M. Cuomo, *Governor*
Peter M. Rivera, *Commissioner*

August 11, 2014

Spectrum Environmental
2539 Albany St
Schenectady, NY 12304

RE: File No. 14-0815

Dear Sir/Madam:

STATE OF NEW YORK
DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH

The attached is a copy of Decision, dated, 8/11/2014, which I have compared with the original filed in this office and which I DO HEREBY CERTIFY to be a correct transcript of the text of the said original.

If you are aggrieved by this decision you may appeal within 60 days from its issuance to the Industrial Board of Appeals as provided by Section 101 of the Labor Law. Your appeal should be addressed to the Industrial Board of Appeals, State Office Building Campus, Building 12, Room 116, Albany, New York, 12240 as prescribed by its Rules and Procedure, a copy of which may be obtained upon request.

WITNESS my hand and the seal of the NYS Department of Labor, at the City of Albany, on this day of 8/11/2014.

Edward A. Smith, P.E.
Senior Safety and Health Engineer
Engineering Services Unit

ES

Phone: (518) 457-1536 Fax: (518) 457-1301
W. Averell Harriman State Office Campus, Bldg. 12, Room 154, Albany, NY 12240
www.labor.state.ny.us

STATE OF NEW YORK
DEPARTMENT OF LABOR
STATE OFFICE BUILDING CAMPUS
ALBANY, NEW YORK 12240-0100

Variance Petition

of

Spectrum Environmental Associates, Inc.
Petitioner's Agent on Behalf of

Belius Bernabe
Petitioner

in re

Premises: Former C and F Building
409 North Pearl Street
Albany, New York 12207

Controlled Demolition Removal Friable ACM

File No. 14-0815

DECISION

Cases 1-5

ICR 56

The Petitioner, pursuant to Section 30 of the Labor Law, having filed Petition No. 14-0815 on June 27, 2014 with the Commissioner of Labor for a variance from the provisions of Industrial Code Rule 56 as hereinafter cited on the grounds that there are practical difficulties or unnecessary hardship in carrying out the provisions of said Rule; and the Commissioner of Labor having reviewed the submission of the petitioner dated June 23, 2014; and

Upon considering the merits of the alleged practical difficulties or unnecessary hardship and upon the record herein, the Commissioner of Labor does hereby take the following actions:

Case No. 1	ICR 56-11.5 (c) (2)
Case No. 2	ICR 56-11.5 (c) (5)
Case No. 3	ICR 56-11.5 (c) (7) **LIMITED**

Case No. 4	ICR 56-11.5 (c) (10)
Case No. 5	ICR 56-11.5 (c) (12)

VARIANCE GRANTED. The Petitioner's proposal for demolition removal of friable materials by the petitioner, from the subject premises in accordance with the attached 4-page stamped copy of the Petitioner's submittal, is accepted; subject to the Conditions noted below:

THE CONDITIONS

Secure the Work Site

1. The entire controlled demolition area and all surrounding portions of the site to be utilized for demolition cleanup, staging areas and regulated abatement work areas, shall be enclosed within a barrier or fence. The intent of this barrier is to define the restricted area at the work site, alert the public to the asbestos work and associated hazards, and to prevent unauthorized entry onto the work site.

2. Signage in accordance with the requirements of ICR 56-7.4(c) shall be posted on the exterior of the work site boundary fence/barrier, to warn the public of the asbestos hazard.

Establishment of Regulated Areas

3. The regulated work areas, decontamination units, airlocks, and dumpster areas shall be cordoned off at a distance of twenty-five feet (25') where possible, and shall remain vacated except for certified workers until satisfactory clearance air monitoring results have been achieved or the abatement project is complete. These areas shall have Signage posted in accordance with Subpart 56-7.4(c) of this Code Rule. For areas where twenty-five feet isn't possible, the areas shall be cordoned off as practical, and a daily abatement air sample shall be included in the vicinity of the barrier.

Controlled Demolition Removals

4. The provisions of 56-11.5 shall be followed for all non-friable controlled demolition removals, except as modified by this variance.

5. Decontamination system enclosures and areas shall be constructed and utilized as per the requirements of 56-7.5(d) and 56-11.5.

6. Uncertified personnel shall not be allowed to access any regulated abatement work area, with the exception of waste hauler truck drivers. These truck drivers will be restricted to their enclosed cab, while

temporarily in the regulated work area for waste transfer activities only. All equipment operators utilized for demolition or removal activities within the regulated work area must be certified in compliance with ICR 56-3.2.

7. No dry disturbance or removal of asbestos material shall be permitted.

8. Wastewater shall be confined within the controlled demolition area

9. All demolition debris, structural members, barrier components, used filters and similar items shall be considered to be asbestos containing materials/asbestos contaminated waste and disposed of as RACM.

10.

11. In addition to the requirement of Subpart 56-4.9(c), air monitoring within the work areas shall be conducted daily. If more than one shift daily is required to accomplish the work, air monitoring within the work area during abatement shall be performed on each shift, preferably at mid-shift timing.

12. Daily abatement air monitoring is required only on days when abatement or support activities such as ACM disturbance or cleaning activities are performed.

13. The contractor shall observe, at a minimum, the following waiting (settling/drying) periods: Demolition - 2 hrs.

14. In lieu of post-abatement clearance air monitoring in compliance with ICR-56-9.2(d), the most recent daily abatement air samples collected during removal and cleaning operations in the regulated work area, shall be used for comparison with ICR 56-4.11 clearance criteria. All other applicable provisions of ICR 56-4 shall be followed for the duration of the abatement project.

15. After removal and cleanings are complete and a minimum drying period has elapsed, an authorized and qualified Project Monitor shall determine if the area is dry and free of visible asbestos debris/residue. If the area is determined to be acceptable and the most recent daily abatement air sample results meet 56-4.11 clearance criteria, the final dismantling of the site may begin.

16. Usage of this variance is limited to those asbestos removals identified in this variance or as outlined in the Petitioner's proposal.

In addition to the conditions required by the above specific variances, the Petitioner shall also comply with the following general conditions:

GENERAL CONDITIONS

1. A copy of this DECISION and the Petitioner's proposals shall be conspicuously displayed at the entrance to the personal decontamination enclosure.

2. This DECISION shall apply only to the removal of asbestos-containing materials from the aforementioned areas of the subject premises.

3. The Petitioner shall comply with all other applicable provisions of Industrial Code Rule 56-1 through 56-12.

4. The NYS Department of Labor Engineering Service Unit retains full authority to interpret this variance for compliance herewith and for compliance with Labor Law Article 30. Any deviation to the conditions leading to this variance shall render this variance Null and Void pursuant to 12NYCRR 56-12.2. Any questions regarding the conditions supporting the need for this variance and/or regarding compliance hereto must be directed to the Engineering Services Unit for clarification.

5. This DECISION shall terminate on August 31, 2015.

Date: August 11, 2014

PETER M. RIVERA
COMMISSIONER OF LABOR

By

Edward A. Smith, P.E.
Senior Safety and Health Engineer

PREPARED BY: Edward A. Smith, P.E.
Senior Safety and Health Engineer

REVIEWED BY: Ravi Pilar, P.E.
Senior Safety and Health Engineer

ATTACHMENT A

Background

The former C and F Plating building located at 406 North Pearl Street in Albany, New York is scheduled for demolition. The site is a Superfund Cleanup site. Once the building is demolished the DEC will dig up about 20 tons of soil contaminated with toxic heavy metals like lead, barium, copper, nickel, mercury, zinc and chromium.

An inspection for asbestos containing materials could not be performed because parts of the building are structurally unsound after being vacant for approximately 30 years. Demolition of the structure will have to be performed in accordance with 56-11.5 (Controlled Demolition with Asbestos in Place) and this variance request.

9. ICR 56 Relief Sought:

11.5(c)(2) Regulated Abatement Work Area
11.5(c)(5) Equipment Decontamination
11.5(c)(7) Debris
11.5(c)(10) Wastewater
11.5(c)(12) Contaminated Earth Surface

10. Hardship Description:

The physical location of 406 North Pearl Street creates a hardship from complying with Section 11.5(c)(2) of the Code Rule. This section requires a boundary twenty-five (25) feet between the work area and the public. This cannot be achieved. The building is less than twenty-five (25) feet from North Pearl Street; there is only a sidewalk between the building and the roadway. In addition there is a creek that runs along the North side of the building. It is approximately twenty (20) feet wide. On the other side of the creek there is another building. On the South side of the structure there is a parking lot for the adjacent business.

Section 11.5(c)(5) and 11.5(c)(12) state that the ground must be scraped of contaminated soil. This cannot be performed because the soil is contaminated with toxic heavy metals such as lead, barium, copper, nickel, mercury, zinc and chromium and will be subject to a Superfund Cleanup by the DEC once the building has been demolished and removed.

