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BUILDING 52 DEMOLITION WASTE MANAGEMENT STRATEGY REPORT
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

By Haley & Aldrich of New York
Rochester, New York

For ARCO Environmental Remediation Limited
Naperville, Illinois

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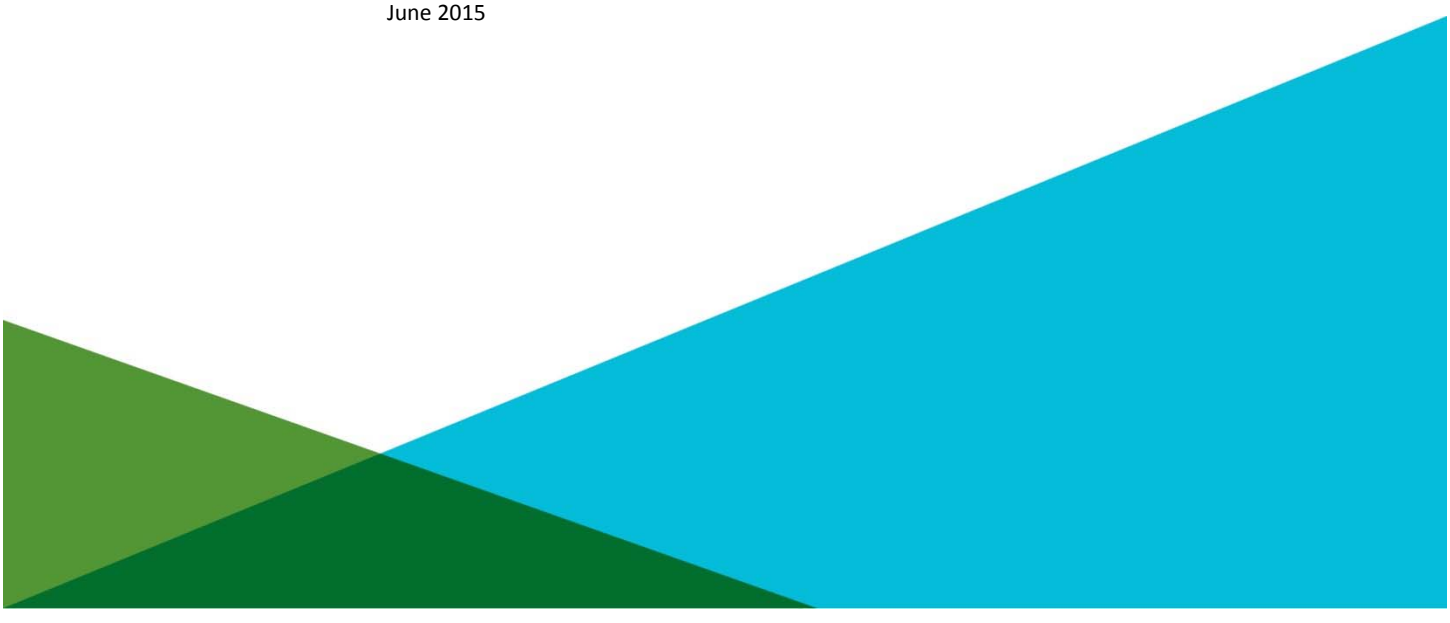

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1. Introduction

Haley & Aldrich Inc. has been contracted by ARCO Environmental Remediation Limited (AERL) to support decommissioning and demolition activities of Building 52 located within the State Superfund Site #360022 at 1 River Street, Hastings-on-Hudson, New York (Site). The purpose of sampling was to evaluate waste streams resulting from demolition of Building 52 and to remove portions of the slab that exceed 50 parts per million (PPM) as an Interim Response Measure (IRM) prior to demolition of the building. Based on reviews of historical manufacturing processes at the site, polychlorinated biphenyls (PCBs) were used for electrical cable manufacturing during World War II; use of PCBs at the site was discontinued after World War II. Building material samples were previously collected between 2006 and 2009 to screen for the presence of PCBs for the purpose of preliminary waste stream management evaluations. Based on results of this screening and review of historical equipment layouts, additional sampling was conducted in 2015 and 2016 to evaluate areas that contain PCBs and delineate areas that contain concentrations of PCBs greater than 50 PPM and to determine options to appropriately manage materials resulting from the demolition of Building 52. Specifically, the following was evaluated:

- the presence of PCBs that exceed TSCA requirements for removal;
- the extent of PCBs within areas containing concentrations of PCBs greater than 50 PPM for the purposes of removal prior to demolition.

This report presents the findings of these investigations and provides recommendations for the waste management strategies for the disposal of building materials with respect to the New York Department of Environmental Conservation (NYDEC) and the Toxic Substance Control Act (TSCA) (40 Code of Federal Regulations (CFR) 761) regulated under the United States Environmental Protection Agency.

1.1 SITE SETTING AND BACKGROUND

Building 52 is located in the north east corner of the State Superfund Site #360022. The Site is approximately 28 acres, and is located on the eastern bank of the Hudson River within the confines of the Hudson River Valley (Figure 1 in Appendix A). The Site was created by filling the Hudson River between the mid-1800s and the early 1900s with the placement of uncontrolled fill using a series of bulkhead walls of various construction types along the western edge. The ground surface at the Site is generally flat with a maximum elevation change of approximately 8 ft. across the site.

The Site began industrial operations in the mid to late 1800s and contained several individual businesses that produced diverse products including lumber, plaster, conduit, pipe, electrical cables, and pavement. Two electrical cable companies merged in 1896 and formed the National Conduit & Cable Company, which constructed Building 52 in 1911. Mergers with other business over the next 20 years resulted in the site being owned by the Anaconda Wire & Cable Corporation, which was a subsidiary of the Anaconda Copper Mining Company.

Anaconda Wire & Cable Corporation was awarded a contract from the United States Navy (Navy) to manufacture electric cable for shipboard use during World War II. The contract required that shipboard cable be heat and flame resistant to withstand heat generated from conducting high electric currents and damage to vessels. PCB mixtures were used to manufacture these products during World War II; PCB use in the manufacturing of cable at the site ceased once the war ended.

After World War II, the Anaconda Wire & Cable Corporation produced electrical and television cable until it ceased operations in 1975. Atlantic Richfield Company (AR) purchased the Anaconda Wire & Cable Corporation in 1977, never operated the facility, and then sold the Site in 1978. In 1998, AR's affiliate, AERL, purchased the Site in order to facilitate environmental investigation and remediation efforts.

1.2 SITE REGULATORY FRAMEWORK

Multiple environmental site investigations have been completed at the Site (including within and adjacent to Building 52), beginning in the mid-1990s, to determine the nature and extent of PCBs. Investigations determined that chemicals used in the manufacturing processes are present in off shore sediments and onsite soils including those adjacent to Building 52, beneath the floor slab (sub-slab), and on or within building materials.

Administratively, the Site has been separated into two Operable Units: OU-1 and OU-2. OU-1 is an upland area approximately 2,400 feet long by 500 feet wide. OU-2 is the area that extends westward into the Hudson River approximately 400 feet from the western OU-1 boundary, north into the Old Marina (approximately 300 feet north of the northwestern corner of OU-1), and approximately parallel to the southern property boundary. Bulkhead walls used to construct the site (as described in Section 1.1) establish the boundaries of OU-1 and some elements of the off-shore portion of the Site (OU-2). While Building 52 is located within OU-1, the OU-1 ROD does not include activities associated with Building 52 including demolition and subsurface investigation beneath the slab.

1.2.1 Record of Decision

Based on Historical investigations, NYSDEC issued a Record of Decision (ROD) (March 2004) and a ROD Amendment (March 2012) to address onshore (OU-1), site wide impacts. The ROD and ROD Amendment requires Site-wide excavation of onshore soils containing PCBs greater than 10 PPM, to a maximum depth of 9 to 12 feet and a two-foot cover on the site. PCB releases occurred at the site prior to 1978; therefore, remediation of PCBs at “as found” concentrations less than 50 PPM are regulated by NYSDEC.

1.2.2 Consent Order

In November, 2013, NYSDEC and AR and AERL entered an Amended Order on Consent with NYSDEC which requires design and implementation of the environmental remedy to address PCBs and lead.

1.3 REMEDIAL DESIGN WORK PLAN

A Remedial Design Work Plan (RDWP) was completed and submitted to NYSDEC and was approved on 16 June 2014. The RDWP described a Pre-Design Investigation (PDI), which began in 2013, that included collecting information and soil and sediment samples required to support completion of a remedial design to address OU-1 and OU-2. One component of a ROD compliant remedy includes submittal of a TSCA Risk Based Disposal application in accordance with 40 CFR 761.61 (c), which was submitted to the USEPA in November 2015.

1.4 PLANNED ACTIVITIES FOR BUILDING 52

Building 52 is located in the northeast corner of the site (see Figure 2 in Appendix B). Limited subsurface data collected adjacent to and under Building 52 indicate the presence of PCBs greater than ROD cleanup concentrations. The physical condition of Building 52 is poor and subsurface investigations and subsequent removal of impacted soils cannot be safely completed with the building in place. Building 52 will be demolished in order to complete the subsurface investigation adjacent to and beneath the slab to finalize the design of the remedy in this portion of the Site.

1.4.1 Materials Sampling Plan

Building 52 is an approximate 2 acre building constructed of a concrete slab, steel columns with brick infill, steel truss roof, with light weight concrete roof deck and saw tooth monitors. PCBs have been observed in building materials such as the concrete floor, brick walls, roof deck, paint, and window caulk and glaze. Initial sampling completed in 2006 and 2009 indicated the presence of PCBs in the concrete floor slab at concentrations greater than 50 PPM. Based on this, the Building 52 Sampling and Analysis Work Plan (2015 SAP) was developed and submitted to the NYSDEC in September 2015 for review and approval (see Appendix A). The objective of the sampling plan was to

- Determine the concentration of PCBs, TCLP lead and asbestos in building materials to evaluate proper handling and disposal requirements
- Delineate existing areas and identify new areas of the floor slab that contain concentrations of PCBs greater than 50 PPM.

Drawings that indicated historical equipment layouts were used to locate borings for the purposes of determining additional areas on the floor and brick walls that may contain concentrations of PCBs greater than 50 PPM.

2. Building 52

Building 52 is currently a vacant, former industrial building located within the northeast corner of OU-1. This building is one of several factory buildings that once operated on the 28-acre Anaconda complex. All buildings in OU-1 except Building 52 have since been removed.

2.1 HISTORICAL USE

Below is an approximate overview of the history of use of Building 52. Additional information regarding the historical use of Building 52 can be reviewed in the Building 52 Alternatives report (Haley & Aldrich, 2014).

- 1911: Building 52 was constructed.
- Pre-1915 – 1920: Copper and brass components for munitions to support World War I efforts were manufactured.
- 1920 – 1942: Building was used as auto dead storage (where automobiles or parts are stored for an indefinite length of time).
- 1942 – 1945: Fire-resistant electrical cable was manufactured under a US Navy contract.
- 1945 – 1970s: Telephone wire was manufactured.
- 1974: Operations at the Hastings-On-Hudson Plant ceased.
- 1978: Site acquired by AR in 1978 through the purchase of copper mining assets from the Anaconda Company.

2.2 BUILDING DESCRIPTION AND DISPOSITION

Building 52 is a one-story building approximately 576 feet in length in the north-south direction and 170 feet in width in the east-west direction. Based on a review of Historical building drawings, the building consists of a concrete slab floor underlain by wood piles.

The roof is supported by steel columns, which extend along the perimeter of the building on 16 foot centers within the east and west walls and on 17 foot centers in the north and south walls. A center row of columns, which provides roof support to steel trusses that extend east-west, is oriented north-south and are on 48 foot centers. The trusses support smaller steel infill beams, which support a cinder concrete roof slab. The exterior walls are masonry and do not appear to be load bearing.

Deterioration of building elements, (e.g., sawtooth roof monitors, brick pilasters, and the roofing system) has been observed and their condition continues to worsen. The roof membrane has significantly deteriorated over the past several years resulting in exposure of large sections of the concrete roof deck to solar radiation, precipitation, and freeze-thaw cycles further reducing structural

integrity. Additional information regarding the physical condition of Building 52 can be reviewed in the Building 52 Alternatives report (Haley & Aldrich, 2014).

2.3 PCB USAGE IN CABLE MANUFACTURING INSIDE BUILDING 52

Building 52 was used to manufacture PCB cables from 1942 to 1945. Components required to produce electrical cables were generally delivered by barge to the northwest portion of the site. Components of the PCB mixture used to manufacture electrical cable at the site and within Building 52 were delivered in the form of Aroclors (delivered as a powder) and Halowax (delivered as a wax) compounds.

The product required for use in electrical cables was produced by mixing components, which resulted in a thick mixture (referred to as the "saturant"). Naphtha or toluene solvent was added to decrease the viscosity to allow placement of the saturant into transfer drums and trucks, pumping through piping, and into machinery to produce cables. Mixed saturant was then transferred to Building 52 for use in the manufacture of electrical cable. Once inside Building 52, saturant was delivered to production machines using an overhead piping network. Records are not available that describe whether overhead pipes were cleaned or removed.

Saturant was mixed in Building 55 and either stored temporarily until required or transferred directly to Building 52. Once inside Building 52, saturant was delivered to electrical cable components as required to meet the design specifications of the cable. Equipment used for this purpose is described below:

- Bull, intermediate, and fine wire felters – used to apply saturant impregnated asbestos to conductors and cables;
- Wire planetary stranders – used to apply saturant impregnated fillers to conductors and cables;
- Vertical and horizontal cabling machine – used to apply pre-saturated filler material to conductors and cables;
- Drying Ovens – used to evaporate solvents from saturated insulation;
- Braiders (wardwell and textile) – used to apply saturant to the braid of the conductor; and
- Royle Tubers – used to extrude rubber or plastic into tubes used as covers on conductors and cables insulation containing saturant.

All manufacturing processes described above ceased upon completion of World War II.

2.4 PLANNED DEMOLITION

The purpose of demolition of Building 52 is to provide safe access to environmental contractors completing subsurface investigation to comply with NYDEC and TSCA regulations through removal of soil removal beneath and adjacent to the building that exceeds ROD removal requirements.

The current demolition strategy is to remove and properly dispose of the above grade structure. As an Interim Response Measure (IRM), portions of the slab that contain PCBs greater than 50 PPM will be removed prior to demolition to prevent releases to the environment during the demolition process. Portions of slab that do not contain PCBs at concentrations greater than 50 PPM will remain in place post demolition. Upon completion of the demolition, in accordance with the ROD, portions of the slab that contain PCBs greater than 10 PPM will be delineated and if needed; removed as part of the site remedy.

3. Materials Sampling

3.1 REGULATORY CONTEXT

In order to properly dispose of waste streams resulting from demolition activities, the 2015 SAP was completed and submitted to NYSDEC in September 2015 and approved on November 10, 2015. The 2015 SAP indicated the locations and frequency at which representative samples of building materials would be collected and analyzed to determine the presence of constituents of interest (COIs). COIs for Building 52 include PCBs, TCLP lead, lead, and asbestos containing material (ACM). Based on this, regulations described below were evaluated and were determine to apply.

3.1.1 Environmental Protection Agency

PCB Remediation Waste

As described previously, PCB use in manufacture of electrical wires within Building 52 occurred during World War II. Therefore, as described in §761.3, as it relates to Building 52, PCB remediation waste means a "waste containing PCBs as a result of a spill, release, or other unauthorized disposal, at the following concentrations: Materials disposed of prior to April 18, 1978, that are currently at concentrations ≥50 ppm PCBs, regardless of the concentration of the original spill…"

As described in §761.60(b)(2)(i), for wastes that fulfill the description of a PCB remediation waste, "Any person disposing of non-liquid PCB remediation waste shall do so by one of the following methods: Dispose of it in a high temperature incinerator approved under §761.70(b), an alternate disposal method approved under §761.60(e), a chemical waste landfill approved under §761.75, or in a facility with a coordinated approval issued under §761.77…"

Materials within Building 52 that contain PCBs that fulfill the description of PCB remediation waste include sections of the concrete floor slab, brick walls, and concrete roof deck.

PCB Bulk Product Waste

As described in § 761.3, as it relates to Building 52, PCB bulk product waste means waste derived from manufactured products containing PCBs in a non-liquid state, at any concentration where the concentration at the time of designation for disposal was ≥50 ppm PCBs. PCB bulk product waste does not include PCBs or PCB Items regulated for disposal under §761.60(a) through (c), §761.61, §761.63, or §761.64. PCB bulk product waste includes, but is not limited to:

"…. Plastics (such as plastic insulation from wire or cable; radio, television and computer casings; vehicle parts; or furniture laminates); preformed or molded rubber parts and components; applied dried paints, varnishes, waxes or other similar coatings or sealants; caulking; adhesives; paper; Galbestos; sound deadening or other types of insulation; and felt or fabric products such as gaskets."

As described in 761.62, for wastes that fulfill the description of a PCB bulk product waste, "Any person may dispose of….PCB bulk product waste in a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill."

Materials within Building 52 that contain PCBs that fulfill the description of PCB bulk product waste include paint, window caulk and glaze, expansion joint caulk, and ceiling coating.