Under 11.5(c)(7) of the Code Rule all debris generated by the demolition shall be considered asbestos contaminated waste. The slab on grade foundation cannot be removed and disposed of asbestos contaminated waste. The DEC will be performing a Superfund Cleanup at the conclusion of the asbestos abatement. Removing the slab on grade would disturb the soils laden with heavy metals.

Wastewater is to be collected by means of trenching or ditches and directed to a holding tank. The soil cannot be disturbed by trenching or ditches due to the heavy metals located in the soil.

11. Proposed Abatement Method Description for each work area or method used:

It is being proposed to follow the work methods and sequencing described below to maintain the purpose and intent of 12 NYCRR Part 56 while allowing for the practical abatement of the asbestos containing materials:

- A full time project monitor shall be on site and responsible for oversight of the abatement contractor during all abatement activities to ensure compliance with ICR 56, the approved variance petition procedures, and to ensure that no visible emissions are observed.

Controlled Demolition

- ~~The Project Monitor shall determine which materials/debris are not contaminated, can be adequately cleaned and properly segregated from ACM materials.~~ All ~~other~~ demolition debris, structural members, barrier components, used filters and similar items shall be considered to be asbestos containing materials/asbestos contaminated waste and shall be transported and disposed of by appropriate legal method. Structural members, steel components and segregated non-ACM components/debris shall be fully decontaminated as per ICR 56, prior to being treated as salvage. *KEAS*
- No dry disturbance or removal of asbestos material shall be permitted.

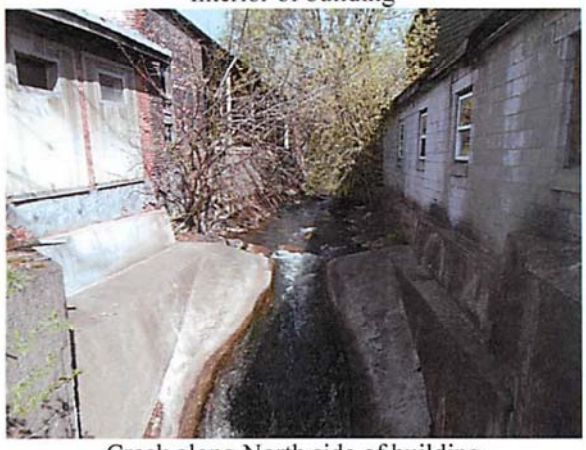
Secure the Work Site and Establish Regulated Areas

- The entire controlled demolition area and all surrounding portions of the site to be utilized for demolition cleanup, staging areas and regulated abatement work areas, shall be enclosed within a barrier or fence. The intent of this barrier is to define the restricted area at the work site, alert the public to the asbestos work and associated hazards, and to prevent unauthorized entry onto the work site. This barrier shall extend around the structure except for the side adjacent to the creek.
- Signage in accordance with the requirements of ICR 56-7.4(c) shall be posted on the exterior of the work site boundary fence/barrier, to warn the public of the asbestos hazard.
- The regulated work areas, decontamination units, airlocks, and dumpster areas shall be cordoned off at a distance of 25-feet where possible, and shall remain vacated except for certified workers until the abatement project is complete, For areas where 25-feet aren't possible, the areas shall be cordoned off as practical, and a daily abatement air sample shall be included within 10 feet of the barrier. In addition to the air sample the interior of the fencing shall be plasticized with one (1) layer of plastic sheeting.
- Uncertified personnel shall not be allowed to access any regulated abatement work area, with the exception of waste hauler truck drivers. These truck drivers will be restricted to their enclosed cab, while temporarily in the regulated work area for waste transfer activities only. All equipment operators utilized for demolition or removal activities within the regulated work area must be certified in compliance with ICR 56-3.2.
- Wastewater shall be confined within the controlled demolition area as required by ICR56-11.5(c)(10). Alternate method to trenching and ditches shall be used to confine wastewater such as absorbent booms.

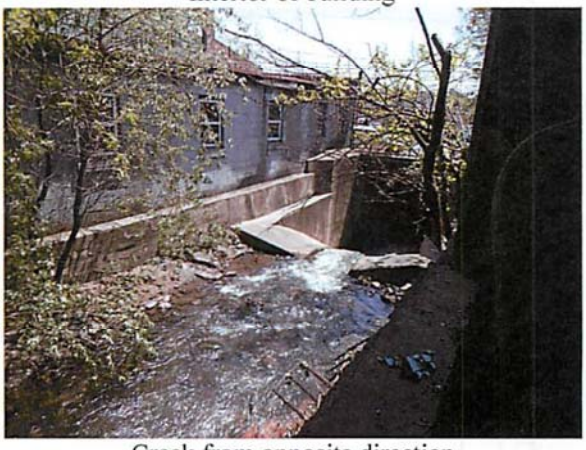
- At the completion of the abatement the ground beneath contaminated materials need not be scraped. This soil shall be subject to DEC Superfund Cleanup at the conclusion of the abatement project.
- Project monitor shall thoroughly inspect the soil to assure all visible materials have been removed.
- In addition to the requirement of Subpart 56-4.9(c), air monitoring within the work areas shall be conducted daily. If more than one shift daily is required to accomplish the work, air monitoring within the work area during abatement shall be performed on each shift, preferably at mid-shift timing.
- Daily abatement air monitoring is required only on days when abatement or support activities such as ACM disturbance or cleaning activities are performed.
- In lieu of post-abatement clearance air monitoring in compliance with ICR-56-9.2(d), the most recent daily abatement air samples collected during removal and cleaning operations in the regulated work area, shall be used for comparison with ICR 56-4.11 clearance criteria. All other applicable provisions of ICR 56-4 shall be followed for the duration of the abatement project.
- After removal and cleanings are complete and a minimum drying period has elapsed, the Project Monitor shall determine if the area is dry and free of visible asbestos debris/residue. If the area is determined to be acceptable and the most recent daily abatement air sample results meet 56-4.11 clearance criteria, the final dismantling of the site may begin.

Interior of building

Interior of building



Creek along North side of building



Creek from opposite direction

14-0815

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AIR SAMPLING REPORT

FOR

BUILDING DEMOLITION
406 N. PEARL STREET
ALBANY, NEW YORK

OCTOBER 8, 2014 – OCTOBER 17, 2014

SEA PROJECT NO.: 14-373

PREPARED FOR:

PRECISION ENVIRONMENTAL SERVICES
831 ROUTE 67
BALLSTON SPA, NEW YORK 12020

EXECUTIVE SUMMARY

This final report is for work performed at 406 N. Pearl Street, Albany, New York. The scope of work performed by the abatement contractor involved the removal of asbestos containing materials from the following area(s):

- Building Demolition

The air monitoring performed by Spectrum Environmental Associates, Inc. was performed in accordance with New York State Department of Labor - Industrial Code Rule 56 and if applicable, any variances granted by the New York State Department of Labor. Industrial Code Rule 56 is the regulation which governs the removal of asbestos containing materials in New York State and defines the requirements for air monitoring. Air monitoring was required for this project based on the quantity of asbestos containing materials scheduled for removal.

In accordance with New York State Department of Labor - Industrial Code Rule 56.4-11, "The PCM clearance air sample results shall be considered satisfactory when every clearance air sample demonstrates an airborne concentration of fibers of less than 0.01 fibers per cubic centimeter, or the established background level(s), whichever is greater."

In Section A of this report labeled as PCM Air Sampling Results, are all the air samples collected for this project. The sample type is listed on the top of each page by Phase with Phase IIC being Clearance (or Final) Air Samples. If you refer to air sample results, the third column from the right (the shaded column) you will find the results in fibers per cubic centimeter (f/cc). This is the column where all the results should be less than 0.01 fibers per cubic centimeter, or the established background level(s), whichever is greater. The other columns are provided due to regulatory reporting requirements and were used in calculating the results in f/cc.

In addition, New York State Department of Labor - Industrial Code Rule 56 required a final visual inspection be performed by an Asbestos Project Monitor independent of the abatement contractor prior to the collection of the Clearance Samples. This was performed by Spectrum and the associated documentation is attached in Section C.

Therefore, based on the final visual inspection(s) passing and the final air samples that were collected and analyzed on this project having met the New York State minimum requirement of less than 0.01 fibers per cubic centimeter, the scheduled removal areas are considered clear and may be re-occupied.

This report is for the exclusive use of Precision Environmental Services, its successors and/or assigns. This report and its contents represent confidential information and should not be duplicated without the expressed permission of Precision Environmental Services, its successors and/or assigns.

Should you have any questions concerning this report or the analytical results presented, please do not hesitate to contact our office at (518) 346-6374.