Post April 18, 1978 Releases of PCBs

According to 761.50 (b)(3)(1)(B), wastes released to the environment prior to April 18, 1978 at "as-found" concentrations ≥50 ppm are not required to be cleaned up in accordance with § 761.61. However, if cleanup is not in accordance with § 761.61, the responsible party is not relieved from the applicable requirements of the cleanup.

In a demolition scenario, debris that contains PCBs greater than 50 PPM released to the environment may constitute a release subject to the regulations and would require clean up in accordance with § 761.61. Activities that may result in a release to the environment include comingling demolition debris containing PCB remediation waste with debris that contains concentrations of PCBs less than 50 PPM. Releases of this nature would necessitate all waste that contacts PCB remediation waste to be disposed of as a PCB remediation waste.

Building 52 materials sampling was designed and conducted to acquire appropriate data to complete a demolition design that reduces the potential that PCB remediation waste comingles with waste containing PCBs less than 50 PPM.

3.1.2 New York State Department of Environmental Conservation

In New York State, lead and PCBs are regulated for transportation and disposal by 6 CRR-NY 372 as described below. Hazardous waste must be transported and disposed of in New York using hazardous waste manifest using waste codes described in 6 CRR-NY 371. Definitions of hazardous waste thresholds for COIs within Building 52 are described below. NYDEC requirements are in addition to TSCA (40 CFR 761) as EPA has not delegated TSCA authority to state agencies.

PCBs

According to 6 NYCRR 371.4 (e)(1), "All solid wastes containing 50 parts per million (ppm) by weight (on a dry weight basis for other than liquid wastes) or greater of polychlorinated biphenyls (PCBs) are listed hazardous wastes, excluding small capacitors as defined in paragraph (3) of this subdivision and PCB articles drained in accordance with subparagraphs (2)(ii) and (iii) of this subdivision. PCB articles that contain less than 50 ppm PCBs are not regulated as hazardous waste."

Materials within Building 52 that contain PCBs that fulfill the description of a NYS hazardous waste include the concrete floor slab, brick walls, concrete roof deck, paint, window caulk and glaze, expansion joint caulk, and ceiling coating.

Lead

NYS Hazardous waste rules for TCLP lead match Federal regulations, which indicate that solid waste containing 5 PPM TCLP lead must be managed as a hazardous waste.

Materials within Building 52 that contain TCLP lead that fulfill the description of a NYS hazardous waste include the portions of brick walls, paint, window caulk and glaze, and expansion joint caulk.

3.1.3 New York State Department of Labor

ACM

Asbestos containing material (ACM) is regulated by the New York State Department of Labor (NYSDOL) through 12 NYCRR Part 56.

3.2 PURPOSE OF SAMPLING

As described in Section 3.1 of this document, demolition of Building 52 may impact portions of the concrete floor slab containing PCBs at concentrations greater than 50 PPM potentially resulting in a new release to the environment. Additionally, building materials, including brick walls and concrete roof deck, may contain hazardous levels of COIs that may require special considerations for demolition and disposal. Therefore, the purpose of materials sampling within Building 52 was to identify materials that contain site specific COIs which require special consideration during demolition or disposal activities based on the regulatory context that governs wastes generated as a result of demolition activities. A sampling plan was developed based on historical building materials sampling and the equipment layout during the period of time at which PCBs were used in the manufacturing process. The sampling plan was approved by the NYSDEC on November 10, 2015. Data collected was used to evaluate potential off-site disposal options and required demolition sequencing and methods. Sampling was conducted to determine the following:

- the presence of hazardous levels of lead;
- the presence of asbestos containing material (ACM);
- locations where building materials (such as expansion joints and window caulk and glaze) that contain PCB concentrations greater than 50 PPM (bulk product waste); and
- locations where masonry material that contains PCB concentrations greater than 50 PPM (PCB remediation waste) which require removal prior to demolition.

Appendix B Figures 3, 4, 5, and 6 show historical sampling locations (collected between 2006 and 2009) and analytical results of PCBs, total lead, TCLP lead, and asbestos contained within building materials. These results were supplemented to determine the extent of impacts by COIs.

Appendix B Table I shows building components and the approximate number of samples that were proposed to be sampled in the 2015 SAP to determine the presence of PCBs, TCLP lead, total lead, and asbestos. Although the sampling generally followed the SAP approved by NYSDEC; the actual number, locations, and types of samples collected were determined based on field conditions and laboratory sample results. Details of sampling are provided in sections that follow.

4. Sampling Overview

Sampling of building materials was completed to evaluate disposal options for waste streams resulting from demolition. Sampling, for the purposes of disposal, was completed, at a minimum, at the frequency (1 sample per 500 cubic yards) and distribution (based on historical processes) required to identify and characterize materials for disposal. Paint chips or other coatings were collected and analyzed to determine TCLP lead and PCB concentrations; samples of other building materials were collected to determine the presence of ACM.

Additionally, the concrete slab was sampled to evaluate areas that contain concentrations of PCBs greater than 50 PPM, which require removal as an IRM. The remaining portion of the slab will remain in place post demolition. Sampling was biased to historical equipment locations based on equipment layouts during wire manufacturing. All sampling was completed in accordance with procedures described in the 2015 SAP. Sampling to determine the concentration of PCBs were collected in accordance with §761.286.

As described in the 2015 SAP, the following materials were sampled to determine the concentration of PCB, TCLP lead, and asbestos to determine appropriate disposal, segregation, and construction sequencing requirements:

- Floor Slab
- Masonry
  - Wall Paint and Brick, and concrete masonry unit (Walls)
  - Ceiling Coating and Concrete Roof Deck
- Other Building Materials
  - Interior Steel
  - Expansion Joints
  - Roofing Material
  - Window Caulk and Glaze
  - Sumps and Drains
  - Overhead piping

4.1 HISTORICAL AND CURRENT PCB SAMPLING

This section summarizes the historical analytical results of building materials and describes the rationale for additional sampling proposed in the 2015 SAP.

As shown in Appendix B Figures 3, 4, 5, and 6, sampling completed in 2006 and 2009 indicated the potential presence of PCBs in building materials, which are described below. Data indicating field sampling methods for floor slabs in 2006 are not available for review. Methods to collect samples from walls in 2009 included using a masonry chisel to remove portions of the walls; sampling methods to collect samples of the concrete floor and roof deck included use of a two-inch concrete core bit. Based on results of historical sampling, the 2015 SAP indicated additional sampling was warranted. Samples collected in 2015 and 2016 that required analysis of PCBs were analyzed (as Aroclors) by Pace Analytical Laboratories (Pace) in Schenectady, New York. Analyses were completed using USEPA SW846 Method 8082A by gas chromatography/electron capture detection (GC/ECD).

Details of the historical sampling and the additional sampling collected in 2015 and 2016 are described in the sections below and results of the historical and recent sampling are summarized in Section 5 of this report.

4.1.1 Floor Slab (PCBs)

In 2006, composite floor samples were collected from 15 locations and analysis indicated a maximum concentration of 12.7 PPM (Appendix B Figure 6). In 2009, 10 concrete core screening locations were evaluated at 0.5 to 1 inch intervals beginning at the finished floor to the bottom of the slab from unbiased locations using a 2 in. diameter core. The purpose of this sampling was to determine whether the PCBs were present within the slab at concentrations that required removal. PCBs greater than 50 PPM were observed in the floor slab at two locations at concentrations of up to 94 ppm in the top one inch of concrete (Appendix B Figure 5).

4.1.1.1 Cleanup Site Characterization Sampling

Based on these results and information regarding historical equipment layouts during PCB use, biased sampling was completed as described in the 2015 SAP (proposed sampling locations shown Appendix B Figure 7). Sampling was completed based on requirements described in §761.265 to determine the horizontal extent of PCB greater than 50 PPM in concrete. The purpose of this delineation was to identify areas subject to an IRM.

4.1.1.2 Sampling to Verify Completion

The most likely source of PCBs in concrete is surface spills during operations. The requirements of §761.280 indicate that verification of cleanup is required by collecting confirmation samples at the bottom of the removal area. The concrete slab IRM will include removal of the areas of the slab that exhibit PCB concentrations greater than 50 PPM in the top 3 inches and backfilling. In order to verify remediation (i.e. confirm that PCBs did not migrate to the bottom of the slab at concentrations greater than 50 PPM), samples of the bottom 1 in. of the concrete slab were collected at select locations that coincided with “top 3 in. samples” and analyzed to determine the concentration of PCBs. The purpose of this sampling was to determine whether PCBs released to the floor surface migrated through the concrete into underlying soil. The concrete slab was (and is currently) competent at the time of the historical release. Based on the typical physical properties of concrete (i.e. low porosity and hydraulic conductivity as compared to soil), the largest concentrations of PCBs are expected to be observed only in the top several inches of the concrete with little vertical migration within the concrete matrix, which was confirmed by results of concrete sampling completed in 2009 (Appendix B Figure 5). The samples did not indicate significant concentration of PCBs in the bottom 1 in. of the slab.

4.1.2 Masonry (PCBs)

Screening samples were collected from building materials consisting of masonry material (i.e., brick and concrete masonry unit (CMU) from walls, concrete from the roof deck) to evaluate disposal requirements. Historical sampling of wall brick, CMU and roof deck concrete were collected to determine building materials that contain concentrations of PCBs that require removal prior to demolition (PCBs greater than 50 PPM) to reduce the potential for comingling PCB remediation waste with wastes that contain PCBs at concentrations less than 50 PPM. Based on these results of historical masonry materials sampling (described below), additional sampling was completed as described in the

2015 SAP (proposed sampling locations shown Appendix B Figure 7). If screening samples indicated concentrations greater than 50 PPM, additional samples were collected as described in §761.265 to determine the extent of PCB remediation waste in masonry material.

Additionally, paint is present on the walls and a coating is present on the ceiling. Historical sampling of these materials was not conducted. Sampling of these materials was completed as described in the 2015 SAP.

4.1.3 Brick and CMU (Walls) Including Paint

Historical screening samples from interior brick walls were previously collected at approximately 15 locations to determine concentrations PCBs. These samples were generally collected at a height of approximately four feet above the finished floor. At three locations, additional brick samples were collected upon washing the wall surface and then removing paint at locations adjacent to the initial sampling location and evaluated for concentrations of PCBs and total lead; historical paint samples were not collected. PCBs were detected at these locations prior to washing and removal of paint at concentrations that ranged between 0.069 and 2.1 PPM (Appendix B Figure 4).

As was described in the 2015 SAP, additional samples of wall brick and concrete block were collected. Additionally, wall paint samples were collected. Wall samples were generally collected at approximately: 0.5 ft., 4 ft., 11 ft., and 22 ft. above the finished floor (AFF); most brick samples were collected at locations that contained paint.

Historical samples of CMU present in openings previously occupied by windows and overhead doors and the wall at the midpoint of the building, which were likely infilled post World War II and are generally unpainted, were not collected, since the presence of PCB remediation waste is unlikely. Therefore, four samples were collected from the interior CMU wall in the middle of the building and six samples were collected from CMU locations previously occupied by windows and overhead doors.

4.1.4 Concrete Roof Deck Including Ceiling Coating

In 2010, wipe samples were previously collected at 14 locations from the ceiling (defined as the underside of the roof deck) to determine the presence of PCBs; detections of PCBs were observed at each of the 14 wipe locations. In addition, historical roof cores were collected at three locations and analyzed for the presence of PCBs; PCB detections ranged between 0.58 and 1.2 PPM. Appendix B Figure 4 shows results of PCB samples collected from the roof and ceiling. Historical samples of ceiling coating were not collected.

As was described in the 2015 SAP, an additional eight samples of the concrete roof deck were collected. Based on historical operations, a source that may result in PCBs present on the ceiling at concentrations that exceed 50 PPM was not identified. Therefore, the roof was divided into eight equal sections; one sample of the underside of the roof deck was collected from the center of each section to determine PCB concentrations. Additionally, ceiling coating samples were collected to determine the presence of PCBs.

4.1.6 Other Building Materials (PCBs)

Historically (i.e. 2009, 2010, and 2011), samples were collected from other building materials, such as roof membrane, flashing, window glaze and caulking, to determine concentrations of PCBs, lead, and asbestos. The results of these evaluations are shown in Appendix B Figure 4. Based on historical results, additional samples of these materials were collected to determine the presence of PCBs as described below.

Interior Steel

Interior steel (columns and roof trusses) is coated with paint. Historical sampling was not conducted. Therefore, the 2015 SAP indicated sampling of each of these materials to determine whether PCBs are present at concentrations that exceed 50 PPM.

Expansion Joints

Expansion joints are located in the concrete floor slab; expansion joints have not been observed in the walls or ceiling. Historical samples indicated PCBs are present at up to 984 PPM at two locations. Based on these data, additional samples were collected from each identified expansion joint to determine whether PCBs are present at concentrations that exceed 50 PPM.

Roofing Material

Two historical roof membrane samples were collected to determine the presence of PCBs; PCBs were not observed. Based on historical operations, a source that may result in PCBs present at concentrations that exceed 50 PPM was not identified. Therefore, the roof was divided into eight equal sections; one sample of the roofing membrane was collected from the center of each section to determine PCB concentrations.

Window Caulk and Glaze

Two window caulk and two glaze samples were collected from a roof monitor in 2009 and indicated the presence of PCBs in one glaze sample at a concentration of 14.1 PPM (Appendix B Figure 5). There are additional windows on the west, north, and east facades of the building. Historical caulk and glaze samples were collected from these windows. Based on this preliminary screening; additional caulking and glazing samples were collected to determine the concentration of PCBs. Therefore, the 2015 SAP indicated that caulking and glazing samples associated with two rows of windows on the building walls would be sampled at an approximate frequency of one sample per 50 feet and analyzed to determine the concentration of PCBs. Additionally, caulk and glaze samples were collected from the roof monitors and analyzed to determine the presence of PCBs.

Sumps

Approximately 15 sumps are present within the building. Each sump was identified, attempted to be accessed, and inspected. If debris or sludge was identified in the sumps, samples were collected to determine concentration of PCBs.

Overhead piping

Overhead piping, potentially used within former processes was identified. Piping that was likely associated with potable water, electric, and gas were identified and appropriately marked. Remaining pipes were accessed to determine contents and samples collected as required to determine concentration of PCBs.

4.2 HISTORICAL AND CURRENT LEAD SAMPLING

This section summarizes the historical analytical results of building materials and describes the rationale for additional sampling proposed in the 2015 SAP

As shown in Appendix B Figures 3, 4, and 5, sampling completed in 2009 indicated the potential presence of TCLP lead in building materials, which are described below. Methods to collect samples from walls in 2009 included using a masonry chisel to remove portions of the walls; sampling methods to collect samples of the concrete floor and roof deck included use of a two-inch concrete core bit. Based on results of historical sampling, the 2015 SAP indicated additional sampling was warranted. Total lead was analyzed for brick walls, CMU, and roof deck samples to determine whether masonry material could be stockpiled on site and used for future backfill material or would require disposal.

Total lead samples were collected and transported to Pace for analysis using USEPA SW846 Method 6010C by GC/ECD. TCLP lead samples were collected and analyzed by Pace by TCLP 1311.

4.2.1 Floor Slab (TCLP lead)

During historical sampling, approximately 54 concrete floor slab samples were collected from 10 locations at 0.5 to 1 in. depth intervals and analyzed to determine the concentration of TCLP lead (shown in Appendix B Figure 5). TCLP lead results of concrete core samples at each location were significantly less than 5 PPM. Additional samples were collected in 2015 to determine TCLP lead concentrations in the concrete floor slab; total lead samples were collected at select locations.

4.2.2 Masonry (TCLP and Total Lead)

Building materials consisting of masonry material (i.e., brick and CMU from walls, concrete from the roof deck) were evaluated to determine disposal requirements. Samples of wall brick, CMU and roof deck concrete were collected to determine building materials that contain concentrations of TCLP lead that require disposal as a NYS hazardous waste. Based on these results of historical sampling of masonry materials (described below), additional samples were collected as described in the 2015 SAP (proposed sampling locations shown Appendix B Figure 7).

Wall Paint and Brick, and CMU (Walls)

Screening samples from interior brick walls were previously collected at approximately 15 locations to determine concentrations TCLP lead. These samples were generally collected at a height of approximately four feet above the finished floor. At three locations, additional samples were collected following washing the wall surface and then removing paint at locations adjacent to the initial sampling location and analyzed for concentrations of total lead. TCLP lead concentrations exceeded 5 PPM at four locations. Based on these exceedances, additional samples were collected as described in the 2015 SAP to determine building materials that contain concentrations of TCLP lead greater than 5 PPM for the

purposes of determining whether special handling during demolition is required. Additionally, total lead samples were collected

Historical samples of CMU present in openings previously occupied by windows and overhead doors and the wall at the midpoint of the building, which were likely infilled post World War II and are generally unpainted, were not collected. Based on this, the presence of TCLP lead at concentrations that exceed hazardous thresholds is unlikely. Therefore, four samples were collected from the interior CMU wall in the middle of the building and six samples were collected from CMU locations previously occupied by windows and overhead doors.

Ceiling Coating and Concrete Roof Deck

Historical roof cores were collected from the ceiling (defined as the underside of the roof deck) at three locations and analyzed for the presence of TCLP lead; TCLP lead was not detected. Based on historical operations, a source that may result in TCLP lead present at concentrations that exceed 5 PPM was not identified.

As was described in the 2015 SAP, an additional eight samples of the concrete roof deck were collected. Based on historical operations, a source that may result in TCLP lead present on the ceiling at concentrations that exceed 5 PPM was not identified. Therefore, the roof was divided into eight equal sections; one sample of the underside of the roof deck was collected from the center of each section to determine TCLP lead concentrations. Additionally, ceiling coating samples were collected to determine the presence of TCLP lead.

4.2.3 Other Building Materials

Interior Steel

Interior steel (columns and roof trusses) is coated with paint. Historical sampling was not conducted. Therefore, the 2015 SAP indicated sampling of each of these materials to determine whether TCLP lead is present at concentrations that exceed 5 PPM.

Expansion Joints

Expansion joints are located in the concrete floor slab; expansion joints have not been observed in the walls or ceiling. Historical samples indicated TCLP lead at approximately 2.3 PPM at two locations. Based on this, samples were collected from select identified expansion joints to determine proper disposal requirements.

Window Caulk and Glaze

Two window caulk and two glaze samples were collected from a roof monitor in 2009 and indicated the presence of TCLP lead at concentrations of up to 50.4 PPM. Based on this result, additional caulk and glaze samples were collected from windows within the roof monitors and exterior walls to determine concentration of TCLP lead.

Sumps

Approximately 15 sumps are present within the building. Each sump was identified, attempted to be accessed, and inspected. If debris or sludge was identified in the sumps, samples were collected to determine concentration of TCLP lead.

Overhead piping

Overhead piping, potentially used within former processes was identified. Piping that was likely associated with potable water, electric, and gas were identified and appropriately marked. Remaining pipes were accessed to determine contents and samples collected as required to determine concentration of residual material containing TCLP lead.

4.3 HISTORICAL AND CURRENT ASBESTOS SAMPLING

Historical ACM samples were collected from roof membrane and flashing, roof monitor window caulk and glaze, wall window caulk and glaze, and floor expansion joint material. Results indicated the presence of ACM in roof flashing, monitor window caulk. ACM was not detected in the roof membrane, floor expansion joint caulk, or window glaze. Based on this information, additional ACM samples were collected of the roof membrane and window caulk and glaze to determine the limits of ACM. Additional materials that may contain ACM were sampled as they were identified. All sampling was conducted by Paradigm Environmental Services, Inc. by a certified asbestos inspector.

Asbestos sample analyses were conducted using Polarized Light Microscopy with dispersion staining (PLM-DS) in accordance with the New York State ELAP 198.1 Method. Transmission Electron Microscopy (TEM) analysis was performed to address New York State Department of Health (NYSDOH) ELAP requirements, which require re-analysis of non-friable, organically bound (NOB) samples with asbestos reported as non-detected (ELAP Method 198.4).

4.4 BUILDING DECOMMISSIONING ASSESSMENT

A Building Decommissioning Assessment (BDA) was performed in 2015 to identify additional materials that will require special handing by a contractor prior to demolition.

5. Results, Interpretation, and Disposal Strategy

Based on the results of the historical sampling and evaluation of operations within Building 52 during wire manufacturing operations; additional sampling was identified in the 2015 SAP. The building slab and superstructure were further evaluated to determine the concentration of PCB, TCLP lead, and asbestos to determine appropriate disposal, segregation, and construction sequencing requirements:

- Floor Slab
- Masonry
  - Wall Paint and Brick and CMU (Walls)
  - Ceiling Coating and Concrete Roof Deck
- Other Building Materials
  - Interior Steel
  - Expansion Joints
  - Roofing Material
  - Window Caulk and Glaze
  - Sumps and Drains
  - Overhead piping

More than 800 samples, including historical building material samples, were analyzed to evaluate the disposition of Building 52. Approximately 733 total samples (which includes 67 ACM samples, 52 field duplicates, 39 equipment blanks, and 43 MS/MSDs) were collected and analyzed between December 2015 and April 2016 to evaluate potential demolition and disposal requirements for debris resulting from the demolition of Building 52.

Below is a summary of results, interpretation of data, and proposed demolition and disposal scenarios of building materials resulting from demolition of Building 52.

5.1 FLOOR SLAB

As described above, historical concrete samples indicated the presence of PCBs greater than 50 PPM in the top 1 to 2 in. at two locations (as shown in Appendix B Figure 5). Based on these data, additional sampling was completed in 2015 and 2016 to evaluate the presence and delineate the extent of PCBs greater than 50 PPM for the purposes of completing an IRM removal prior to demolition of Building 52. Details of sampling results, interpretation of the data, the proposed, and transport and disposal of resulting waste are described in the sections below.

5.1.1 Results

PCBs

In December 2015, 21 floor slab investigation locations were completed based on historical sampling results and likely wire manufacturing equipment locations as described in the 2015 SAP. As is indicated in the 2015 SAP, select sampling locations were modified based on field conditions. Two additional sampling locations were added based on initial sampling results (FLR-CON-41) and the presence of a less than 90 days, hazardous waste storage area (FLR-CON-39), which is used to store hazardous waste generated by all site activities including the PDI and the IRM DNAPL recovery prior to proper shipment

and disposal at an off-site facility. The concentration of PCBs in concrete within the hazardous waste storage area is less than 50 PPM indicating that current management of this area has not resulted in a release of PCBs.

Based on the results of concrete slab sampling, six locations exhibited concentrations of PCBs that exceeded 50 PPM and required further delineation as described below. All samples were collected in accordance with §761.286.

- FLR-CON-21 (originally completed in 2009; resampled in 2015) (Concrete Area A)
- FLR-CON-26 (originally completed in 2009; resampled in 2015) (Concrete Area B)
- FLR-CON-15 (Concrete Area C)
- FLR-CON-16 (Concrete Area D)
- FLR-CON-2 (Concrete Area E)
- FLR-CON-4 (Concrete Area F)

Once areas that contain PCBs greater than 50 PPM were identified, the horizontal extents were delineated based on requirements in §761.260 and §761.265 and the 2015 SAP. Initially, samples were collected on a grid interval of 1.5 meters to reduce the volume of concrete that required removal during the IRM. The extent of PCB remediation waste was able to be determined within several of the areas using this approach (Concrete Areas A, B, C and F). However, two areas were sufficiently large that the maximum allowable grid interval of 3 meters to characterize the cleanup area was used (concrete Areas D and E). A total of approximately 140 samples were collected and analyzed to complete delineation of areas that contain PCB remediation waste.

Once the horizontal extents of PCBs greater than 50 PPM were determined, sampling of the bottom 1 in. of concrete was completed in select locations. The requirements of §761.283 indicate the required spacing to verify cleanup is a grid interval of 1.5 meters. However, as described in Section 4.1.1.1.2 of this document, based on the limited ability of PCBs to migrate vertically or horizontally through concrete, sampling to confirm the vertical extent of remediation was conducted by collecting a concrete sample from the bottom 1 in. of the slab at 38 locations. Bottom sampling locations corresponded with concentrations of the top 3 in. that ranged between 53.3 to 23,100 PPM PCBs; 20 of the 38 bottom samples were collected at locations that corresponded with top 3 in. concentrations greater than 1,000 PPM PCBs. Three locations contained PCBs greater than 50 PPM in the bottom 1 in. The top and bottom results of these three sample groups are summarized below.

Sampling location	PCB Remediation Waste Area	Top 3 in. Result (PPM)	Corresponding Bot. 1 in. Result (PPM)
FLR-CON-204	E	1,170	107
FLR-CON-418	E	569	160
FLR-CON-225	D	14,400	135

Results of PCB concrete slab sampling are shown on Figures C.1 through C.3 and in Table C.1 and C.2.

Lead

Approximately 30 samples were collected to determine TCLP and total lead concentrations. The maximum concentration of TCLP lead and total lead was 0.18 PPM and 34.6 PPM, respectively. Therefore, TCLP lead concentrations are below the hazardous waste threshold; there are no federal or state disposal thresholds based on the concentration of total lead.

Results of TCLP lead concrete slab sampling are shown on Figure D.1 and in Table D.1. Results of total lead concrete slab sampling are shown on Figure E.1 and in Table E.1.

5.1.2 Interpretation and IRM

Based on the results of the sampling program, an IRM removal is required to reduce the potential of new releases to the environment during demolition activities. Six areas of the concrete will be removed prior to beginning building demolition based on sampling results described above. Removal areas are shown in Figure C.8 and a summary of actions resulting from sampling is provided in the table below.

Concrete Floor Locations	No. of top 3 in. Sampling Locations	No. of bottom sample locations	Total IRM Removal (SF)
Area A	12	0	50
Area B	9	0	25
Area C	14	2	125
Area D	74	27	3760
Area E	29	9	830
Area G	1	0	25
Total	**139**	**38**	**4815**

PCB remediation waste resulting from the IRM will be disposed in accordance with §761.61(a)(5)(B)(2)(iii) at Chemical Waste Management (CWM) Emelle, operated by Waste Management located in Emelle, Alabama or an alternate landfill permitted to accept PCB Remediation Waste. Upon completion of concrete removal activities, the areas will be backfilled with gravel, and covered with steel plates, or backfilled with asphalt or similar. Portions of the slab that do not require an IRM will remain in place. Due to the presence of PCBs in concrete greater than 10 PPM, additional delineation and removal of these areas may be required in the future to comply with future site (OU-1) remediation requirements set forth in the ROD.

As shown in the table below, sampling locations FLR-CON-318 and FLR-CON-317 (Area E) and FLR-CON-301, FLR-CON-305, FLR-CON-113, and FLR-CON-312 (Area D) are proximate to bottom 1 in. sampling locations that indicate results greater than 50 PPM. With one exception (FLR-CON-301 at 40.6 PPM), the bottom 1 in. results of proximate locations are much less than 1 PPM and exhibit similarly high PCB concentrations in the top 3 in.

PCB Remediation Waste Area[1]	Sampling location	Top 3 in./ bot. 1 in. Result (PPM)	Sampling location	Top 3 in./ bot. 1 in. Result (PPM)
E	FLR-CON-204	1,170/107	FLR-CON-318 (located 5 ft. from FLR-CON-204)	23,100/0.371
E	FLR-CON-418	569/160	FLR-CON-317 (located 10 ft. from FLR-CON-418)	426/0.0741
D	FLR-CON-225	14,400/135	FLR-CON-301 (located 5 ft. from FLR-CON-225)	4,950/40.6
			FLR-CON-305 (located 5 ft. from FLR-CON-225)	2,560/0.195
			FLR-CON-113 (located 5 ft. from FLR-CON-225)	3,386/0.139
			FLR-CON-312 (located 5 ft. from FLR-CON-225)	95.8/0.0251

[1]See Figure C.8

Based on data of bottom 1 in. sampling results that exceeded 50 PPM as compared to proximate bottom 1 in. sampling locations with results less than 50 PPM, the bottom sampling at locations that exceed 50 PPM will be resampled during slab removal. Once portions of the slab that coincides with bottom 1 in. samples that exhibited concentrations of PCBs greater than 50 PPM are removed, the concrete slab will be turned over and a 1 in. sample collected and analyzed to determine the presence of PCB in the bottom portion of the concrete. If PCBs greater than 10 PPM are not observed (ROD requires removal of material greater than 10 PPM), then the vertical distribution of PCBs at this location has been established and additional sampling is not required. If PCBs greater than 10 PPM are observed, then the vertical distribution of PCBs at this location has not been established and soil sampling will be completed post demolition.

5.1.3 Demolition Approach and Disposal Strategy (Floor Slab)

Based on these results, the floor slab will be managed in the following way:

- Based on historical and current sampling, TCLP lead is not present at concentrations greater than 5 PPM and that will result in a waste stream that exhibits hazardous characteristic.
- Portions of floor slab containing PCB concentrations greater than 50 PPM will be removed prior to demolition and managed as a NYS hazardous and TSCA waste and disposed of as a hazardous waste at CWM Emelle, operated by Waste Management located in Emelle, Alabama or an alternate landfill permitted to accept PCB Remediation Waste.

- Upon removal of the concrete slab at locations FLR-CON-204, FLR-CON-418, and FLR-CON-225, the resulting slab will be turned over and a 1 in. diameter, 1 in. deep sample will be collected to determine whether PCBs are greater than 10 PPM are present in the bottom portion of the slab. If the concentrations are less than 50 PPM, then additional investigation locations will not be completed.
- Upon completion of concrete removal, the void created by concrete removal will be filled using gravel and/or asphalt. If a low permeability cover is not used as a surface completion, additional protective measures may be taken to eliminate intermixing of demolition debris with newly placed material.

- The remaining portions of the concrete slab contain PCBs less than 50 PPM. Upon completion of the building demolition and waste removal the slab will be washed, rinsed, and left in place.

5.2 MASONRY

As described above, limited screening level sampling was completed to determine the concentration of PCBs in masonry in 2009, which identified the presence of PCB less than 50 PPM. In order to confirm this limited screening, additional sampling was completed in 2015 to evaluate whether PCBs greater than 50 PPM are present and delineate these areas for the purposes of appropriately segregating waste streams resulting from the demolition of Building 52 as required. Details of sampling results, interpretation of the data, and the proposed transport and disposal of resulting waste are described in the sections below.

5.2.1 Wall Paint and Brick, and CMU (Walls)

5.2.1.1 Data Summary and Evaluation (Wall Paint)

Nine samples of loose paint associated with interior brick and one sample of loose paint associated with exterior brick were collected and analyzed to determine the presence of PCBs and TCLP lead (not including field duplicates or MS/MSD). Below is a discussion of results associated with PCB and lead sampling.

PCBs

Seven interior paint samples indicated the presence of PCBs greater than 50 PPM with concentrations that ranged between 53.6 PPM to 316 PPM; the one exterior paint sample did not contain PCBs at concentrations greater than 50 PPM. Interior and exterior brick samples (described above) were collected and analyzed at locations which coincided with painted surfaces. Historical documents do not indicate when paint was applied to the walls. Based on the range of PCB concentrations observed in the paint samples and the much lower concentration of PCBs observed in brick samples (with paint present in the samples), PCBs observed in the paint indicate that PCBs are present due to the manufacturing process of the paint. The EPA considers paint containing PCBs greater than 50 PPM to be a PCB bulk product, which can be managed as a non-hazardous waste. However, New York State considers PCBs contained in any material at concentrations greater than 50 PPM to be a hazardous waste. Therefore, paint resulting from scraping prior to demolition will be managed as a hazardous waste.

Results of PCB paint sampling are shown on Figure C.6 and in Table C.6.

Lead

Five of the nine interior wall paint samples contained TCLP lead greater than 5 PPM (ranged between 17.5 and 78.3 PPM) while remaining samples (including exterior wall paint) contained TCLP lead concentrations that ranged between 0.202 and 2.20 PPM. Based on these results, paint chips resulting from scrapping may be hazardous or nonhazardous based on lead concentrations. Upon completion of scrapping, resulting drums of paint chips may be sampled to characterize the waste to determine appropriate disposal requirements.

Results of TCLP lead paint sampling are shown on Figure D.4 and in Table D.4.

5.2.1.2 Data Summary and Evaluation (Brick and CMU Walls)

As was described in the 2015 SAP, samples were collected from masonry materials, which included wall brick, concrete block, and the concrete roof deck. Wall samples were generally collected at approximately: 0.5 ft., 4 ft., 11 ft., and 22 ft. AFF at locations that contained and did not contain paint. Eighty-four samples of interior brick and CMU and 12 samples of exterior brick were collected to determine the concentration of PCBs and TCLP lead (not including field duplicates or MS/MSD). Below is a discussion of results associated with PCB and lead sampling.

PCBs

Exterior Brick
Exterior brick samples contained PCBs at concentrations that ranged between ND and 0.122 PPM.

Interior Brick
Interior brick locations WAL-INB-001 and WAL-INB-013 contained PCBs greater than 50 PPM (62.4 PPM and 133.1 PPM at approximately 0.5 ft. AFF), one interior brick sample contained PCBs at a concentration of 24.6 PPM (22 ft. AFF), and the remaining 70 samples contained PCBs at concentrations that ranged between ND and 9.79 PPM). Based on the proximity of interior brick sampling locations that exhibit concentrations of PCBs greater than 50 PPM to the floor, the presence of PCBs greater than 50 PPM in wall brick sample is likely to be a result of a spill, release, or other unauthorized disposal. Once areas that contain PCBs greater than 50 PPM were identified, the horizontal extents were delineated based on requirements in §761.260 and §761.265 and was provided by the 2015 SAP.

Based on these requirements, brick samples were collected 5 ft. above and 5 ft. to the left and right of the initial sample indicating the presence of PCB remediation waste. The sample located 5 ft. below the initial sample, was completed on the floor. Prior to demolition, portions of the wall and concrete associated with PCB remediation waste that coincides with sampling conducted at WAL-INB-001 and WAL-INB-013 will be removed and managed as a NYS hazardous waste and TSCA waste.

Results of PCB masonry sampling are shown on Figures C.1 through C.3 and in Table C.3.