ANALYTICAL PROCEDURES

The sampling and analytical methods incorporated in this study are those recommended in National Institution for Occupational Safety and Health (NIOSH) Methods 7400 (NIOSH Manual of Analytical Methods (NMAM), Fourth Edition, 8/15/94) for the quantifications of airborne fiber concentrations. This method of analysis requires the use of specific procedures for the collection of the sample.

A sampling pump is used to draw a known volume of air through a mixed cellulose ester filter with a pore size of 0.8 micron. The pumps are calibrated prior to sampling using either a bubble burette or a calibrated rotameter. Any particulate or fibrous materials present in the samples air are deposited onto the filter. A portion of the filter is visually analyzed at 400x magnification by Phase Contrast Microscopy (PCM).

When analyzing the filter, only fibers that have a length to width ratio of at least three to one and that are at least 5 microns in total length are counted. The number of fibers on the filter is counted until 100 fields have been examined or until 100 fibers are observed, whichever comes first. At least twenty of fields per cassette are required to be examined. A field is the area covered by the microscope graticule during the counting process. The fiber concentration, fibers per cubic centimeter of air (f/cc), is calculated using a nominal value of 5.5 fibers/100 fields, a maximum possible concentration is calculated using a nominal value of 5.5 fibers/100 fields and the volume of air sampled. Maximum possible concentrations are indicated by a less than (<) sign.

It is important to note that this analytical method does not differentiate between asbestos fibers and other fibers. When it is necessary to know the number of airborne asbestos fibers present, Transmission Electron Microscopy (TEM) analysis is performed. The principle of the TEM method is as follows:

In the TEM analysis, the known volume of air is drawn through a mixed cellulose ester filter with a pore size of 0.45 micron. The filter with the deposited particulate and fibrous materials is then covered with a conductive coating. The coated filter is subsequently analyzed at about 20,000x magnification by morphological observation, Selected Area Electron Diffraction (SAED) and Energy Dispersive X-ray microanalysis (EDX). The result is the number of asbestos structures per cubic centimeter of air.

PCM AIR SAMPLING RESULTS

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Final Report of Analysis

NYS DOH E.L.A.P. # 11540

Client: Precision Environmental Services
170 Erie Boulevard
Schenectady, New York 12308

Project #: 14-373

Project: Building Demolition

Sample Type: Phase IIB (Removal)

Work Area:

Date Collected: 10/8/14

Date Analyzed: 10/8/14

Date Received: 10/8/14

Date Reported: 10/9/14

Lab I.D.	Client Sample #	Location/Description	L.O.D.	f/cc	f/mm²
7764	1	Field Blank	---	---	0.0
7765	2	Field Blank	---	---	0.0
7766	3	Critical - 1	0.002	**0.004**	17.8
7767	4	Ambient	0.002	**0.003**	14.0
7768	5	Decon In	0.002	**0.002**	8.9
7769	6	Decon Out	0.002	**0.003**	12.7
7770	7	Critical - 2	0.002	**0.004**	15.3

ANALYTICAL METHOD: N.I.O.S.H. 7400, "A" RULES PHASE CONTRAST MICROSCOPY

Microscope: Olympus CX21 Phase Contrast	Field Area: 0.00785 mm²	BDL = Below Detection Level
f/mm² = Fibers per Square Millimeter	L.O.D. = Level of Detection	OVL = Overloaded with particulate
f/cc = Fibers per Cubic Centimeter	L.O.D. = 7 fibers per mm²	OVLBL = Fibers exceeds QC limit

ANALYTICAL RESULTS DEPENDENT ON FIELD BLANKS SUBMITTED WITH SAMPLES
REPORTED ANALYTICAL RESULTS ARE BASED ON SAMPLE DATA PROVIDED BY THE CLIENT

Analyst:

Laboratory Director,

Laboratory Precision (S_r): 0.32

John B. Van Denburgh III

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Final Report of Analysis

NYS DOH E.L.A.P. # 11540

Client: Precision Environmental Services
170 Erie Boulevard
Schenectady, New York 12308

Project #: 14-373

Project: Building Demolition

Sample Type: Phase IIB (Removal)

Work Area:

Date Collected: 10/9/14

Date Analyzed: 10/9/14

Date Received: 10/9/14

Date Reported: 10/10/14

Lab I.D.	Client Sample #	Location/Description	L.O.D.	f/cc	f/mm²
7777	8	Field Blank	---	---	0.0
7778	9	Field Blank	---	---	0.0
7779	10	Ambient	0.002	**0.003**	12.7
7780	11	Critical - 1	0.002	**0.003**	10.2
7781	12	Decon In	0.002	**0.002**	7.6
7782	13	Decon Out	0.002	**0.003**	11.5
7783	14	Inside Work Area	0.002	**0.004**	14.0
7784	15	Critical - 2	0.002	**0.002**	8.9

ANALYTICAL METHOD: N.I.O.S.H. 7400, "A" RULES PHASE CONTRAST MICROSCOPY

Microscope: Olympus CX21 Phase Contrast	Field Area: 0.00785 mm²	BDL = Below Detection Level
f/mm² = Fibers per Square Millimeter	L.O.D. = Level of Detection	OVL = Overloaded with particulate
f/cc = Fibers per Cubic Centimeter	L.O.D. = 7 fibers per mm²	OVLBL = Fibers exceeds QC limit

ANALYTICAL RESULTS DEPENDENT ON FIELD BLANKS SUBMITTED WITH SAMPLES
REPORTED ANALYTICAL RESULTS ARE BASED ON SAMPLE DATA PROVIDED BY THE CLIENT

Analyst:

Laboratory Director,

Laboratory Precision (S_r): 0.32

John B. Van Denburgh III

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Final Report of Analysis

NYS DOH E.L.A.P. # 11540

Client: Precision Environmental Services
170 Erie Boulevard
Schenectady, New York 12308

Project #: 14-373

Project: Building Demolition

Sample Type: Phase IIB (Removal)

Work Area:

Date Collected: 10/10/14

Date Analyzed: 10/10/14

Date Received: 10/10/14

Date Reported: 10/14/14

Lab I.D.	Client Sample #	Location/Description	L.O.D.	f/cc	f/mm²
7909	16	Field Blank	---	---	0.0
7910	17	Field Blank	---	---	0.0
7911	18	Decon In	0.001	**0.003**	15.3
7912	19	Decon Out	0.001	**0.003**	17.8
7913	20	Ambient	0.001	**0.002**	11.5
7914	21	Critical - 1	0.001	**0.002**	8.9
7915	22	Critical - 2	0.001	**0.003**	15.3
7916	23	Inside Work Area	0.001	**0.002**	10.2

ANALYTICAL METHOD: N.I.O.S.H. 7400, "A" RULES PHASE CONTRAST MICROSCOPY

Microscope: Olympus CX21 Phase Contrast	Field Area: 0.00785 mm²	BDL = Below Detection Level
f/mm² = Fibers per Square Millimeter	L.O.D. = Level of Detection	OVL = Overloaded with particulate
f/cc = Fibers per Cubic Centimeter	L.O.D. = 7 fibers per mm²	OVLBL = Fibers exceeds QC limit

ANALYTICAL RESULTS DEPENDENT ON FIELD BLANKS SUBMITTED WITH SAMPLES
REPORTED ANALYTICAL RESULTS ARE BASED ON SAMPLE DATA PROVIDED BY THE CLIENT

Analyst:

Laboratory Director,

Laboratory Precision (S_r): 0.132

John B. Van Denburgh III

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Final Report of Analysis

NYS DOH E.L.A.P. # 11540

Client: Precision Environmental Services
170 Erie Boulevard
Schenectady, New York 12308

Project #: 14-373

Project: Building Demolition

Sample Type: Phase IIB (Removal)

Work Area:

Date Collected: 10/11/14

Date Analyzed: 10/11/14

Date Received: 10/11/14

Date Reported: 10/13/14

Lab I.D.	Client Sample #	Location/Description	L.O.D.	f/cc	f/mm²
7828	24	Field Blank	---	---	0.0
7829	25	Field Blank	---	---	0.0
7830	26	Ambient	0.002	**0.002**	10.2
7831	27	Decon In	0.002	**0.003**	14.0
7832	28	Decon Out	0.002	**0.002**	7.6
7833	29	Critical - 1	0.002	**0.003**	11.5
7834	30	Inside Work Area	0.002	**0.002**	8.9
7835	31	Critical - 2	0.002	**0.003**	12.7