Lead

An evaluation, using a 90% confidence interval (CI), of the resultant TCLP lead concentration for comingled brick and masonry material was completed using the sampling and statistical analysis procedures as described in Chapter Nine of the SW-846 Compendium. This evaluation indicated that

the concentration of TCLP lead in masonry demolition debris would be below 1.51 PPM, within a 90% CI. Based on this evaluation, demolition of the brick walls will not result in a hazardous waste.

Results of TCLP lead masonry sampling are shown on Figure D.2 and in Table D.2.

ACM

Roof tar was identified on the brick of the west side of Building 52 at the location where the former Building 52B was attached to Building 52. Testing results of roofing tar located on the west wall of Building 52 indicates the presence of asbestos.

Asbestos is not expected to be contained within brick; samples were not collected.

Results of ACM roofing tar sampling are shown on Figure F.1 and in Table F.1.

Evaluation or Sufficiency of Sampling Frequency

Brick that contains PCBs at concentrations greater than 50 PPM will be removed prior to demolition. Therefore, in order to determine the sampling frequency of remaining brick that will be managed as a bulk PCB waste, sample locations that exhibit concentrations greater than 50 PPM (WAL-INB-001 and WAL-INB-013) were removed from the data set. Once these samples were removed from the data set, the resulting interior and exterior wall sampling frequency was approximately one sample per 18 CY, which is sufficient to characterize the resulting waste stream; additional waste characterization samples will not be collected.

5.2.1.3 Demolition Approach and Disposal Strategy (Walls)

Based on these results, masonry associated with walls will be managed as follows:

- Lead is not present in brick or CMU walls at concentrations that will result in a waste stream that exhibits hazardous characteristics.

- Portions of wall brick and floor slab containing PCB concentrations greater than 50 PPM will be removed prior to demolition and managed as a NYS hazardous and TSCA waste and disposed of as a hazardous waste at CWM Emelle, operated by Waste Management located in Emelle, Alabama or an alternate landfill permitted to accept PCB Remediation Waste.

- Loose or peeling paint will be scraped prior to beginning demolition activities to reduce potential for worker and community exposure. Additional sampling will be conducted to characterize the waste to determine appropriate disposal requirements. However, for planning purposes, due to the presence of PCBs greater than 50 PPM and TCLP lead present greater than 5 PPM in approximately 50% of paint samples analyzed, this material may require transport and disposed of as a hazardous waste at CWM Emelle, operated by Waste Management located in Emelle, Alabama or an alternate landfill permitted to accept PCB Remediation Waste. If the waste characterization profile indicates the paint does not contain PCBs or lead at concentrations considered hazardous within New York State, then paint chips may be disposed of as a PCB bulk product waste at High Acres operated by Waste Management located in Fairport, New York.

- Roofing tar located on the west side of Building 52 will likely be abated prior to demolition; the actual disposal strategy will be designed by the contractor based on 12 NYCRR Part 56 (NYSDOL).

- Portions of the brick walls, which contains bonded paint, that do not exhibit concentrations of PCBs greater than 50 PPM or TCLP lead greater than 5 PPM will be managed as a PCB bulk product waste consistent with EPA guidance and transported and disposed at High Acres Landfill operated by Waste Management located in Fairport, New York.

- Based on the statistical evaluation completed in accordance with Chapter 9 of SW-846, lead is not present within the brick at concentrations that will result in a waste stream that exhibits hazardous characteristics.

5.2.2 Ceiling Coating and Concrete Roof Deck

5.2.2.1 Data Summary and Evaluation (Ceiling Coating)

Ten samples of a black coating, which is bonded to the ceiling, were collected and analyzed to determine the presence of PCBs and TCLP lead (not including field duplicates or MS/MSD). Below is a discussion of results associated with PCB and lead sampling.

PCBs

Concentrations of PCBs in the ceiling coating range between 16.87 to 492 PPM. Seven of the ten samples analyzed indicated the presence of PCBs greater than 50 PPM with concentrations that ranged between 58.5 PPM to 492 PPM. Roof deck samples (described below) were collected and analyzed at locations which coincided with the ceiling coating. Historical documents do not indicate when the ceiling coating was applied. Based on the range of PCB concentrations observed in the ceiling coating and the much lower concentration of PCBs observed in roof deck samples (with ceiling coating present in the sample), PCBs observed in the ceiling coating indicates that PCBs are present due to the manufacturing process of the coating. Based on these results, chips resulting from scrapping may be hazardous based on PCB concentrations.

Results of PCB ceiling coating sampling are shown on Figure C.7 and in Table C.7.

Lead

One of the ten ceiling coating samples contained TCLP lead greater than 5 PPM (11.6 PPM) while remaining samples contained TCLP lead concentrations that ranged between 0.0781 and 4.25 PPM. Upon completion of scrapping, resulting drums of paint chips may be sampled to characterize the waste to determine appropriate disposal requirements.

Results of TCLP lead ceiling coating sampling are shown on Figure D.5 and in Table D.6.

5.2.2.2 Data Summary and Evaluation (Roof Deck)

Eight samples of the underside of the roof deck were collected to determine the concentration of PCBs and TCLP lead (not including field duplicates or MS/MSD). Below is a discussion of results associated with PCB and lead sampling.

PCBs

Concentrations of PCBs in the roof deck ranged between ND and 206.6 PPM. One roof deck location contained in PCBs greater than 50 PPM (206.6 PPM), one roof deck sample contained PCBs at a concentration of 28.1 PPM, and the remaining six samples contained PCBs at concentrations that ranged between ND and 6.59 PPM). Based on this data, the presence of PCBs greater than 50 PPM in the roof deck sample is assumed to be a result of a spill, release, or other unauthorized disposal. Once an area containing PCBs greater than 50 PPM was identified, the horizontal extents were delineated based on requirements in §761.260 and §761.265 and the 2015 SAP. Remaining roof deck samples did not indicate the presence of PCBs greater than 50 PPM; the roof deck would not result in a hazardous or TSCA waste based on PCB concentrations.

Results of PCB roof deck sampling are shown on Figure C.7 and in Table C.7.

Lead

Results of roof deck sampling did not indicate the presence of TCLP lead greater than 5 PPM; the roof deck would not result in a hazardous waste based on TCLP lead concentrations.

Results of TCLP lead roof deck sampling are shown on Figures D.5 and in Table D.6.

ACM

Asbestos is not expected to be contained within this material; samples were not collected.

Sample Frequency

Once the sample containing PCBs greater than 50 PPM is removed from the data set, the resulting roof deck sampling frequency was one sample per 176 CY, which is sufficient to characterize the resulting waste stream; additional waste characterization samples will not be collected.

5.2.2.3 Demolition Approach and Disposal Strategy (Roof Deck and Ceiling Coating)

Based on these results, the roof deck will be managed in the following way:

- Lead is not present in the roof deck at concentrations that will result in a waste stream that exhibits hazardous characteristics.
- The portion of the roof deck containing PCB concentrations greater than 50 PPM will be removed prior to demolition and managed as a NYS hazardous and TSCA waste and disposed of as a hazardous waste at CWM Emelle, operated by Waste Management located in Emelle, Alabama or an alternate landfill permitted to accept PCB Remediation Waste.
- Loose or peeling ceiling coating may be scrapped prior to beginning demolition activities to reduce potential for worker and community exposure. Additional sampling will be conducted to characterize the waste (scraped ceiling coating) to determine appropriate disposal requirements. However, for planning purposes, due to the presence of PCBs greater than 50

PPM in ceiling coating samples, this material (scraped ceiling coating) will likely be managed as a NYS hazardous waste transported and disposed of at CWM Emelle, operated by Waste Management located in Emelle, Alabama. If the waste characterization indicates the ceiling coating does not contain PCBs or lead at concentrations considered hazardous within New York State, then the waste may be disposed of as a PCB bulk product waste at High Acres operated by Waste Management located in Fairport, New York.

- Portions of the concrete roof deck, which contains bonded ceiling coating, that do not exhibit concentrations of PCBs greater than 50 PPM or TCLP lead greater than 5 PPM, will be managed as a PCB bulk product waste and transported and disposed at High Acres Landfill operated by Waste Management located in Fairport, New York.

5.3 OTHER BUILDING MATERIALS

In addition to building materials described in previous sections, several additional material types were identified as potentially containing concentrations of PCBs or lead that may require transport and disposal as a hazardous waste. Details of the materials and sampling are provided below.

5.3.1 Interior Steel

Building 52 contains painted interior steel columns and steel roof trusses overhead supporting the roof deck. Below is a discussion of results associated with PCB and lead sampling.

5.3.1.1 Data Summary and Evaluation (Steel Paint)

Twenty samples of paint applied to interior steel columns and steel roof trusses were collected and analyzed to determine the presence of PCBs and TCLP lead (not including field duplicates or MS/MSD). Samples were collected throughout the building from multiple heights.

PCBs

Nineteen interior steel column and steel roof truss samples indicated the presence of PCBs greater than 50 PPM with concentrations that ranged between 86.3 PPM to 325 PPM. Based on the narrow range of PCB concentrations observed and the wide distribution of sample locations, PCBs observed in the paint indicates that PCBs are present due to the manufacturing process of the paint and will become a PCB bulk product waste as a result of the demolition process.

Results of PCB paint sampling are shown on Figure C.6 and in Table C.6.

Lead

Twenty interior steel column and steel roof truss samples indicated the presence of TCLP lead greater than 5 PPM (ranged between 12.7 and 111 PPM). Based on these results, loose paint scrapped prior to demolition will be managed as a hazardous waste. Paint applied to interior steel would not result in interior steel becoming a characteristically hazardous waste.

Results of TCLP lead sampling are shown on Figure D.4 and in Table D.5.

ACM

Asbestos is not expected to be contained within this material; samples were not collected.

5.3.1.2 Demolition Approach and Disposal Strategy (Steel)

Based on these results, interior steel will be managed in the following way:

- Loose or peeling paint will be scraped prior to beginning demolition activities to reduce potential for worker and community exposure. Additional sampling may be conducted to characterize the waste to determine appropriate disposal requirements. However, for planning purposes, due to the presence of PCBs greater than 50 PPM and TCLP lead present greater than 5 PPM in nearly all of paint samples analyzed, this material will likely be managed as a NYS hazardous and TSCA waste and disposed of as a hazardous waste at CWM Emelle, operated by Waste Management located in Emelle, Alabama or an alternate landfill permitted to accept PCB Remediation Waste. If the waste characterization profile indicates the paint does not contain PCBs or lead at concentrations considered hazardous within New York State, then paint chips may be disposed of as a PCB bulk product waste at High Acres operated by Waste Management located in Fairport, New York.

- Based on the presence of paint containing PCBs greater than 50 PPM, all interior steel with paint will be managed as a PCB bulk product waste.

5.3.2 Expansion Joints

Building 52 contains more than 1,500 feet of expansion joints that contain caulk in the concrete floor slab. Below is a discussion of results associated with PCB and lead sampling.

5.3.2.1 Data Summary and Evaluation (Expansion Joint)

Samples were collected at 18 expansion joint caulk locations and analyzed to determine the presence of PCBs (not including field duplicates or MS/MSD); nine expansion joint caulk samples were collected and analyzed to determine the presence of TCLP lead (not including field duplicates or MS/MSD).

PCBs

Seventeen expansion joint caulk samples indicated the presence of PCBs greater than 50 PPM with concentrations that ranged between 66.9 PPM to 3,040 PPM. Historically, PCBs were commonly used in manufacture of caulking material, which would result in a Bulk PCB Waste once removed. However, based on New York State hazardous waste rules, materials containing PCBs greater than 50 PPM are considered a hazardous waste. Therefore, based on exhibited concentrations of expansion joint caulk, this material would require disposal as a hazardous waste.

Results of PCB expansion joint sampling are shown on Figure C.4 and in Table C.4.

Lead

Four expansion joint samples indicated the presence of TCLP lead greater than 5 PPM (ranged between 5.14 and 71.5 PPM). Based on these results, expansion joint caulk may be hazardous or nonhazardous based on lead concentrations. Additional sampling will be conducted to characterize the waste to determine appropriate disposal requirements.

Results of TCLP lead expansion joint sampling are shown on Figure D.2 and in Table D.3.

ACM

Asbestos is not expected to be contained within this material; samples were not collected.

5.3.2.2 Demolition Approach and Disposal Strategy (Expansion Joints)

Based on these results, expansion joints will be managed in the following way:

- Due to the presence of PCBs greater than 50 PPM in the expansion joint caulk and the three samples containing TCLP lead greater than 5 PPM, additional sampling of caulk and removed concrete will be completed at five locations to characterize the resulting waste. Results may indicate that this material can be disposed of a PCB bulk product waste at High Acres operated by Waste Management located in Fairport, New York. If additional sampling is not conducted or if PCB and TCLP lead results indicates results greater than 50 PPM and/or 5 PPM, respectively, then the expansion joint and associated concrete will be managed as a NYS hazardous and TSCA waste and disposed of as a hazardous waste at CWM Emelle, operated by Waste Management located in Emelle, Alabama or an alternate landfill permitted to accept PCB Remediation Waste.

- Expansion joint caulk will be removed after completion of the demolition and prior to power washing the pad. This will be completed by cutting out the expansion joint plus 6 in. on either side of each expansion joint observed (~1,500 ft.).

5.3.3 Roofing Material

5.3.3.1 Data Summary and Evaluation (Roofing Material)

Eight roof membrane samples were collected and analyzed to determine the presence of PCBs and TCLP lead (not including field duplicates or MS/MSD), which supplemented Historical samples completed in 2009. Additionally, two roof flashing samples were collected in 2009 and analyzed for PCBs and TCLP lead.

PCBs

The maximum observed concentration of PCBs in the roof membrane resulting from 10 samples (current and Historical) was 4.17 PPM. PCBs were not detected in roof flashing material collected in 2009. Therefore, the roofing material is not a regulated waste based on PCB concentration.

Results of PCB roofing material sampling are shown on Figure C.7 and in Table C.7.

Lead

One roof membrane sample indicated the presence of TCLP lead greater than 5 PPM (9.33 PPM). TCLP lead concentrations of nine roof membrane samples ranged between ND and 4.15 PPM. TCLP lead was not detected in roof flashing material collected in 2009. In a demolition scenario, roofing material will likely be demolished as part of the roof demolition. Based on these results and the likely roofing material demolition strategy, the presence of TCLP lead at one location would not result in the waste stream becoming a characteristically hazardous waste due to the presence of lead.

Results of TCLP lead roofing material sampling are shown on Figures D.5 and in Table D.6.

ACM

Existing roof membrane asbestos samples (two) were supplemented with eight additional samples of roofing membrane to determine the presence of asbestos. Asbestos was not detected in any of the 10 samples collected.

Two flashing samples collected in 2009 contained asbestos. Additionally, roofing tar was observed and three samples were collected to determine the concentration of asbestos. Asbestos was detected in one of the three roofing tar samples.

Results of ACM roofing material sampling are shown on Figures F.1 and in Table F.1.

5.3.3.2 Demolition and Disposal Strategy (Roofing Material)

Based on these results, the roof flashing and tar will be managed as ACM. The abatement will be designed based on 12 NYCRR Part 56 (NYSDOL) by the contractor. Once the flashing and tar are abated, the remaining roofing membrane can be managed as a non-regulated waste as part of the roof demolition.

5.3.4 Window Caulk and Glaze

Windows are present in the roof monitor and on the perimeter walls of Building 52. Caulk and glaze samples were collected to determine the concentration of PCBs, TCLP lead, and asbestos.

5.3.4.1 Data Summary and Evaluation (Window Caulk and Glaze)

Results of PCB and TCLP lead sampling are discussed below.

PCBs

Approximately 83 window caulk and glaze samples were collected and analyzed from windows located around the perimeter of the building and within roof monitors to determine the presence of PCBs. Based on the results below, PCBs are present at concentrations that exceed 50 PPM within most monitor caulk locations. Window caulk and glaze are building materials that were commonly manufactured with PCBs and will become a PCB bulk product waste as a result of the demolition process. Below is a summary of PCB results from window sampling.

Media	No. of locations	No. of detections >50 PPM*	Range of detections
Monitor window caulk	14	13	42.7 - 133.7
Monitor window glaze	14	4	5.66 - 192.6
Wall window caulk	25	9	4.94 - 171.1
Wall window glaze	30	1	1.82 - 48.2

Results of PCB window caulk and glaze sampling are shown on Figure C.5 and in Table C.5.

Lead

Approximately 73 window caulk and glaze samples were collected and analyzed from windows located around the perimeter of the building and within roof monitors to determine the presence of TCLP lead. Based on the results below, TCLP lead is present at concentrations that exceed 5 PPM within more than 80% of samples collected from window caulk and glaze. Below is a summary of PCB results from window sampling.

Media	No. of locations	No. of detections >5 PPM	Range of detections (PPM)
Monitor window caulk	14	14	23.7 - 252
Monitor window glaze	14	13	4.9 - 146
Wall window caulk	25	18	0.04 - 146
Wall window glaze	30	24	0.84 - 115

Results of TCLP lead window caulk and glaze sampling are shown on Figures D.3 and in Table D.4.

ACM

Historical sampling in 2009 indicated the potential presence of ACM associated with window caulk and glaze. Therefore, approximately 34 window caulk and glaze samples were collected from windows on the building perimeter and on the roof monitors. Below is a summary of sampling results.

Media	No. of locations	No. of ACM detections	Range of detections (%)
Monitor window caulk	5	3	0 - 11
Monitor window glaze	2	0	0
Wall window caulk	15	11	0 - 14
Wall window glaze	17	0	0

Results of ACM window caulk and glaze sampling are shown on Figures F.1 and in Table F.1.

Sample Frequency

Based on the 2015 SAP, the proposed sampling frequency was one sample per 50 ft. of building length. This sampling frequency was achieved for PCBs and TCLP lead on the west and north sides of the building. Windows on the east side of the building were boarded up resulting in limited access conditions and a sampling frequency of one sample per 80 ft. of building length for PCBs and TCLP lead was achieved. Windows on the south side of the building were either infilled with CMU or did not contain caulk or glaze; samples were not collected from the south side of Building 52. Based on 12 NYCRR Part 56 (NYSDOL), one sample per material type is required to determine the presence (or two samples per material type to determine the absence) of ACM resulting in a lower required frequency of samples collected. Based on data obtained, an adequate number of samples were collected to determine the waste characteristics and disposal strategy.

5.3.4.2 Demolition Approach and Disposal Strategy (Window Caulk and Glaze)

The final demolition and disposal strategy for the windows will be determined by the contractor based on 12 NYCRR Part 56 (NYSDOL) (for ACM abatement), NYS hazardous waste regulations, and TSCA. Based on the presence of ACM, the most stringent monitoring and worker PPE requirements for demolition of the windows are the asbestos rules (NYSDOL). Potential scenarios are described below.

- If the windows are demolished as part of the building demolition (i.e.. brick walls and roof), then demolition of Building 52 will be managed as an asbestos abatement. Elevated concentrations of TCLP lead will likely not result in a hazardous waste due to the volume of brick and roof deck. However, due to the presence of PCBs in the caulk and glaze, the waste will be disposed of as a PCB bulk product waste.

- If the windows are abated prior to demolition of the building, then the resulting waste stream (windows) will likely be hazardous due to the presence of TCLP lead greater than 5 PPM.

5.3.5 Sumps and Drains

Fifteen sumps/vaults were identified within Building 52 that may have been used to support manufacturing processes (locations shown in Appendix G, Figure G.1). Each accessible sump/vault was evaluated to determine the presence of residual materials that may contain PCBs or lead as discussed below. Floor drains (will be plugged during demolition activities) were not accessed.

5.3.5.1 Data Summary and Evaluation (Sumps)

Fifteen sumps were evaluated, two of which contained sufficient material that could be sampled; one sump (FLR- SMP-008) contained PCBs at a concentration of 218 PPM. TCLP lead results of samples collected from each sump were less than 5 PPM. The remaining sumps were either welded shut, were filled with gravel, or were filled with water.

Results of PCB sump residual sampling are shown on Figures C.4 and D.2 and in Table C.4 and D.3.

5.3.5.2 Demolition and Disposal Strategy (Sumps)

Prior to demolition of the building, sumps containing material containing PCBs greater than 50 PPM will be removed and cleaned. The resulting waste stream may be managed as a NYS hazardous and TSCA waste and disposed of as a hazardous waste at CWM Emelle, operated by Waste Management located in Emelle, Alabama or an alternate landfill permitted to accept PCB Remediation Waste. Water contained within sumps will be removed and the sumps inspected to determine whether residual wastes are present. If residual wastes are present, samples will be collected and analyzed to determine PCBs and TCLP lead concentrations. Waste water will be characterized and disposed. Prior to demolition, sumps may be covered with the lid currently in place, filled with gravel and covered during demolition, or backfilled with concrete, cold patch or similar. Floor drains will be appropriately plugged prior to demolition.

5.3.6 Overhead Piping

Overhead unpainted piping, potentially used within former processes, was identified and evaluated to determine whether residual PCBs are present. Pipes that were likely associated with storm water from roof drains, potable water, electrical conduit, or steam were identified as such and not further evaluated. Remaining pipes were accessed to determine whether residual material containing PCBs is present as described below.

- Approximately five pipes were identified as potentially being part of the Historical manufacturing process. Each pipe was evaluated and determined to be open to atmosphere and not under pressure.

- A reciprocating saw was used to cut a “V” notch in the pipes and a Mini-Rae 5 gas meter was used to assess the air quality inside the pipe (O2, CO, H2S, LEL, and VOCs), which resulted in levels that indicated inert conditions.

- The pipes were visually inspected to determine that residual material or liquids are not present.

Results of this evaluation indicated that residual liquids or sludges were not present in the pipes and, thus, samples were not collected. Prior to or during demolition, overhead pipes will be either disposed of or recycled.

5.3.7 Other Waste Streams

The Building Decommissioning Assessment (BDA) identified additional materials that will require special handling. Materials identified include Universal Wastes, unknown wastes, gas cylinders, batteries, and debris. These materials will be characterized as required by the contractor and appropriately disposed. A waste inventory resulting from completion of the BDA are shown in Appendix J.

5.4 ASBESTOS CONTAINING MATERIAL

In addition to materials described above, additional materials and equipment located within Building 52 were evaluated to determine the presence of asbestos.

5.4.1 Data Summary and Evaluation (Other ACM)

In addition to window caulk and glazing samples discussed in Section 4.3.4 of this document, samples were collected of additional building materials that were suspected to contain asbestos. A summary of materials tested and results are provided in the table below.

Media	No. of locations	No. of ACM detections	Range of detections (%)
Drywall and spackle	7	0	0
Overhead crane panel insulation	3	3	67-80
Overhead crane electrical box transite	2	2	23-27
Crane electrical box wire	2	0	0

Additionally, brakes on the overhead crane and transite panels potentially located in electrical boxes throughout the building on roof trusses could not be accessed. These materials were identified as potentially containing asbestos and will need to be evaluated prior to demolition.

Results of ACM sampling are shown on Figures F.1 and F.2 and in Table F.1.

5.4.2 Demolition and Disposal Strategy (Other ACM)

Based on these results, materials listed above and, if identified, similar materials will be managed as ACM. Abatement of these materials will be designed based on 12 NYCRR Part 56 (NYSDOL) by the contractor.

5.5 DISPOSAL STRATEGY SUMMARY

As described above, following waste streams have been identified with associated recommended disposal strategy as described in the table below.

Media	**Pre demolition or demolition action**	**Waste type**	**Disposal location**
Concrete floor slab	(1) Remove portions of concrete slab greater than 50 PPM prior to demolition (2) Leave remaining portions of slab in place	PCB remediation waste	CWM; Emelle, AL or similar
Masonry walls with bonded paint	(1) Remove portions of brick walls greater than 50 PPM prior to demolition (2) Demolish with bonded paint	(1) PCB remediation waste (2) Bulk PCB product waste	(1) CWM; Emelle, AL or similar (2) High Acres; Fairport, NY

Media	Pre demolition or demolition action	Waste type	Disposal location
Roof deck with bonded coating	(1) Remove portions of roof deck greater than 50 PPM prior to demolition (2) Demolish remainder of roof deck with bonded paint	(1) PCB remediation waste (2) Bulk PCB product waste	(1) CWM; Emelle, AL or similar (2) High Acres; Fairport, NY
Interior paint and ceiling coating chips	Scrape loose paint and coating and place in drums, collect samples to complete waste profile	(1) If characterization indicates PCBs<50 PPM, TCLP lead <5 PPM, not regulated (2) If characterization indicates PCBs>50 PPM, TCLP lead >5 PPM, hazardous	(1) CWM; Emelle, AL, or similar, if hazardous (2) High Acres; Fairport, NY if not regulated
Interior steel	Dispose	Bulk PCB product waste	High Acres; Fairport, NY
Expansion joints	Cut out 6'' in each side of joint, collect samples to complete waste profile	(1) If characterization indicates PCBs<50 PPM, TCLP lead <5 PPM, not regulated (2) If characterization indicates PCBs>50 PPM, TCLP lead >5 PPM, hazardous	(1) CWM; Emelle, AL, or similar, if not regulated (2) High Acres; Fairport, NY if hazardous
Roofing material	Remove flashing and roofing tar; demo remaining portions of roofing materials	ACM/Non-regulated	High Acres; Fairport, NY
Window caulk and glaze	Contains ACM, abatement TBD by asbestos contractor	Bulk product/ACM	High Acres; Fairport, NY
Residuals in sumps	Remove prior to demo, fill sump	PCB remediation waste	CWM; Emelle, AL or similar
Overhead piping	Recycle or demo with building	Non-regulated	High Acres; Fairport, NY
ACM	Abatement TBD by asbestos contractor	ACM	High Acres; Fairport, NY

6. Quality Assurance and Data Validation

The information below summarizes sample quality assurance sampling and third party validation.

6.1 QUALITY ASSURANCE

Samples were collected using equipment and procedures described in the 2015 SAP. Sample containers were properly labeled, with sampling records maintained and pertinent information transcribed to chain-of-custody forms. Sample bottles were stored in appropriate containers prepared by the laboratory.

Field Quality Assurance/Quality Control (QA/QC) samples were collected during sampling which included field duplicate samples and matrix spike/matrix spike duplicate samples, trip blanks, and field equipment blanks. Blind field duplicate samples were collected to evaluate matrix interference and sampling and analytical precision of analyses. Field duplicate and MS/MSD sampling frequency is described below.

Sample Media	No. of Samples	No. of Field Dups	FD Frequency	No. of MS/MSD	MS/MSD Frequency
Concrete slab	203	22	11%	14	7%
Brick walls/CMU	96	13	14%	10	11%
Window caulk	39	3	8%	3	8%
Window glaze	44	3	7%	4	9%
Expansion joint caulk	18	2	11%	1	6%
Paint	53	6	11%	6	11%
Ceiling coating	10	1	10%	1	10%
Roof deck	13	1	8%	2	15%
Roof membrane	8	1	13%	1	13%
Miscellaneous media	5	-	-	1	20%
Total	**489**	**52**	**11%**	**43**	**9%**

Field equipment blanks were collected to evaluate decontamination procedures and/or ambient sources of COC. Field equipment blanks were collected for non-disposable equipment once per day per field crew.

Laboratory analytical reports received and field data collected were added to the project specific database.

6.2 DATA VALIDATION

Select analytical results for environmental samples collected as part of Building 52 investigation were reviewed to determine the data usability in accordance with the procedures outlined in the project specific quality assurance project plan (QAPP). Consistent with the procedures used during the PDI, only samples that represented the extent of the removal action were reviewed; that is sample locations that exhibited concentrations of total PCBs greater than 50 PPM which will be removed were not

evaluated. Full validation is currently being completed by a third party validator (Environmental Standards, Inc. (ESI) and will be provided after complete.

During the data validation process, the following quality control/quality assurance (QA/QC) criteria were reviewed:

- Sample Data Reporting Format
- Holding Time and Sample Preservation Compliance
- Initial Calibration and Continuing Calibration Procedures
- Field/Method/Preparation Blank Sample Analysis
- System Monitoring Compound Recoveries (where applicable)
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Field Duplicate Sample Analysis

Below is a brief description of the procedures used in the evaluation and example corrective actions implemented if needed. The intent of this summary is to assist the data user with an understanding of the data qualification procedures implemented for their use in the evaluation of the current site conditions.

6.2.1 Sample Data Reporting Procedures

The reported results for each project sample were provided in a NYSDEC Analytical Services Protocol (ASP) Category B deliverables format and was provided to ESI. The data reporting format will be evaluated within each SDG and when found to be non-compliant with the project data quality objectives (DQOs) additional documentation will be requested and received from the laboratory as part of the validation process.

6.2.2 Holding Time and Sample Preservation Compliance

Maximum allowable holding times were measured from the time of sample collection to the time of sample preparation and analysis for each project sample. When a project sample was identified as analyzed after the expiration of the USEPA recommended maximum holding time, the reported sample results were qualified with a “J” as estimated and non-detected parameters were qualified with an “R” as rejected.

6.2.3 Initial Calibration and Continuing Calibration Procedures

Instrument calibration procedures for the analysis of project samples were evaluated based on the requirements of the National Functional Guidelines and/or prescribed by the laboratory standard operating procedures (SOPs) when not directly addressed by the guidelines.

In cases where target compounds were detected and reported using a RRF from a non-compliant continuing calibration standard, the result was flagged with a “J” and the reporting limits for non-detect samples were flagged with a “UJ” indicating that the reported values and reporting limits are estimated.

6.2.4 Equipment/Method Blank Sample Analyses

The presence of target compounds in associated equipment or method blank samples prepared and analyzed concurrently with the project samples was evaluated as part of each laboratory sample data package. If target compounds were reported at a concentration greater than the method detection limit (MDL) for organic parameter analyses the associated sample results were qualified.

In the case of method blank samples for organic parameter analyses, if the target compound detected was identified, an action level 5 times (5x) the blank contamination level was calculated. In accordance with EPA If the concentration contaminant detected in the associated project samples was between the MDL and the action level, the result was flagged with a "U". This data qualification indicates that the parameter was not present in the sample at a concentration greater than the adjusted reporting level.

6.2.5 System Monitoring/Surrogate Compound Recoveries

System monitoring/surrogate compounds were added to each sample prior to analysis of PCBs by EPA Method 8082 to confirm the efficiency of the sample preparation procedures. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results.

Generally, sample extracts prepared for the analysis of PCBs by EPA Method 8082 required dilution prior to analysis. This dilution procedure was implemented by the laboratory to enable quantification of the detected target analytes within the instrument calibration range. Where applicable, the laboratory qualified the reported results indicating the system monitoring compound recovery could not be calculated due to a sample extract dilution.

In cases where the surrogate recovery fell outside the laboratory acceptance criteria, the results greater than the reporting limit were qualified "J", and the reporting limits for non-detect samples were flagged "UJ", as estimated.

6.2.6 Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy were evaluated based on the laboratory control (LCS) and matrix spike (MS/MSD) sample analyses performed concurrently with the project samples. For LCS analyses, after the addition of a known amount of PCB into laboratory reagent water, the LCS was prepared and analyzed to confirm the ability of the analytical system to accurately detect and quantify the target analytes. For MS/MSD samples, after the addition of a known amount of PCB to the sample matrix, the MS/MSD samples were prepared and analyzed to confirm the ability of the analytical system to detect and quantify the target analytes within the sample matrix.

The percent recovery calculated for each target analyte was evaluated for compliance with the laboratory specific acceptance criteria. If the calculated percent recovery fell below the acceptance criteria, the result for the project samples analyzed concurrently was qualified with a "J" as estimated or "UJ" if reported as non-detect.

6.2.7 Field Duplicate Sample Analysis

Field duplicate samples were collected and analyzed to determine the precision for the sampling and analysis process through calculation of the relative percent difference (RPD) between the original and

duplicate sample PCBs concentrations. If the calculated RPD for analytes detected at concentrations greater than five times (5x) the reporting limit exceeded the RPD criteria, the reported results were qualified “J” as estimated.

6.2.8 Validation Completeness

Based on the iterative nature of the program completed during several mobilizations, sample validation is not complete. Upon completion of validation, updated tables will be provided. Any changes to conclusions or interpretations resulting from completion of the validation process will be provided as an addendum.

Appendix A

Building 52 Materials Sampling Plan

HALEY ALDRICH

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BUILDING 52 MATERIALS
SAMPLING AND ANALYSIS PLAN
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

By Haley & Aldrich of New York
Rochester, New York

For ARCO Environmental Remediation Limited
Naperville, Illinois

File No. 28612-339
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1. Introduction

Haley & Aldrich Inc. has been contracted by ARCO Environmental Remediation Limited (AERL) to support decommissioning and demolition activities of Building 52 located within the State Superfund Site #360022 at 1 River Street, Hastings-on-Hudson, New York (Site). Based on reviews of historical manufacturing processes at the site, polychlorinated biphenyls (PCBs) were used for electrical cable manufacturing during World War II; use of PCBs at the site was discontinued after World War II. Building material samples have been collected between 2006 and 2009 to screen for the presence of PCBs and lead for the purpose of preliminary waste stream management evaluations. The purpose of this Sampling and Analysis Plan (SAP) is to document historical sampling results and describe sampling frequencies and analyses that will be used to characterize building materials to determine options to appropriately manage materials resulting from demolition of Building 52. Specifically, the following will be evaluated:

- the presence of site contaminants of concern (COCs) at concentrations that exceed Record of Decision (ROD) criteria, hazardous levels, or TSCA requirements for removal prior to demolition (if applicable);
- the presence of asbestos containing material (ACM);
- building materials that contain PCB concentrations greater than 50 PPM; and
- the extents of PCBs within areas containing concentrations of PCBs greater than 50 PPM for the purposes of removal prior to demolition.

1.1 SITE SETTING AND BACKGROUND

The 28 acre site is located on the eastern bank of the Hudson River within the confines of the Hudson River Valley (Figure 1). The site was created by filling the Hudson River between the mid-1800s and the early 1900s with the placement of uncontrolled fill using a series of bulkhead walls of various construction types along the western edge. The ground surface at the Site is generally flat; ground surface predominantly ranges between approximately El. 3 and El. 11.