ANALYTICAL METHOD: N.I.O.S.H. 7400, "A" RULES PHASE CONTRAST MICROSCOPY

Microscope: Olympus CX21 Phase Contrast	Field Area: 0.00785 mm²	BDL = Below Detection Level
f/mm² = Fibers per Square Millimeter	L.O.D. = Level of Detection	OVL = Overloaded with particulate
f/cc = Fibers per Cubic Centimeter	L.O.D. = 7 fibers per mm²	CVLBL = Fibers exceeds QC limit

ANALYTICAL RESULTS DEPENDENT ON FIELD BLANKS SUBMITTED WITH SAMPLES
REPORTED ANALYTICAL RESULTS ARE BASED ON SAMPLE DATA PROVIDED BY THE CLIENT

Analyst:

Laboratory Director,

Laboratory Precision (S_r): 0.32

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FINAL REPORT OF ANALYSIS

NYS DOH E.L.A.P. # 11540

CLIENT: PRECISION ENVIRONMENTAL SERVICES
170 ERIE BOULEVARD
SCHENECTADY, NEW YORK 12308

PROJECT #: 14-373

PROJECT: BUILDING DEMOLITION

SAMPLE TYPE: PHASE IIB (REMOVAL)

WORK AREA:

DATE COLLECTED: 10/13/14

DATE ANALYZED: 10/13/14

DATE RECEIVED: 10/13/14

DATE REPORTED: 10/14/14

LAB I.D.	CLIENT SAMPLE #	LOCATION/DESCRIPTION	L.O.D.	f/cc	f/mm²
7892	32	Field Blank	---	---	0.0
7893	33	Field Blank	---	---	0.0
7894	34	Decon In	0.002	**0.003**	11.5
7895	35	Decon Out	0.002	**0.003**	14.0
7896	36	Critical - 1	0.002	**0.002**	10.2
7897	37	Ambient	0.002	**0.003**	12.7
7898	38	Critical - 2	0.002	**0.004**	16.6
7899	39	Inside Work Area	0.002	**0.002**	7.8

ANALYTICAL METHOD: N.I.O.S.H. 7400, "A" RULES PHASE CONTRAST MICROSCOPY

Microscope: Olympus CX21 Phase Contrast	Field Area: 0.00785 mm²	BDL = Below Detection Level
f/mm² = Fibers per Square Millimeter	L.O.D. = Level of Detection	OVL = Overloaded with particulate
f/cc = Fibers per Cubic Centimeter	L.O.D. = 7 fibers per mm²	OVLBL = Fibers exceeds QC limit

ANALYTICAL RESULTS DEPENDENT ON FIELD BLANKS SUBMITTED WITH SAMPLES
REPORTED ANALYTICAL RESULTS ARE BASED ON SAMPLE DATA PROVIDED BY THE CLIENT

Analyst:

Laboratory Director,

Laboratory Precision (S_r): 0.37

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FINAL REPORT OF ANALYSIS

NYS DOH E.L.A.P. # 11540

CLIENT: PRECISION ENVIRONMENTAL SERVICES
170 ERIE BOULEVARD
SCHENECTADY, NEW YORK 12308

PROJECT #: 14-373

PROJECT: BUILDING DEMOLITION

SAMPLE TYPE: PHASE IIB (REMOVAL)

WORK AREA:

DATE COLLECTED: 10/14/14

DATE ANALYZED: 10/14/14

DATE RECEIVED: 10/14/14

DATE REPORTED: 10/15/14

LAB I.D.	CLIENT SAMPLE #	LOCATION/DESCRIPTION	L.O.D.	f/cc	f/mm²
7969	40	Field Blank	---	---	0.0
7970	41	Field Blank	---	---	0.0
7971	42	Ambient	0.001	**0.003**	14.0
7972	43	Critical - 1	0.001	**0.002**	11.5
7973	44	Decon In	0.001	**0.003**	16.6
7974	45	Decon Out	0.001	**0.002**	10.2
7975	46	Inside Work Area	0.001	**0.003**	15.3
7976	47	Critical - 2	0.001	**0.002**	8.9

ANALYTICAL METHOD: N.I.O.S.H. 7400, "A" RULES PHASE CONTRAST MICROSCOPY

Microscope: Olympus CX21 Phase Contrast	Field Area: 0.00785 mm²	BDL = Below Detection Level
f/mm² = Fibers per Square Millimeter	L.O.D. = Level of Detection	OVL = Overloaded with particulate
f/cc = Fibers per Cubic Centimeter	L.O.D. = 7 fibers per mm²	OVLBL = Fibers exceeds QC limit

ANALYTICAL RESULTS DEPENDENT ON FIELD BLANKS SUBMITTED WITH SAMPLES
REPORTED ANALYTICAL RESULTS ARE BASED ON SAMPLE DATA PROVIDED BY THE CLIENT

Analyst:

Laboratory Director,

Laboratory Precision (S_r): 0.32

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FINAL REPORT OF ANALYSIS

NYS DOH E.L.A.P. # 11540

CLIENT: PRECISION ENVIRONMENTAL SERVICES
170 ERIE BOULEVARD
SCHENECTADY, NEW YORK 12308

PROJECT #: 14-373

PROJECT: BUILDING DEMOLITION

SAMPLE TYPE: PHASE IIB (REMOVAL)

WORK AREA:

DATE COLLECTED: 10/15/14

DATE ANALYZED: 10/15/14

DATE RECEIVED: 10/15/14

DATE REPORTED: 10/17/14

LAB I.D.	CLIENT SAMPLE #	LOCATION/DESCRIPTION	L.O.D.	f/cc	f/mm²
8012	48	Field Blank	---	---	0.0
8013	49	Field Blank	---	---	0.0
8014	50	Ambient	0.002	**0.004**	17.8
8015	51	Decon In	0.002	**0.003**	12.7
8016	52	Decon Out	0.002	**0.002**	10.2
8017	53	Inside Work Area	0.002	**0.002**	7.6
8018	54	Critical - 1	0.002	**0.003**	12.7
8019	55	Critical - 2	0.002	**0.002**	10.2

ANALYTICAL METHOD: N.I.O.S.H. 7400, "A" RULES PHASE CONTRAST MICROSCOPY

Microscope: Olympus CX21 Phase Contrast	Field Area: 0.00785 mm²	BDL = Below Detection Level
f/mm² = Fibers per Square Millimeter	L.O.D. = Level of Detection	OVL = Overloaded with particulate
f/cc = Fibers per Cubic Centimeter	L.O.D. = 7 fibers per mm²	OVLBL = Fibers exceeds QC limit

ANALYTICAL RESULTS DEPENDENT ON FIELD BLANKS SUBMITTED WITH SAMPLES
REPORTED ANALYTICAL RESULTS ARE BASED ON SAMPLE DATA PROVIDED BY THE CLIENT

Analyst:

Laboratory Precision (S_r): 0.32

Laboratory Director,

John B. Van Denburgh III

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Final Report of Analysis

NYS DOH E.L.A.P. # 11540

Client: Precision Environmental Services
170 Erie Boulevard
Schenectady, New York 12308

Project #: 14-373

Project: Building Demolition

Sample Type: Phase IIB (Removal)

Work Area:

Date Collected: 10/16/14

Date Analyzed: 10/16/14

Date Received: 10/16/14

Date Reported: 10/17/14

Lab I.D.	Client Sample #	Location/Description	L.O.D.	f/cc	f/mm²
8020	57	Field Blank	---	---	0.0
8021	58	Field Blank	---	---	0.0
8022	59	Ambient	0.001	**0.002**	12.7
8023	60	Critical - 1	0.001	**0.002**	10.2
8024	61	Decon In	0.001	**0.001**	7.6
8025	62	Decon Out	0.001	**0.003**	17.8
8026	63	Critical - 2	0.001	**0.002**	14.0
8027	64	Inside Work Area	0.001	**0.002**	11.5

ANALYTICAL METHOD: N.I.O.S.H. 7400, "A" RULES PHASE CONTRAST MICROSCOPY

Microscope: Olympus CX21 Phase Contrast	Field Area: 0.00785 mm²	BDL = Below Detection Level
f/mm² = Fibers per Square Millimeter	L.O.D. = Level of Detection	OVL = Overloaded with particulate
f/cc = Fibers per Cubic Centimeter	L.O.D. = 7 fibers per mm²	OVLBL = Fibers exceeds QC limit

ANALYTICAL RESULTS DEPENDENT ON FIELD BLANKS SUBMITTED WITH SAMPLES
REPORTED ANALYTICAL RESULTS ARE BASED ON SAMPLE DATA PROVIDED BY THE CLIENT

Analyst:

Laboratory Precision (S_r): 0.32

Laboratory Director,

John B. Van Denburgh III

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Final Report of Analysis

NYS DOH E.L.A.P. # 11540

Client: Precision Environmental Services
170 Erie Boulevard
Schenectady, New York 12308

Project #: 14-373

Project: Building Demolition

Sample Type: Phase IIB (Removal)