The site began industrial operations in the mid to late 1800s and contained several individual businesses that produced diverse products including lumber, plaster, conduit, pipe, electrical cables, and pavement. Two electrical cable companies merged in 1896 and formed the National Conduit & Cable Company, which constructed Building 52 in 1911. Mergers with other business over the next 20 years resulted in the site being owned by the Anaconda Wire & Cable Corporation, which was a subsidiary of the Anaconda Copper Mining Company.

Anaconda Wire & Cable Corporation was awarded a contract from the United States Navy (Navy) to manufacture electric cable for shipboard use during World War II. The contract required that shipboard cable be heat and flame resistant to withstand heat generated from conducting high electric currents and damage to vessels. PCB mixtures were used to manufacture these products during World War II; PCB use in the manufacturing of cable at the site ceased once the war ended.

After World War II, the Anaconda Wire & Cable Corporation produced electrical and television cable until it ceased operations in 1975. Atlantic Richfield purchased the Anaconda Wire & Cable Corporation in 1977, never operated the facility, and then sold the Site in 1978. In 1998, AR's affiliate, AERL, purchased the Site in order to facilitate environmental investigation and remediation efforts.

A more detailed description of Building 52 is presented in Section 2.0.

1.2 BUILDING 52 HISTORICAL PCB USE

Components required to produce electrical cables were generally delivered by barge to the northwest portion of the site. Components of the PCB mixture used to manufacture electrical cable at the site and within Building 52 were delivered in the form of Aroclors (delivered as a powder) and Halowax (delivered as a wax) compounds.

The product required for use in electrical cables was produced by mixing components, which resulted in a thick mixture (referred to as the "saturant"). Naphtha or toluene solvent was added to decrease the viscosity to allow placement of the saturant into transfer drums and trucks, pumping through piping, and into machinery to produce cables. Mixed saturant was then transferred to Building 52 for use in the manufacture of electrical cable. Once inside Building 52, saturant was delivered to production machines using an overhead piping network.

1.3 REGULATORY FRAMEWORK

Multiple environmental site investigations have been completed at the Site (including within and adjacent to Building 52), beginning in the mid-1990s, to determine the nature and extent of PCBs. Investigations determined that chemicals used in the manufacturing processes are present in off shore sediments and onsite soils including those adjacent to Building 52, beneath the floor slab (sub-slab), and on or within building materials.

Administratively, the Site has been separated into two Operable Units: OU-1 and OU-2. OU-1 is an upland area approximately 2,400 feet long by 500 feet wide. OU-2 is the area that extends westward into the Hudson River approximately 400 feet from the western OU-1 boundary, north into the Old Marina (approximately 300 feet north of the northwestern corner of OU-1), and approximately parallel to the southern property boundary. Bulkhead walls used to construct the site (as described in Section 1.1) establish the boundaries of OU-1 and some elements of the off-shore portion of the Site (OU-2).

1.3.1 Record of Decision

Based on historic investigations, the New York State Department of Environmental Conservation (NYSDEC) issued a Record of Decision (ROD) (March 2004) and a ROD Amendment (March 2012) to address onshore (OU-1), site wide impacts. The ROD and ROD Amendment requires Site-wide excavation of onshore soils containing PCBs greater than 10 ppm (parts per million), to a maximum depth of 9 to 12 feet and a two foot cover on the site. The United States Environmental Protection Agency (USEPA) has not delegated authority to states to address PCBs at concentrations that exceed 50 PPM. Based on this, the remedy may be subject to USEPA approval. PCB releases occurred at the site prior to 1978; therefore, remediation of PBCs at as found concentrations less than 50 PPM are regulated by NYSDEC. The 2004 NYSDEC ROD and 2012 NYSDEC ROD Amendment are included in Appendix A.

1.3.2 Consent Order

In November, 2013, NYSDEC and the Atlantic Richfield Company and AERL entered an Amended Order on Consent with NYSDEC which requires design and implementation of the environmental remedy to address PCBs and lead.

1.4 REMEDIAL DESIGN WORK PLAN

A Remedial Design Work Plan (RDWP) was completed and submitted to NYSDEC and was approved on 16 June 2014. The RDWP described a Pre-Design Investigation (PDI), which began in 2013, that included collecting information and soil and sediment samples required to support completion of an integrated remedial design to address OU-1 and OU-2. One component of a ROD compliant remedy includes submittal of a Risk Based Disposal application in accordance with 40 CFR 761.61 (c), which is planned to be submitted to the USEPA in 2015.

2. Building 52

Building 52 is currently a vacant, former industrial building located within the northeast corner of OU-1. This building is one of several factory buildings that once operated on the 28-acre Anaconda complex. All buildings except Building 52 have since been removed.

2.1 HISTORICAL USE

Below is a general overview of the history of use of Building 52. Additional information regarding the historical use of Building 52 can be reviewed in the Building 52 Alternatives report (Haley & Aldrich, 2014).

- Building 52 was constructed in 1911.
- Copper and brass components for munitions to support World War I efforts were manufactured prior to 1915 through approximately 1920.
- Used as auto dead storage (where automobiles or parts are stored for an indefinite length of time) between approximately 1920 and 1942.
- Fire-resistant electrical cable was manufactured under a US Navy contract between 1942 and 1945.
- Telephone wire was manufactured between 1945 and the early 1970s.
- Operations at the Hastings-On-Hudson Plant ceased in 1974 and the Site was acquired by Atlantic Richfield in 1978 through the purchase of copper mining assets from the Anaconda Company.

2.2 BUILDING DESCRIPTION AND DISPOSITION

Building 52 is a one-story building approximately 576 feet in length in the north-south direction and 170 feet in width in the east-west direction. Based on a review of historic building drawings, the building consists of a concrete slab floor underlain by wood piles.

The roof is supported by steel columns, which extend along the perimeter of the building on 16 foot centers within the east and west walls and on 17 foot centers in the north and south walls. A center row of columns, which provides roof support to steel trusses that extend east-west, is oriented north-south and are on 48 foot centers. The trusses support smaller steel infill beams, which support a cinder concrete roof slab. The exterior walls are masonry and do not appear to be load bearing.

Deterioration of building elements, (e.g., sawtooth roof monitors, brick pilasters, and the roofing system) has been observed and their condition continues to worsen. The roof membrane has significantly deteriorated over the past several years resulting in exposure of large sections of the concrete roof deck to solar radiation, precipitation, and freeze-thaw cycles further reducing structural

integrity. Additional information regarding the physical condition of Building 52 can be reviewed in the Building 52 Alternatives report (Haley & Aldrich, 2014).

2.3 HISTORICAL CABLE MANUFACTURING USING PCBS INSIDE BUILDING 52

Saturant was mixed in Building 55 and either stored temporarily until required or transferred directly to Building 52. Once inside Building 52, saturant was delivered to electrical cable components as required to meet the design specifications of the cable. Equipment used for this purpose is described below.

- Bull, intermediate, and fine wire felters – used to apply saturant impregnated asbestos to conductors and cables
- Wire planetary stranders – used to apply saturant impregnated fillers to conductors and cables
- Vertical and horizontal cabling machine – used to apply pre-saturated filler material to conductors and cables
- Drying Ovens – used to evaporate solvents from saturated insulation
- Braiders (wardwell and textile) – used to apply saturant to the braid of the conductor
- Royle Tubers – used to extrude rubber or plastic into tubes used as covers on conductors and cables insulation containing saturant.

All manufacturing processes described above ceased upon completion of World War II.

3. Scope of Work

The purpose of the work described herein is to characterize building materials to determine appropriate management during demolition as described below. Data collected as part of this evaluation will be used to evaluate, at a minimum, potential decontamination procedures and off-site disposal options. Sampling will be conducted to determine the following:

- the presence of site contaminants of concern (COCs) at concentrations that exceed ROD, hazardous levels, or TSCA requirements for removal prior to demolition (if applicable);
- the presence of asbestos containing material (ACM);
- building materials that contain PCB concentrations greater than 50 PPM; and
- extents of PCBs within areas containing concentrations of PCBs greater than 50 PPM for the purposes of removal prior to demolition.

On site reuse of demolition debris as future backfill may be evaluated in the future. A supplemental work plan would be submitted to NYSDEC for review prior to making a determination to reuse demolition debris as backfill material.

Figures 3, 4, 5, and 6 show existing sampling locations and analytical results of PCBs, total lead, TCLP lead, and asbestos contained within building materials.

Table I shows building components and approximate number of samples that will be sampled to determine the presence of PCBs, TCLP lead, total lead, and asbestos and the rationale for the samples. Details of sampling are provided below. The actual number, locations, and types of samples will be determined based on field conditions. All sampling will be completed in accordance with the Quality Assurance procedures located in Section 4.

3.1 CONCRETE FLOOR SLAB

There are three areas on the floor slab that contain PCBs at concentrations that exceed 50 PPM; two areas in the concrete floor slab and caulking material contained within a floor expansion joint. Additional samples of the concrete floor will be completed to delineate the extents of PCBs at the two locations in the floor slab containing PCBs greater than 50 PPM.

In 2009, 10 concrete core screening samples were collected at 0.5 to 1 inch intervals from unbiased locations to determine the presence of PCBs and TCLP lead. Sampling results identified PCB concentrations of up to 94 ppm in the top one inch of concrete. Lead was present in TCLP samples at concentrations significantly below hazardous levels. Figure 5 shows results of discrete PCB and TCLP lead samples collected from the floor slab. Additionally, as shown in Figure 6, composite floor samples were collected in 2006 from 15 locations with a maximum concentration of 12.7 PPM.

According to 40 CFR Part 761, disturbance of PCBs deposited prior to 1978 at concentrations greater than 50 PPM, would be classified as a "new release" (e.g., if chipped or damaged during demolition). PCBs greater than 50 PPM were observed in the floor slab at two locations. Additional areas that contain PCB concentrations that exceed 50 PPM may be present based on information about historic manufacturing equipment locations and PCB handling processes. Therefore, additional sampling is

required to delineate extents of existing areas that contain PCBs greater than 50 PPM and to characterize, and then delineate if required, the remaining slab to evaluate the potential presence of additional areas that contain PCBs greater than 50 PPM.

For the purposes of characterizing the floor slab, proposed biased sampling locations were identified based on review of historical equipment layouts of equipment that used PCBs during manufacturing (shown in Figure 7). The resulting sampling frequency, when considering biased (proposed samples) and unbiased samples collected in 2009 (existing samples), is 1 location per 3,200 square feet. This sampling frequency is adequate to characterize locations that may contain PCBs in the floor slab greater than 50 PPM.

Existing and newly identified areas of the concrete slab will be delineated as described in 40 CFR Part 761 to determine the extents of PCBs containing concentrations greater than 50 PPM. The purpose of this delineation is to identify and then remove and backfill areas of the slab that contain concentrations greater than 50 PPM prior to demolition to eliminate new releases. Removal of these areas will be completed in accordance with 40 CFR Part 761. Portions of the slab that do not require removal to eliminate new releases will remain in place. Based on historical TCLP lead results, additional samples will not be collected to determine lead concentrations. Additional delineation and removal of these areas may be required in the future to comply with remediation requirements set forth in the ROD.

Concrete samples will be collected using a device less than 3 cm in diameter advanced to a maximum depth of 7.5 cm below finished floor as is required by 40 CFR Part 761. Historical results indicate the highest concentrations of PCBs in are in the top three inches of the concrete floor slab. Composite samples of the entire slab thickness may also be collected. Sampling locations may require multiple penetrations in order to meet minimum laboratory sample size requirements.

3.2 MASONRY CHARACTERIZATION

Demolition debris consisting of masonry material (i.e., brick and CMU from walls, concrete from the roof deck) may be evaluated to determine disposal requirements. Samples of wall brick and CMU and roof deck concrete will be collected to determine building materials that contain concentrations of site COCs (which include PCBs, TCLP lead, and total lead) that require disposal as TSCA and/or and RCRA regulated hazardous wastes.

Sampling will be completed to evaluate disposal options for demolition debris. This sampling will be collected, at a minimum, a frequency (1 sample per 500 cubic yards) and distribution (based on historic processes) required to adequately identify and characterize materials for disposal. Additionally, paint chips or other coatings will be collected and analyzed to determine total lead and PCB concentrations.

If characterization samples indicate a hazardous waste, additional samples may be collected to delineate the area of exceedance for the purposes of appropriately segregating demolition debris.

3.2.1 Brick and CMU (Walls)

Screening samples from interior brick walls were previously collected at approximately 15 locations to determine concentrations of TCLP lead and PCBs. These samples were generally collected at a height of approximately four feet above the finished floor. At three locations, additional samples were collected upon washing the wall surface and then removing paint at locations adjacent to the initial sampling

location and evaluated for concentrations of PCBs and total lead. PCBs were detected at these locations prior to washing and removal of paint at concentrations that ranged between 0.069 and 2.1 PPM (Figure 4). Additional samples will be collected to determine building materials that contain concentrations of site COCs as described in Section 3.2 of this document.

Windows and overhead door openings were likely infilled post World War II using concrete masonry units (CMU). Due to the age of this material relative to cessation of PCB use at the site and the unlikelihood that PCBs and lead are present at concentrations that exceed decision thresholds in this material, CMU will be sampled at a frequency of two locations per wall. Resulting data will be used to evaluate waste disposal options.

Brick and CMU samples will be collected using a device less than 3 cm in diameter advanced to a maximum depth of 7.5 cm into the surface as is required by 40 CFR Part 761 at locations described in Figure 7. A putty knife or similar scraping device will be used to collect paint chips. Sampling locations may require multiple penetrations in order to meet minimum laboratory sample size requirements. Operating procedures that describe sample collection techniques are described in Section 3.7 of this document. Minimum sample weights required by the laboratory are described in Table I.

3.2.2 Concrete Roof Deck and Ceiling

Wipe samples were previously collected at 14 locations from the ceiling (defined as the underside of the roof deck) to determine the presence of PCBs; detections of PCBs were observed at each of the 14 locations. In addition, roof cores were collected at three locations and analyzed for the presence of PCBs; PCB detections ranged between 0.58 and 1.2 PPM. Figure 4 shows results of PCB samples collected from the roof and ceiling. Additional samples will be collected to determine building materials that contain concentrations of site COCs as described in Section 3.2 of this document.

Concrete roof deck and ceiling samples will be collected using a device less than 3 cm in diameter advanced to a maximum depth of 7.5 cm into the surface as is required by 40 CFR Part 761. Since the concrete roof deck is 10 cm thick (4 inches), samples will be collected from the underside of the roof to evaluate areas most likely exposed to COCs. Sampling locations may require multiple penetrations in order to meet minimum laboratory sample size requirements. A putty knife or similar scraping device will be used to collect surface coatings. Operating procedures that describe sample collection techniques are described in Section 3.7 of this document. Minimum sample weights required by the laboratory are described in Table I.

3.3 OTHER BUILDING MATERIALS

Previously, samples were collected from other building materials, such as roof membrane, flashing, window glaze and caulking, to determine concentrations of PCBs, lead, and asbestos. The results of these evaluations are shown in Figure 4.

PCBs were detected at concentrations up to 987 ppm in floor expansion joint caulk (Figure 5). Additional samples of this material or adjacent concrete are not required. Samples will be collected to determine the presence of PCBs if additional expansion joints are observed.

Ten paint samples will be collected from steel beams and trusses to determine the presence of PCBs and TCLP lead using a putty knife (scraping or chipping). Additionally, one paint sample will be collected from the exterior of each monitor end wall for a total of 22 samples.

Based on preliminary screening, window glazing and window caulk associated with windows on roof monitors contains ACM, PCBs at concentrations less than 14 ppm, and TCLP lead at concentrations of up to 50.4 PPM (Figure 5). An additional three caulking and glazing samples per roof monitor will be collected to determine the concentration of PCBs, TCLP lead, and asbestos.

Samples of glazing and caulking associated with two rows of windows on the building walls have not been collected. Samples will be collected at a frequency of one sample per row of windows per fifty feet and analyzed for PCBs, TCLP lead, and asbestos.

3.4 LABORATORY ANALYSIS

3.4.1 PCBs

Samples that require analysis of PCBs will be analyzed as Aroclors) by Pace Analytical Laboratories (Pace) in Schenectady, New York. Analyses will be completed using USEPA SW846 Method 8082A by gas chromatography/electron capture detection (GC/ECD).

3.4.2 Lead

Total lead samples will be collected and sent to Pace for analysis using USEPA SW846 Method 6010C by GC/ECD. TCLP lead samples will also be collected and analyzed by Pace by TCLP 1311.

3.4.3 Asbestos

Suspect asbestos sample analysis will be conducted using Polarized Light Microscopy with dispersion staining (PLM-DS) in accordance with the New York State ELAP 198.1 Method. Transmission Electron Microscopy (TEM) analysis will be performed to address New York State Department of Health (NYSDOH) ELAP requirements, which require re-analysis of non-friable, organically bound (NOB) samples with asbestos reported as non-detected (ELAP Method 198.4).

3.5 FIELD OPERATING PROCEDURES

The following Operating Procedures (OPs) are relevant to the building material sampling described above. Health and safety related OPs will be provided in the Site-specific Health Safety Security and Environmental Plan (HSSEP).

OP3001 – Preservation and Shipment of Environmental Samples
OP3026 – Chain of Custody
OP3027 – Decontamination Procedure
OP3028 – Investigation Derived Wastes
OP3029 – Field Data Recording

The subcontractors selected for sampling work will submit OPs and field equipment specifications used to complete materials sampling prior to the commencement of work.

3.6 DATA INTERPRETATION

Analytical data from building material samples will be used to determine materials management strategies prior to demolition activities.

- Where samples indicate building materials with either PCB concentrations exceeding subsurface cleanup criteria (10 ppm) and total lead concentrations (1,000 ppm) described in the ROD, or TCLP lead concentrations exceeding 6 NYCRR Part 371.3 criteria of 5 mg/l, building materials will be disposed of offsite without decontamination.

- Where samples indicate building materials with PCB concentrations greater than 50 ppm, building materials will be disposed as required in 40 CFR 761.

4. Quality Assurance

Samples will be collected using equipment and procedures appropriate to the matrix, parameters and sampling objectives and in accordance with appropriate SOPs. Sample containers will be properly labeled, with sampling records maintained, and pertinent information transcribed to chain-of-custody forms. Sample bottles will be stored in the proper types of containers prepared by the laboratory. If required, samples will be cooled to 4^{o}C from the time of collection until they are analyzed by the laboratory.

Field Quality Assurance/Quality Control (QA/QC) samples will be collected during sampling. Field QA/QC samples for this project will include field duplicate samples and matrix spike/matrix spike duplicate samples, trip blanks, and field equipment blanks.

Blind field duplicate samples will be collected to evaluate matrix interference and sampling and analytical precision of analyses at a frequency of 1 duplicate per 20 samples, and matrix spike/matrix spike duplicate (MS/MSD) samples will be collected to evaluate matrix interference and sampling and analytical accuracy at a rate of 1 per 20 samples. MS/MSD samples will require double the normal sample volume and should be collected on samples anticipated to exhibit a relatively low degree of impact.

Field equipment blanks will be collected to evaluate decontamination procedures and/or ambient sources of COC. Field equipment blanks will be collected at a frequency of 1 per 20 samples collected with non-disposable equipment.

4.1 LABORATORY DATA VALIDATION AND EVALUATION

Laboratory analytical reports are received and field data are collected will be added to a project specific database. The analytical data will then be reviewed for compliance with QA/QC protocols and conformance with requested analyses listed on chain-of-custody documents. Deviations will be discussed with the laboratory for clarification or correction.

Laboratory narratives will be reviewed by Haley & Aldrich personnel to ensure that the laboratory QC criteria have been met. Independent data validation of approximately 10% of the analytical data packages may be conducted to evaluate the usability of the data.

5. Health and Safety

Health and safety requirements applicable to all persons entering the Site or involved in field activities will be described in the Site-specific Health Safety Security and Environmental Plan (HSSEP), which will be prepared in accordance with OSHA 1910.120 and specific Atlantic Richfield requirements. These documents will be available for use on site and will be developed prior to the commencement of work.

References

1. NYSDEC, 2012. RECORD OF DECISION, Harbor at Hastings. Operable Unit Number 01: On-Site Contamination, State Superfund Project, Hastings-on-Hudson, Westchester County, Site No. 360022. Prepared by Division of Environmental Remediation, New York State Department of Environmental Conservation. March 2012

2. NYSDEC, 2013. AMENDED ORDER OF CONSENT, NYSDEC v. Atlantic Richfield Co. (Site No. 3-60-022)

3. NYSDEC, 2012. DECLARATION STATEMENT - RECORD OF DECISION AMENDMENT, Harbor at Hastings. Operable Unit Number 01: On-Site Contamination, State Superfund Project, Hastings-on-Hudson, Westchester County, Site No. 360022. Prepared by Division of Environmental Remediation, New York State Department of Environmental Conservation. March 2012

4. NYSDEC, 2012. RECORD OF DECISION, Harbor at Hastings. Operable Unit Number 02: Hudson River Sediments, State Superfund Project, Hastings-on-Hudson, Westchester County, Site No. 360022. Prepared by Division of Environmental Remediation, New York State Department of Environmental Conservation. March 2012

5. Haley & Aldrich, 2014. Building 52 Alternatives, Former Anaconda Wire and Cable Company Site, Hastings-On-Hudson, NY. NYSDEC SITE #3-60-22. Prepared by Haley & Aldrich of New York, Rochester, New York for Atlantic Richfield, Warrenville, Illinois. April 2014

6. Haley & Aldrich, 2014. Remedial Design Work Plan, Former Anaconda Wire and Cable Company Site, Hastings-On-Hudson, NY. NYSDEC SITE #3-60-022. Prepared by Haley & Aldrich of New York, Rochester, New York for Atlantic Richfield, Naperville, Illinois. July 2014

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TABLES

TABLE I
BUILDING MATERIALS SAMPLING
ARCO
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

Building Component	Waste Stream	Current screening data information	Sampling Rationale	Analyte of concern	Sample Frequency	Sample type	Sampling Methodology	Total approximate number of sample locations	Resulting Sampling Frequency (per CY)	Resulting Sampling Frequency (sf)	Potential Waste Stream Disposition
Roof	Membrane	Non-haz level lead, PCBs	Confirm C&D	Asbestos PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	bulk	knife; fill container	8	N/A	13,750	Dispose
	Flashing	Non-haz level lead, PCBs; positive for asbestos	no samples required	Asbestos PCBs TCLP lead	N/A	N/A	N/A	0	N/A	N/A	Dispose
	Roof deck	Non-haz level lead, PCBs	Provide contractors option to separate roofing material from roof deck	PCBs Total lead TCLP lead	1 sample per 900 sf	core	<3 cm dia. drill, concrete dust or core	8	170	N/A	Dispose
	Monitor window caulk	Haz levels of lead, Non-haz levels of PCBs, Asbestos present	Additional samples may indicate portion of windows do not have to be managed as haz, PCB, or asbestos waste	Asbestos PCBs TCLP lead	3 samples per monitor	bulk	knife; fill container	22	N/A	N/A	Dispose
	Monitor window glaze	Haz levels of lead, Non-haz levels of PCBs, Asbestos present	Additional samples may indicate portion of windows do not have to be managed as haz, PCB, or asbestos waste	Asbestos PCBs TCLP lead	3 samples per monitor	bulk	knife; fill container	22	N/A	N/A	Dispose
	Monitor end wall paint	No data	Determine whether paint is lead based and requires scraping and additional HSSE during demo	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	chips	scraper	22	N/A	N/A	Dispose
	Ceiling	No data	Determine if coating (currently peeling from the ceiling) is lead based and requires scraping and additional HSSE during demo	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	chips	scraper	10	N/A	N/A	Dispose
	Steel trusses	No data	Determine whether paint is lead based and requires scraping and additional HSSE during demo	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	chips	scraper	10	N/A	N/A	Recycle
	Piping	No data	Determine whether pipes are empty and contain hazardous levels of PCBs or lead	PCBs TCLP lead	N/A	wipe/bulk	Tap or cut pipe	10	N/A	N/A	Recycle/dispose

TABLE I
BUILDING MATERIALS SAMPLING
ARCO
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

Building Component	Waste Stream	Current screening data information	Sampling Rationale	Analyte of concern	Sample Frequency	Sample type	Sampling Methodology	Total approximate number of sample locations	Resulting Sampling Frequency (per CY)	Resulting Sampling Frequency (sf)	Potential Waste Stream Disposition
Floor	Concrete	Most areas contain PCB <50 PPM in top 1 - 2 inches; two areas contain PCBs >50 PPM in top 1 - 2 inches.	Determine whether additional areas of the concrete contain PCBs > 50 PPM; delineate existing areas > 50 PPM	PCBs TCLP lead	1 sample per 2,750 sf; targeting locations with historic PCB operations	core	<3 cm dia. drill, concrete dust or core	36	N/A	2,720	Leave in place
	Explansion Joint caulking	Haz concentrations of PCBs	Determine whether additional expansion joints contain PCBs > 50 PPM	PCBs	1 per expansion joint	bulk	knife; fill container	Add'l as required	N/A	N/A	Leave in place/dispose
	Sumps	No data; may have been evacuated during previous work	Access to determine whether contains liquids or solids; collect samples as appropriate. Collect PCB wipe sampes to potentially support subsurface investigation program	PCBs TCLP lead	1 per sump	wipe/bulk	scoop material into container; or complete wipe sample	As required	N/A	N/A	Dispose
Walls	Interior brick	Non-haz levels of PCBs; some areas haz levels of TCLP lead, total lead exceed ROD requirements in some areas	Determine waste characterization for disposal	PCBs Total lead TCLP lead	1 sample per 900 sf	core	<3 cm dia. drill, concrete dust or core	64	14	769	Dispose
	Exterior brick	No data	Determine waste characterization for disposal	PCBs Total lead TCLP lead	1 sample per 2,700 sf (PCBs not expected since no operations outside)	core	<3 cm dia. drill, concrete dust or core	12	76	4,103	Dispose
	Window Caulking	No data	Additional samples may indicate portion of windows do not have to be managed as haz, PCB, or asbestos waste	PCBs TCLP lead	1 sample per 50 linear feet of wall	bulk	knife; fill container	22	N/A	N/A	Dispose
	Window Glazing	No data	Additional samples may indicate portion of windows do not have to be managed as haz, PCB, or asbestos waste	Asbestos PCBs TCLP lead	1 sample per 50 linear feet of wall	bulk	knife; fill container	22	N/A	N/A	Dispose

TABLE I
BUILDING MATERIALS SAMPLING
ARCO
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

Building Component	Waste Stream	Current screening data information	Sampling Rationale	Analyte of concern	Sample Frequency	Sample type	Sampling Methodology	Total approximate number of sample locations	Resulting Sampling Frequency (per CY)	Resulting Sampling Frequency (sf)	Potential Waste Stream Disposition
Walls	Steel beams	No data	Determine whether paint is lead based and requires scraping and additional HSSE during demo	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	chips	scraper	10	N/A	N/A	Recycle
	Interior CMU wall	No data	Determine waste characterization for disposal	PCBs Total Lead TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	core	<3 cm dia. drill, concrete dust or core	4	N/A	N/A	Dispose
Second floor	Walls	No data	Determine whether haz concentrations of PCBs or lead present	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	core	<3 cm dia. drill, concrete dust or core	4	N/A	N/A	Dispose
	Floor	No data	Determine whether haz concentrations of PCBs or lead present	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	core	<3 cm dia. drill, concrete dust or core	4	N/A	N/A	Dispose

FIGURES

SITE COORDINATES: 40°59'36"N 73°53'9"W

N
W
E
S

U.S.G.S. QUADRANGLE: HASTINGS-ON-HUDSON, NEW YORK

HALEY ALDRICH

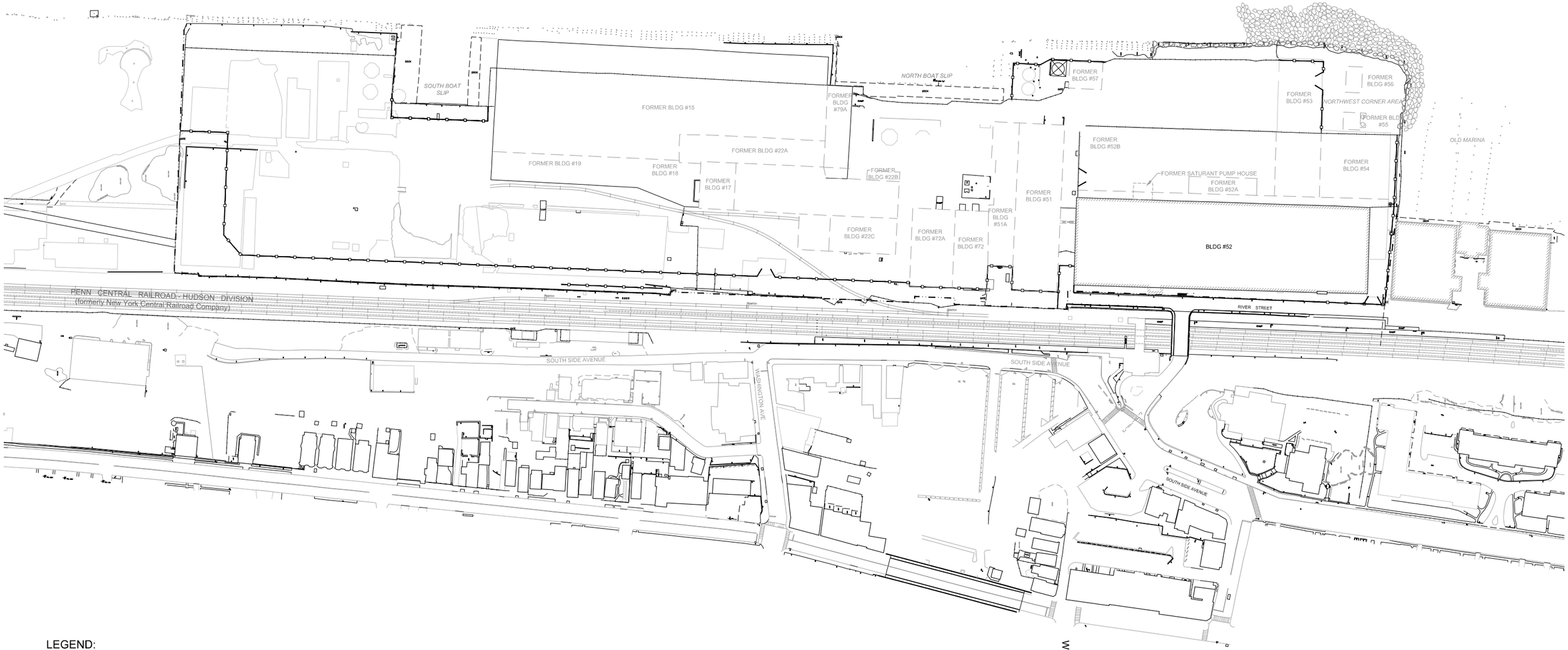
OU-1 REMEDIATION
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

PROJECT LOCUS

SCALE: 1:24000
JUNE 2015

FIGURE 1

G:\PROJECTS\28612 HASTINGS\H&S MASTER\HASPS\258_BUILDING 52 ASBESTOS\FIGURES\28612-LOCUS.DWG



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LEGEND:

- PROPERTY LINE
- RAIL ROAD
- EXISTING STRUCTURES
- FORMER STRUCTURES
- EXISTING FENCE
- NEW FENCE (MATCH EXISTING CHAIN LINK)
- TEMPORARY FENCE MOUNTED ON JERSEY BARRIER. (8 FOOT MIN.)
- RIP-RAP
- UG DRAINS / SEWER TO RIVER

NOTES:

1. BASE PLAN PROVIDED BY BOSWELL ENGINEERING DRAWING NO. 04-209-MW (01/27/2006).
2. HISTORICAL SURVEY INFORMATION PROVIDED BY PARSONS IN JULY 2005.
3. MEAN HIGH AND MEAN LOW WATER ARE EL. +2.2 AND EL. -2.0, BASED ON HISTORICAL SITE REPORTS. THE MEAN HIGH LINE IS ESTIMATED AT ELEVATION +2.2 FEET. MEAN LOW IS SHOWN AT ELEVATION -1.0 FEET, BUT IS UNDERSTOOD TO BE AT APPROXIMATELY ELEVATION -2.0 FEET.
4. RIP-RAP DESIGNATION IN THE RIVER IS BASED ON INTERPRETATION OF SIDE SCAN SONAR DATA PROVIDED BY AQUASURVEY INC. IN NOVEMBER 2007.