Work Area:

Date Collected: 10/17/14

Date Analyzed: 10/17/14

Date Received: 10/17/14

Date Reported: 10/20/14

Lab I.D.	Client Sample #	Location/Description	L.O.D.	f/cc	f/mm²
8088	64	Field Blank	---	---	0.0
8089	65	Field Blank	---	---	0.0
8090	66	Ambient	0.002	**0.004**	12.7
8091	67	Critical - 1	0.002	**0.005**	17.8
8092	68	Decon In	0.002	**0.004**	15.3
9093	69	Decon Out	0.002	**0.003**	11.5
9094	70	Critical - 2	0.002	**0.005**	16.6
9095	71	Inside Work Area	0.002	**0.003**	10.2

ANALYTICAL METHOD: N.I.O.S.H. 7400, "A" RULES PHASE CONTRAST MICROSCOPY

Microscope: Olympus CX21 Phase Contrast	Field Area: 0.00785 mm²	BDL = Below Detection Level
f/mm² = Fibers per Square Millimeter	L.O.D. = Level of Detection	OVL = Overloaded with particulate
f/cc = Fibers per Cubic Centimeter	L.O.D. = 7 fibers per mm²	OVLBL = Fibers exceeds QC limit

ANALYTICAL RESULTS DEPENDENT ON FIELD BLANKS SUBMITTED WITH SAMPLES
REPORTED ANALYTICAL RESULTS ARE BASED ON SAMPLE DATA PROVIDED BY THE CLIENT

Analyst:

Laboratory Director,

Laboratory Precision (S_r): 0.32

John B. Van Denburgh III

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AIR SAMPLING CHAIN OF CUSTODY (Rev 7-24-06)

PROJECT INFORMATION
Project #: 14-373 Date Collected: 10-8-14
Job Site/Building: 406 N. Pearl St.
Room/Work Area: Bldg. demo
Rotameter #: _____ Calibration Date: _____
Collected By (Print): Adam Ulyate

SAMPLE TYPE
☐ Phase IB (Background)
☐ Phase IIA (Prep)
☐ Phase IIB (Removal)
☐ Phase IIC (Clearance)
☐ Air Quality

TYPE OF ANALYSIS
☐ PCM - OSHA
☒ PCM - NIOSH 7400
☐ TEM - NIOSH 7402
☐ TEM - AHERA
☐ Other: _____

TURNAROUND
☐ RUSH
☐ 12 Hour
☐ 24 Hour
☒ 48 Hour
☐ Other: _____

SAMPLE IDENTIFICATION

Lab ID No.	Sample No.	Pump No.	Location (NAE = Negative Air Exhaust)	Pump On/Off hr:mn / hr:mn	Rate (LPM) On/Off	Time Min	Air Volume Liters	L.O.D.	Adjust Count /100	Result F/cc	F/mm²
7764	1		Field Blank	---	---	---	---	---	0	---	0.0
65	2		Field Blank	---	---	---	---	---	0	---	0.0
66	3		CRIT-1	0800 / 1700	3 / 3	540	1620	0.007	14	0.009	17.8
67	4		Ambient	0801 / 1701	3 / 3				11	0.003	14.0
68	5		Decon-In	0802 / 1702	3 / 3				7	0.002	8.9
69	6		Decon-Out	0803 / 1703	3 / 3				10	0.003	12.7
7770	7		CRIT-2	0804 / 1704	3 / 3	↑	↑	↑	12	0.004	15.3

ADDITIONAL INFO
Report Results to: _____
Phone/Fax: _____
Comments: _____

CHAIN OF CUSTODY
Relinquished: _____ Date: 10-8-14 Time: _____
Received: _____ Date: 10/9/14 Time: _____
Sample Log-in: _____ Date: _____ Time: _____
Sample Prep: _____ Date: _____ Time: _____
Analyzed: _____ Date: _____ Time: _____
QA/QC Review: _____ Date: _____ Time: _____

*NOTE: **Spectrum Environmental Associates, Inc.** utilizes laboratories that meet the requirements set forth by AHERA 40 CFR 763.90 (i)(2)(ii). Rotameters are calibrated against a Dry Cal DC-Lite Primary Flow Meter manufactured by BIOS International Corporation.*

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AIR SAMPLING CHAIN OF CUSTODY (Rev 7-24-06)

PROJECT INFORMATION

Project #: 14-373 Date Collected: 10-9-14
Job Site/Building: 406 N. Pearl St.
Room/Work Area: Bldg. Demo
Rotameter #: _____ Calibration Date: _____
Collected By (Print): Adam Wynar

SAMPLE TYPE

- ☐ Phase IB (Background)
- ☐ Phase IIA (Prep)
- ☐ ~~Phase IIB~~ (Removal)
- ☐ Phase IIC (Clearance)
- ☐ Air Quality

TYPE OF ANALYSIS

- ☐ PCM - OSHA
- ☒ ~~PCM~~ - NIOSH 7400
- ☐ TEM - NIOSH 7402
- ☐ TEM - AHERA
- ☐ Other: _____

TURNAROUND

- ☐ RUSH
- ☐ 12 Hour
- ☐ 24 Hour
- ☒ ~~48 Hour~~
- ☐ Other: _____

SAMPLE IDENTIFICATION

Lab ID No.	Sample No.	Pump No.	Location (NAE = Negative Air Exhaust)	Pump On/Off hr:mn / hr:mn	Rate (LPM) On/Off	Time Min	Air Volume Liters	L.O.D.	Adjust Count /100	Result f/cc	F/mm²
7777	8		Field Blank	---	---	---	---	---	0	---	0.10
78	9		Field Blank	---	---	---	---	---	0	---	0.0
79	10		Ambient	1000 / 1830	3 / 3	510	1530	0.007	10	0.003	12.7
7780	11		Crit-1	1001 / 1831	3 / 3				8	0.003	10.2
81	12		Decon-In	1002 / 1832	3 / 3				6	0.002	7.6
82	13		Decon-Out	1003 / 1833	3 / 3				9	0.003	11.5
83	14		EWA	1004 / 1834	3 / 3				11	0.004	14.0
7784	15		Crit-2	1005 / 1835	3 / 3	1	1	1	7	0.002	8.9
				/	/						
				/	/						
				/	/						
				/	/						
				/	/						

ADDITIONAL INFO

Report Results to: _____
Phone/Fax: _____
Comments: _____

CHAIN OF CUSTODY

		Date	Time
Relinquished:	Adam Wynar	10-9-14	
Received:			
Sample Log-in:			
Sample Prep:			
Analyzed:			
QA/QC Review:			

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AIR SAMPLING CHAIN OF CUSTODY (REV 7-24-06)

PROJECT INFORMATION
Project #: 14-373 Date Collected: 10/10/14
Job Site/Building: 406 N. PEARL ST
Room/Work Area: DEMO
Rotameter #: SEA #34 Calibration Date: 8/12/14
Collected By (Print): DAN SMITH

SAMPLE TYPE
☐ Phase IB (Background)
☐ Phase IIA (Prep)
☑ Phase IIB (Removal)
☐ Phase IIC (Clearance)
☐ Air Quality

TYPE OF ANALYSIS
☐ PCM - OSHA
☑ PCM - NIOSH 7400
☐ TEM - NIOSH 7402
☐ TEM - AHERA
☐ Other:

TURNAROUND
☐ RUSH
☐ 12 Hour
☐ 24 Hour
☒ 48 Hour
☐ Other:

SAMPLE IDENTIFICATION

Lab ID No.	Sample No.	Pump No.	Location (NAE = Negative Air Exhaust)	Pump On/Off hr:mn / hr:mn	Rate (LPM) On/Off	Time Min	Air Volume Liters	L.O.D.	Adjust Count /100	Result F/cc	F/mm²
7909	16	BLANK 1	Field Blank	---	---	---	---	---	0	---	0.0
10	17	BLANK 2	Field Blank	---	---	---	---	---	0	---	0.0
11	18		DECON IN	8:05 AM / 19:05	3 / 3	660	1980	0.001	12	0.003	12.3
7912	19		DECON OUT	8:06 AM / 19:06	3 / 3				14	0.003	17.8
13	20		AMBIENT	8:07 AM / 19:07	3 / 3				9	0.002	11.5
14	21		CRIT 1	8:08 AM / 19:08	3 / 3				7	0.002	8.9
15	22		CRIT 2	8:09 AM / 19:09	3 / 3				12	0.003	15.3
7914	23		ENSIDE WORK AREA	8:10 AM / 19:10	3 / 3				8	0.002	10.2

ADDITIONAL INFO
Report Results to:
Phone/Fax:
Comments:

CHAIN OF CUSTODY

		Date	Time
Relinquished:		10/10/14	
Received:		10/14/14	
Sample Log-in:		/ /	
Sample Prep:		/ /	
Analyzed:		/ /	
QA/QC Review:		/ /	

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AIR SAMPLING CHAIN OF CUSTODY (Rev 7-24-06)

PROJECT INFORMATION

Project #: 14-373 Date Collected: 10-11-14
Job Site/Building: 406 N. Pearl St.
Room/Work Area: Bldg. demo
Rotameter #: _____ Calibration Date: _____
Collected By (Print): Adam Wyman

SAMPLE TYPE

- ☐ Phase IB (Background)
- ☐ Phase IIA (Prep)
- ☒ Phase IIB (Removal)
- ☐ Phase IIC (Clearance)
- ☐ Air Quality

TYPE OF ANALYSIS

- ☐ PCM - OSHA
- ☒ PCM - NIOSH 7400
- ☐ TEM - NIOSH 7402
- ☐ TEM - AHERA
- ☐ Other: _____

TURNAROUND

- ☐ RUSH
- ☐ 12 Hour
- ☐ 24 Hour
- ☒ 48 Hour
- ☐ Other: _____

SAMPLE IDENTIFICATION

Lab ID No.	Sample No.	Pump No.	Location (NAE = Negative Air Exhaust)	Pump On/Off hr:mn / hr:mn	Rate (LPM) On/Off	Time Min	Air Volume Liters	L.O.D.	Adjust Count /100	Result f/cc	F/mm²
7828	24		Field Blank	---	---	---	---	---	0	---	0.0
29	25		Field Blank	---	---	---	---	---	0	---	0.0
7830	26		Ambient	0800 / 1700	3 / 3	540	1620	0.007	8	0.002	10.7
31	27		Decon-In	0804 / 1704	3 / 3				11	0.003	14.0
32	28		Decon-Out	0800 / 1700	3 / 3				6	0.002	7.6
33	29		Crit-1	0803 / 1703	3 / 3				9	0.003	11.5
34	30		EWA	0809 / 1709	3 / 3				7	0.002	8.9
7835	31		Crit-2	0806 / 1705	3 / 3	4	4	4	10	0.003	12.7

ADDITIONAL INFO

Report Results to: _____
Phone/Fax: _____
Comments: _____

CHAIN OF CUSTODY

Relinquished:		Date: 10-14-14	Time:
Received:		Date: 10/13/14	Time:
Sample Log-in:		Date:	Time:
Sample Prep:		Date:	Time:
Analyzed:		Date:	Time:
QA/QC Review:		Date:	Time:

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AIR SAMPLING CHAIN OF CUSTODY (REV 7-24-06)

PROJECT INFORMATION
Project #: 14-373 Date Collected: 10-13-14
Job Site/Building: 906 N. Pearl St
Room/Work Area: Bldg demo
Rotameter #: _____ Calibration Date: _____
Collected By (Print): Adam Lyman

SAMPLE TYPE
☐ Phase IB (Background)
☐ Phase IIA (Prep)
☒ Phase IIB (Removal)
☐ Phase IIC (Clearance)
☐ Air Quality

TYPE OF ANALYSIS
☐ PCM - OSHA
☒ PCM - NIOSH 7400
☐ TEM - NIOSH 7402
☐ TEM - AHERA
☐ Other: _____

TURNAROUND
☐ RUSH
☐ 12 Hour
☐ 24 Hour
☒ 48 Hour
☐ Other: _____

SAMPLE IDENTIFICATION

Lab ID No.	Sample No.	Pump No.	Location (NAE = Negative Air Exhaust)	Pump On/Off hr:mn / hr:mn	Rate (LPM) On/Off	Time Min	Air Volume Liters	L.O.D.	Adjust Count /100	Result f/cc	F/mm²
7892	32		Field Blank	---	---	---	---	---	0	---	0.0
93	33		Field Blank	---	---	---	---	---	0	---	0.0
94	34		Decon - In	0730 / 1630	3 / 3	540	1620	0.007	9	0.003	11.5
7895	35		Decon - Out	0731 / 1631	3 / 3	"	"	"	11	0.003	14.6
96	36		Exit-1	0732 / 1632	3 / 3	"	"	"	8	0.002	10.1
97	37		Ambient	0733 / 1633	3 / 3	"	"	"	10	0.003	12.7
98	38		Exit-2	0734 / 1634	3 / 3	"	"	"	13	0.004	16.6
7899	39		DWA	0735 / 1635	3 / 3	"	"	"	6	0.002	7.6

ADDITIONAL INFO
Report Results to: _____
Phone/Fax: _____
Comments: _____

CHAIN OF CUSTODY
Relinquished: _____ Date: 10-13-14 Time: _____
Received: _____ Date: 10/14/14 Time: _____
Sample Log-in: _____ Date: _____ Time: _____
Sample Prep: _____ Date: _____ Time: _____
Analyzed: _____ Date: _____ Time: _____
QA/QC Review: _____ Date: _____ Time: _____

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AIR SAMPLING CHAIN OF CUSTODY (Rev 7-24-06)

PROJECT INFORMATION

Project #: 14-373 Date Collected: 10-14-14
Job Site/Building: 406 N. Pearl St.
Room/Work Area: Bldg Demo
Rotameter #: _____ Calibration Date: _____
Collected By (Print): Adam Wyman

SAMPLE TYPE

- ☐ Phase IB (Background)
- ☐ Phase IIA (Prep)
- ☒ Phase IIB (Removal)
- ☐ Phase IIC (Clearance)
- ☐ Air Quality

TYPE OF ANALYSIS

- ☐ PCM - OSHA
- ☒ PCM - NIOSH 7400
- ☐ TEM - NIOSH 7402
- ☐ TEM - AHERA
- ☐ Other: _____

TURNAROUND

- ☐ RUSH
- ☐ 12 Hour
- ☐ 24 Hour
- ☒ 48 Hour
- ☐ Other: _____

SAMPLE IDENTIFICATION

Lab ID No.	Sample No.	Pump No.	Location (NAE = Negative Air Exhaust)	Pump On/Off hr:mn / hr:mn	Rate (LPM) On/Off	Time Min	Air Volume Liters	L.O.D.	Adjust Count /100	Result Fcc	F/mm²
7969	40		Field Blank	---	---	---	---	---	5	---	0.0
70	41		Field Blank	---	---	---	---	---	0	---	0.6
71	42		Ambient	0730 / 1800	3 / 3	630	1890	0.001	11	0.003	14.0
72	43		Crit-1	0731 / 1801	3 / 3				9	0.002	11.5
7973	44		Decon-IN	0732 / 1802	3 / 3				13	0.003	16.6
74	45		Decon-OUT	0733 / 1803	3 / 3				8	0.002	10.2
75	46		EWA	0734 / 1804	3 / 3				12	0.003	15.3
7976	47		Crit-2	0735 / 1805	3 / 3				7	0.002	8.9

ADDITIONAL INFO

Report Results to: _____
Phone/Fax: _____
Comments: _____

CHAIN OF CUSTODY

		Date	Time
Relinquished:	[signature]	10-14-14	
Received:	[signature]	3/15/14	
Sample Log-in:			
Sample Prep:			
Analyzed:			
QA/QC Review:			

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AIR SAMPLING CHAIN OF CUSTODY (REV 7-24-06)

#373

PROJECT INFORMATION
Project #: ~~14-1129~~ Date Collected: 10/15/14
Job Site/Building: 406 N. Pearl St.
Room/Work Area: Demo Area.
Rotameter #: Sen-17 Calibration Date: 2-22-14
Collected By (Print): Martin Mann

SAMPLE TYPE
- ☐ Phase IB (Background)
- ☐ Phase IIA (Prep)
- ☒ Phase IIB (Removal)
- ☐ Phase IIC (Clearance)
- ☐ Air Quality

TYPE OF ANALYSIS
- ☐ PCM - OSHA
- ☒ PCM - NIOSH 7400
- ☐ TEM - NIOSH 7402
- ☐ TEM - AHERA
- ☐ Other:

TURNAROUND
- ☐ RUSH
- ☐ 12 Hour
- ☐ 24 Hour
- ☒ 48 Hour
- ☐ Other:

SAMPLE IDENTIFICATION

Lab ID No.	Sample No.	Pump No.	Location (NAE = Negative Air Exhaust)	Pump On/Off hr:mn / hr:mn	Rate (LPM) On/Off	Time Min	Air Volume Liters	L.O.D.	Adjust Count /100	Result F/cc	F/mm²
80 12	48		Field Blank	---	---	---	---	---	0	---	0.0
13	49		Field Blank	---	---	---	---	---	0	---	0.0
14	50		Ambient	8:30 / 18:30	3[illegible] / 3[illegible]	6[illegible]	[illegible]	0.002	14	0.001	17.8
80 15	51		Decon-IN	8:31 / 18:31	3[illegible] / 3[illegible]	6[illegible]	[illegible]		10	0.002	12.7
16	52		Decon-Out	8:32 / 18:32	3[illegible] / 3[illegible]	600 / [illegible]	[illegible]		8	0.002	10.2
17	53		Iwa-	8:33 / 18:33	3[illegible] / 3[illegible]	6[illegible] / [illegible]	[illegible]		4	0.002	7.6
18	54		Critical-1	8:34 / 18:34	3[illegible] / 3[illegible]	6[illegible] / [illegible]	[illegible]		10	0.003	12.7
80 19	55		Critical-2	8:35 / 18:35	3[illegible] / 3[illegible]	6[illegible] / [illegible]	[illegible]		8	0.002	10.2

ADDITIONAL INFO
Report Results to:
Phone/Fax:
Comments:

CHAIN OF CUSTODY
Relinquished: Date: 10/15/14 Time: 20:00
Received: Date: 10/17/14 Time:
Sample Log-in: Date: Time:
Sample Prep: Date: Time:
Analyzed: Date: Time:
QA/QC Review: Date: Time:

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AIR SAMPLING CHAIN OF CUSTODY (REV 7-24-06)

PROJECT INFORMATION

Project #: 14-373 Date Collected: 10-16-14
Job Site/Building: 406 N. Pearl St.
Room/Work Area: Bldg demo
Rotameter #: _____ Calibration Date: _____
Collected By (Print): Adam WYMAN

SAMPLE TYPE

- ☐ Phase IB (Background)
- ☐ Phase IIA (Prep)
- ☒ Phase IIB (Removal)
- ☐ Phase IIC (Clearance)
- ☐ Air Quality

TYPE OF ANALYSIS

- ☐ PCM - OSHA
- ☒ PCM - NIOSH 7400
- ☐ TEM - NIOSH 7402
- ☐ TEM - AHERA
- ☐ Other: _____

TURNAROUND

- ☐ RUSH
- ☐ 12 Hour
- ☐ 24 Hour
- ☒ 48 Hour
- ☐ Other: _____

SAMPLE IDENTIFICATION

Lab ID No.	Sample No.	Pump No.	Location (NAE = Negative Air Exhaust)	Pump On/Off hr:mn / hr:mn	Rate (LPM) On/Off	Time Min	Air Volume Liters	L.O.D.	Adjust Count /100	Result F/cc	F/mm²
8020	57		Field Blank	---	---	---	---	---	0	---	0.0
21	58		Field Blank	---	---	---	---	---	0	---	0.0
22	59		Ambient	0830 / 2130	3 / 3	780	2340	0.001	10	0.002	12.7
23	60		CRIT-1	0831 / 2131	3 / 3				8	0.002	10.2
24	61		DECON-IN	0832 / 2132	3 / 3				6	0.001	7.6
8025	62		DECON-OUT	0833 / 2133	3 / 3				14	0.003	17.8
26	63		CRIT-2	0834 / 2134	3 / 3				11	0.002	14.0
8027	64		EWA	0835 / 2135	3 / 3	"	"	"	9	0.002	11.5
				~~0836~~ / 2136	~~3~~ / 3						

ADDITIONAL INFO

Report Results to: _____
Phone/Fax: _____
Comments: _____

CHAIN OF CUSTODY

Relinquished:		Date: 10-16-14	Time:
Received:		Date: 10/17/14	Time:
Sample Log-in:		Date:	Time:
Sample Prep:		Date:	Time:
Analyzed:		Date:	Time:
QA/QC Review:		Date:	Time:

*NOTE: **Spectrum Environmental Associates, Inc.** utilizes laboratories that meet the requirements set forth by AHERA 40 CFR 763.90 (i)(2)(ii). Rotameters are calibrated against a Dry Cal DC-Lite Primary Flow Meter manufactured by BIOS International Corporation.*

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AIR SAMPLING CHAIN OF CUSTODY (REV 7-24-06)

PROJECT INFORMATION

Project #: 14-373 Date Collected: 10-17-14
Job Site/Building: 406 N Pearl ST
Room/Work Area: Bldg demo
Rotameter #: _____ Calibration Date: _____
Collected By (Print): Adam Wyman

SAMPLE TYPE

- ☐ Phase IB (Background)
- ☐ Phase IIA (Prep)
- ☒ Phase IIB (Removal)
- ☐ Phase IIC (Clearance)
- ☐ Air Quality

TYPE OF ANALYSIS

- ☐ PCM - OSHA
- ☒ PCM - NIOSH 7400
- ☐ TEM - NIOSH 7402
- ☐ TEM - AHERA
- ☐ Other: _____

TURNAROUND

- ☐ RUSH
- ☐ 12 Hour
- ☐ 24 Hour
- ☒ 48 Hour
- ☐ Other: _____

SAMPLE IDENTIFICATION

Lab ID No.	Sample No.	Pump No.	Location (NAE = Negative Air Exhaust)	Pump On/Off hr:mn / hr:mn	Rate (LPM) On/Off	Time Min	Air Volume Liters	L.O.D.	Adjust Count /100	Result f/cc	F/mm²
8088	64		Field Blank	---	---	---	---	---	0	---	0.0
89	65		Field Blank	---	---	---	---	---	0	---	0.0
8090	66		Ambient	0730 / 1500	3 / 3	450	1350	0.002	10	0.004	12.9
91	67		CRIT-1	0731 / 1501	3 / 3				14	0.005	17.8
92	68		DECON-IN	0732 / 1502	3 / 3				12	0.004	15.3
93	69		DECON-OUT	0733 / 1503	3 / 3				9	0.003	11.5
94	70		CRIT-2	0734 / 1504	3 / 3				13	0.005	16.6
8095	71		EWA	0735 / 1505	3 / 3				8	0.003	10.2

ADDITIONAL INFO

Report Results to: _____
Phone/Fax: _____
Comments: _____

CHAIN OF CUSTODY

Relinquished: _____ Date: 10-17-14 Time: _____
Received: _____ Date: 10/20/14 Time: _____
Sample Log-in: _____ Date: _____ Time: _____
Sample Prep: _____ Date: _____ Time: _____
Analyzed: _____ Date: _____ Time: _____
QA/QC Review: _____ Date: _____ Time: _____

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SAMPLE LOCATION DRAWING(S)/MAP(S)

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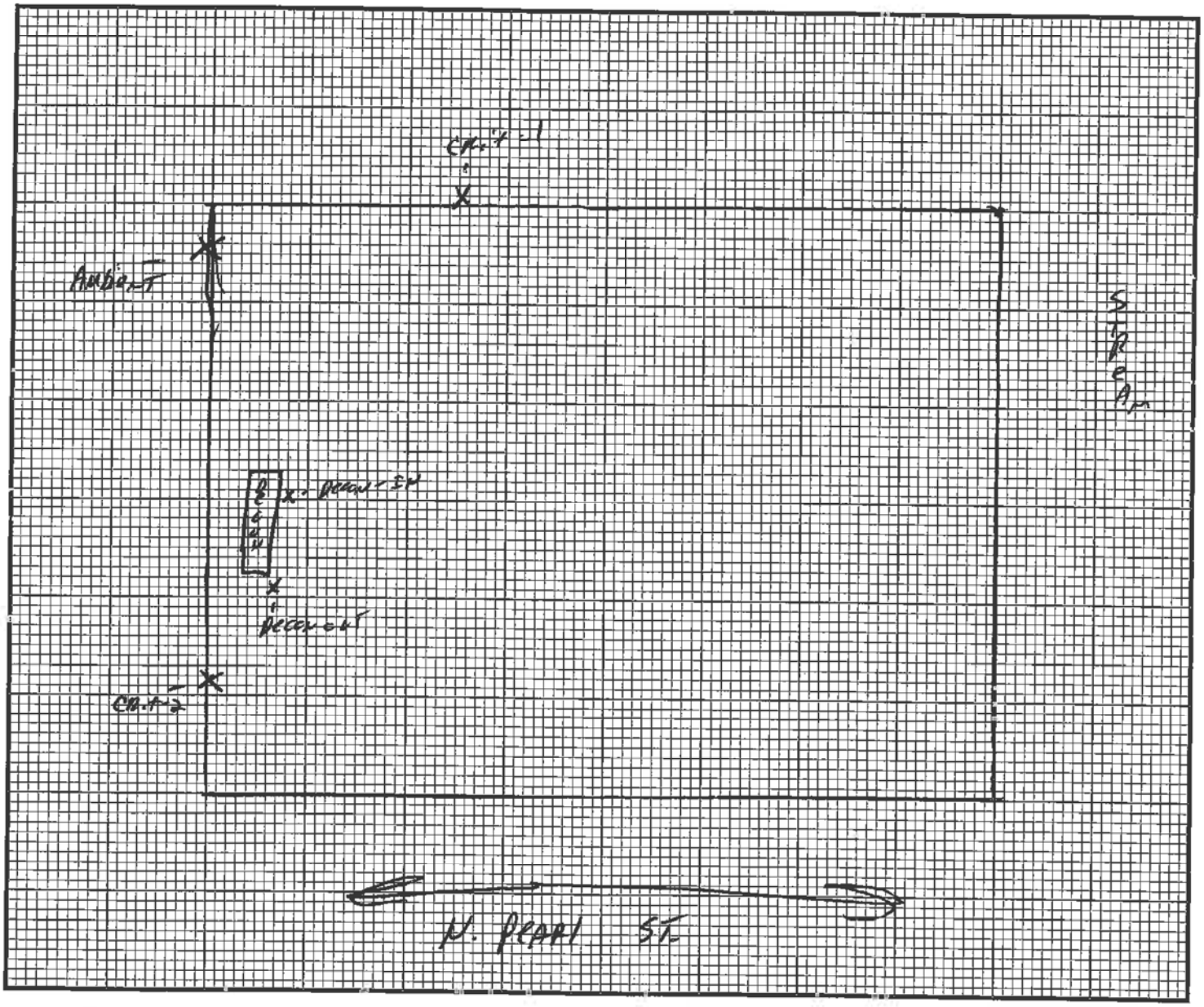
Map - Site Sketch

Job Site/Building: 406 N. Pearl St. Project Number: 14-

Room/Work Area: Bldg demo Hygienist: Adam Wyrau



Legend

Key Plan

Called North

PROJECT MONITOR VISUAL INSPECTION(S)

HENNESSY
Engineering &
Consulting

William C. Hennessy, Jr. P.E.

May 1, 2014

Stephen M. Phelps
Precision Environmental Services, Inc.
831 Route 67, Lot 38A
Ballston Spa, NY 12020

Re: C&F Plating Site
406 North Pearl Street
City of Albany, NY

Dear Mr. Phelps:

On April 25, 2014 I visited the building(s) at the subject site in the City of Albany, County of Albany, New York to attest to the condition of the structure.

The structure was observed to exhibit significant structural, weather and/or water damage. Vertical and horizontal members are not structurally sound due to this damage. Walls, ceilings and floors were damaged such that partial collapse has occurred and additional collapse is possible.

Pursuant to the Building Code, Fire Code and Property Maintenance Code of New York State, as well as 12 NYCRR Part 56 it is my opinion the building is an unsafe structure because it is dangerous to the life, health, property or safety of the public and it is structurally unsafe.

It is also my opinion the structure is unsafe since it is unfit for human occupancy and shall be condemned pursuant to the provisions of the aforementioned codes of New York State.

Sincerely,

William C. Hennessy, Jr. P.E.

P.O. Box 118, Voorheesville, NY 12186 • HennessyEC@verizon.net • 518-475-1670

ATTACHMENT D

LUSTER-ON PRODUCTS, INC.

54 Waltham Avenue, P.O. Box 90247, Springfield, Massachusetts 01139
Telephone (800) 888-2541 • (413) 739-2541
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www.luster-on.com

October 29, 2014

Mr. Stephen M. Phelps
Operations Manager
Precision Environmental Services Inc
831 Rt. 67, Lot 38A
Ballston Spa, NY 12020

Dear Mr. Phelps:

We have received the samples of unknown material submitted to us on October 24, 2014, Laboratory # 14297. We have analyzed the solutions using a variety of techniques to determine if they are truly products originally blended by Luster-On.

After looking at all of the results generated, we can verify that the two solutions are indeed the Luster-On 66A (Drum 002) and the Luster-On 66B (Drum 001). Our report is attached to this document.

If you have any questions about this testing or if further testing is deemed necessary or desired, please feel free to contact this office.

Sincerely,
LUSTER-ON PRODUCTS, INC.

Joseph J. Ciejka
Vice-President, Development & Technology

LUSTER-ON
PRODUCTS, INC.

Verification of Products Submitted by Precision Environmental Services, Inc.

Background

On Monday, October 20th, 2014, Stephen Phelps of Precision Environmental Services, Inc. of Ballston Spa, NY contacted Luster-On Products about the possible identity of two abandoned chemical containers which were likely sold by Luster-On Products to C & F Plating of Albany, NY. Initial pictures of the drums were electronically sent and it was quite apparent that after years of exposure the protective steel outer layer of the drum had severely corroded but the polymeric lining appeared to have remained intact and had prevented any loss of the chemistry to the environs. An initial examination of the photos along with some additional information relayed by Mr. Phelps led Luster-On to believe that the two materials were Luster-On 66A and Luster-On 66B or Luster-On Acid Dip 66A and Luster-On Acid Dip 66B.

These two materials are sold in conjunction to be mixed together in equal portions of 6% by volume in water to yield a solution used to chemically passivate the surface of electroplated zinc and/or cadmium while leaving an olive drab coloration to the desired component.

Luster-On volunteered to analyze the solutions to verify the initial belief that the two solutions were indeed the 66A & B. The 66A is an acidic, aqueous solution containing sodium bichromate and zinc nitrate; the 66B is a formic acid solution in water. Precision Environmental Services was able to secure the two containers in an overpack drum to prevent any further damage or loss of chemistry to the environment. Samples, approximately 100mL in volume, were then shipped to the Luster-On laboratory.

The samples arrived here at Luster-On on Friday, October24th via FedEx. Upon personal examination of the two samples, labeled as Drum 001 (the proposed 66B) and Drum 002 (proposed 66A), the orange solution (Drum 002) indeed had the color identical to that expected of the 66A solution. While the 66B (Drum 001) had an unexpected rust color to the solution as opposed to the expected clear, water white solution; it did have the odor associated with the 66B.

Physical Attributes and Concentration Guidelines

The samples' coloration and/or odor were in line with what was expected from the 66A and the 66B. Additional testing including the pH, specific gravity and component concentration was then performed. The pH was taken using a standard laboratory meter and probe standardized to pH 4 and 7. The pH of the Drum 001 solution was 1.40 and that of Drum 002 was 1.50 both falling within the expected range of 1.0 – 1.75. Secondly, the specific gravity of each solution was determined by weighing a pipetted 10 mL amount into a tared beaker. The specific gravity of the solution from Drum 001 was 1.088 g/mL (formulation target is 1.100 g/mL) and that of Drum 002 was 1.344 g/mL (formulation target is 1.350 g/mL).

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Next, the bichromate and zinc concentration were analyzed titrimetrically to determine if the 002 solution met the quality control standards established by Luster-On. The bichromate concentration was determined through an iodometric titration with a value of 24.2 mL, well in range of the accepted values – 22.5 – 26.0 mL. The zinc levels were analyzed using an EDTA titration with a titrant volume of 19.4 mL, again in range of the accepted values 18 – 22 mL. The acid level of Drum 001's solution was determined via an acid/base neutralization using 1.0N NaOH with a final titration value of 14.3 mL in range of the accepted 12.8 – 15.1 value.

All physical attributes, outside of the color of the solution 001 drum, fit the quality control profile of the 66A and B.

Tramp Metals

The two solutions were also checked for some possible tramp metals (metals which may contaminate the product) using a Perkin-Elmer AAnalyst 100 atomic absorption spectrophotometer. Knowing that the steel drums were compromised, Luster-On decided to check the solutions for iron, chromium and zinc where applicable. The results are listed in the following table.

Metal Contaminant	Drum 001	Drum 002
Chromium	1.7 ppm	---
Iron	570 ppm	6.6 ppm
Zinc	2.6 ppm	---

The coloration of the 001 solution may be explained by the level of iron dissolved in the solution; the chromium found present did not react with diphenylcarbazide so it is reasonable to assume that it is in the trivalent form as opposed to the more dangerous hexavalent state.

Testing of the Function of the Product

In a final verification procedure, a small passivation solution was prepared by mixing 6 mL of each solution with 88 mL of tap water. Freshly zinc electroplated fasteners were immersed into the passivation solution and although there were indicative signs of the olive drab finish, the solution did not provide a worthwhile chemical conversion coating. It is reasonable to believe that the iron contamination of the 66B is interfering with the proper formation of the passivation film.

Conclusion

After weighing all of the evidence presented, pictures of containers, physical attributes of the solutions, concentrations of the constituents and partial functioning of the working solution, Luster-On can verify that the contents of Drum 001 are that of our Luster-On 66B product. We can also verify that the contents of the Drum 002 are that of our 66A product.