W S Z E

0 100 200 300 400

SCALE IN FEET

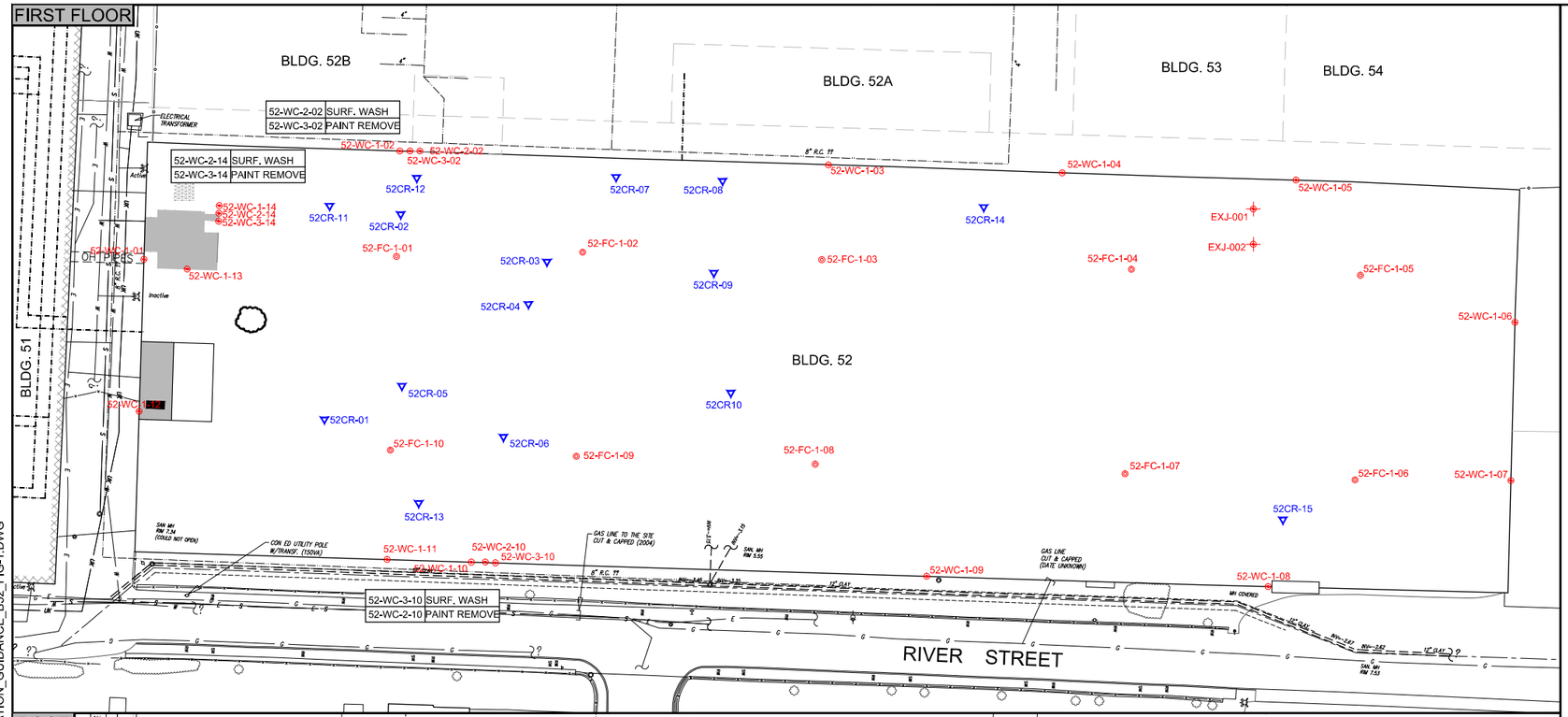
HALEY ALDRICH

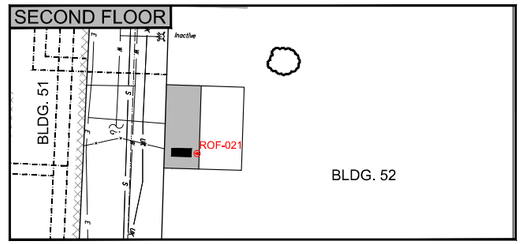
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

SITE PLAN

SCALE: AS SHOWN
JUNE 2015

FIGURE 2



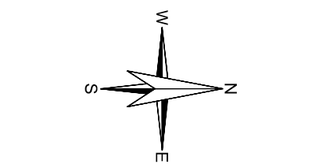


LEGEND:

—W—	WATER
—G—	GAS
—E—	ELECTRIC
—S—	SANITARY
—UK—	UNKNOWN UTILITY
◎	FOUNDATION CORE
◉	WALL CORE
○	ROOF CORE
⊕	OTHER SAMPLING
□	CEILING WIPE
▽	FLOOR CORE (PARSONS)

SAMPLE NAMING:
WC - WALL CORE
FC - FLOOR CORE
CR - FLOOR CORE (PARSONS)
CW- CEILING WIPE - CEILING IS UNDERSIDE OF ROOF DECK (LOCATION APPROXIMATE)
RC - ROOF CORE - CORED FROM TOP OF ROOF (LOCATION APPROXIMATE)
ROF - ROOFING MATERIAL (LOCATION APPROXIMATE)
FLA - ROOF FLASHING (LOCATION APPROXIMATE)
WIC - WINDOW CAULKING (LOCATION APPROXIMATE)
WIG - WINDOW GLAZING (LOCATION APPROXIMATE)
EXJ - EXPANSION JOINT CAULK (LOCATION APPROXIMATE)

NOTES:
1. DURING SUBSURFACE INVESTIGATIONS IN 2006, COMPOSITE CONCRETE CORES WERE ANALYZED BY PARSONS. SCREENING OF THE CORES, USING WIPES, WAS COMPLETED PRIOR TO COMPOSITING.
2. SAMPLES OF VARIOUS BUILDING MATERIALS WERE COLLECTED BETWEEN 2009 AND 2010 FOR PRELIMINARY WASTE STREAM DETERMINATION.
3. IN PREPARATION FOR BUILDING STRUCTURAL INSPECTIONS IN 2010, WIPE SAMPLES OF THE UNDERSIDE OF THE ROOF DECK WERE COMPLETED AS PART OF HEALTH AND SAFETY PLANNING TO SCREEN FOR POTENTIAL PCB EXPOSURE.
4. BASE PLAN PROVIDED BY BOSWELL ENGINEERING DRAWING NO. 04-209-MW (JANUARY 2006).
5. HISTORICAL SURVEY INFORMATION PROVIDED BY PARSONS IN JULY 2005.
6. INTERIOR BUILDING FEATURES BASED ON DRAWINGS PROVIDED BY PARSONS IN NOVEMBER 2004.
7. QUALIFIERS:
   - ND - NOT DETECTED
   - J OR B - ESTIMATED RESULT
   - NA - NOT AVAILABLE
8. RESULTS SEPARATED BY A SLASH (/) SHOW A SAMPLE AND THE CORRESPONDING FIELD DUPLICATE RESULT.
9. "SURF WASH" AND "PAINT REMOVE" DENOTE HOW THE SAMPLE WAS PREPARED PRIOR TO BEING ANALYZED.



SITE KEY: NTS

HALEY ALDRICH

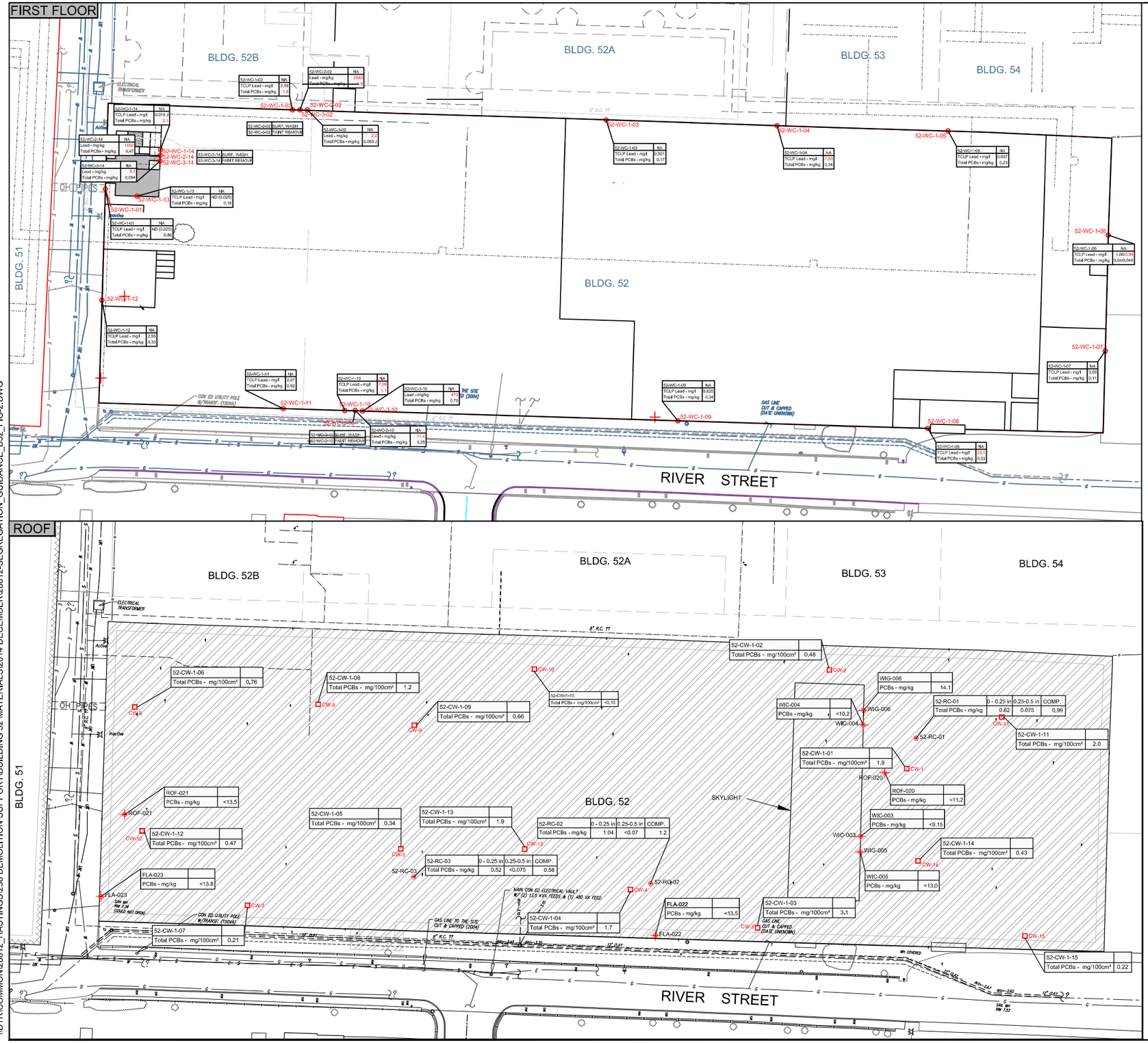
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

BUILDING 52 SCREENING SAMPLE LOCATIONS

SCALE: AS SHOWN
JUNE 2015

FIGURE 3

\\DTRCOMMON\28612_HASTINGS\238 DEMOLITION SUPPORT\BUILDING 52 MATERIALS\2014 DECEMBER\28612-SEGREGATION_GUIDANCE_B52_FIG-1.DWG

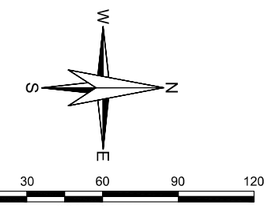


LEGEND:

—W—	WATER	●	WALL CORE
—G—	GAS	○	ROOF CORE
—E—	ELECTRIC	⊕	OTHER SAMPLING
—S—	SANITARY	□	CEILING WIPE
—UK—	UNKNOWN UTILITY		

SAMPLE NAMING:
WC - WALL CORE
FC - FLOOR CORE
CR - FLOOR CORE (PARSONS)
CW- CEILING WIPE - CEILING IS UNDERSIDE OF ROOF DECK (LOCATION APPROXIMATE)
RC - ROOF CORE - CORED FROM TOP OF ROOF (LOCATION APPROXIMATE)
ROF - ROOFING MATERIAL (LOCATION APPROXIMATE)
FLA - ROOF FLASHING (LOCATION APPROXIMATE)
WIC - WINDOW CAULKING (LOCATION APPROXIMATE)
WIG - WINDOW GLAZING (LOCATION APPROXIMATE)
EXJ - EXPANSION JOINT CAULK (LOCATION APPROXIMATE)

NOTES:
1. DURING SUBSURFACE INVESTIGATIONS IN 2006, COMPOSITE CONCRETE CORES WERE ANALYZED BY PARSONS. SCREENING OF THE CORES, USING WIPES, WAS COMPLETED PRIOR TO COMPOSITING.
2. SAMPLES OF VARIOUS BUILDING MATERIALS WERE COLLECTED BETWEEN 2009 AND 2010 FOR PRELIMINARY WASTE STREAM DETERMINATION.
3. IN PREPARATION FOR BUILDING STRUCTURAL INSPECTIONS IN 2010, WIPE SAMPLES OF THE UNDERSIDE OF THE ROOF DECK WERE COMPLETED AS PART OF HEALTH AND SAFETY PLANNING TO SCREEN FOR POTENTIAL PCB EXPOSURE.
4. BASE PLAN PROVIDED BY BOSWELL ENGINEERING DRAWING NO. 04-209-MW (JANUARY 2006).
5. HISTORICAL SURVEY INFORMATION PROVIDED BY PARSONS IN JULY 2005.
6. INTERIOR BUILDING FEATURES BASED ON DRAWINGS PROVIDED BY PARSONS IN NOVEMBER 2004.
7. QUALIFIERS:
   - ND - NOT DETECTED
   - J OR B - ESTIMATED RESULT
   - NA - NOT AVAILABLE
8. RESULTS SEPARATED BY A SLASH (/) SHOW A SAMPLE AND THE CORRESPONDING FIELD DUPLICATE RESULT.
9. "SURF WASH" AND "PAINT REMOVE" DENOTE HOW THE SAMPLE WAS PREPARED PRIOR TO BEING ANALYZED.



SITE KEY: NTS

HALEY ALDRICH

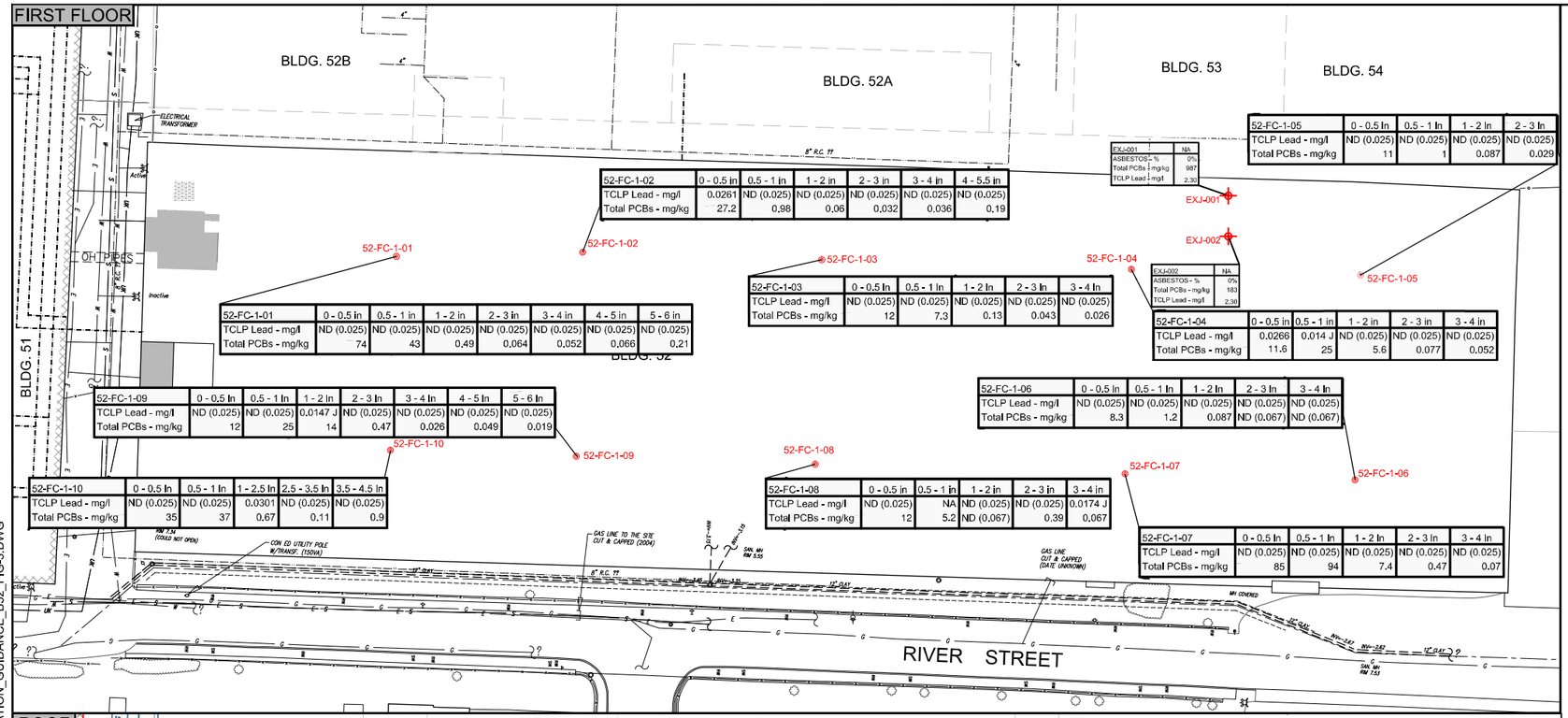
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

BUILDING 52 SCREENING SAMPLE LOCATIONS AND RESULTS (WALLS AND ROOF)

SCALE: AS SHOWN
JUNE 2015

FIGURE 4

\\DTRICOMMON\28612_HASTINGS\238 DEMOLITION SUPPORT\BUILDING 52 MATERIALS\2014 DECEMBER\28612-SEGREGATION_GUIDANCE_B52_FIG-2.DWG



52-FC-1-02	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In	4 - 5.5 In
TCLP Lead - mg/l	0.0261	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	27.2	0.98	0.06	0.032	0.036	0.19

52-FC-1-05	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	11	1	0.087	0.029

EXJ-001	NA
ASBESTOS - %	0%
Total PCBs - mg/kg	987
TCLP Lead - mg/l	2.30

52-FC-1-01	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In	4 - 5 In	5 - 6 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	74	43	0.49	0.064	0.052	0.066	0.21

52-FC-1-03	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	12	7.3	0.13	0.043	0.026

EXJ-002	NA
ASBESTOS - %	0%
Total PCBs - mg/kg	183
TCLP Lead - mg/l	2.30

52-FC-1-04	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	0.0266	0.014 J	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	11.6	25	5.6	0.077	0.052

52-FC-1-09	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In	4 - 5 In	5 - 6 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	0.0147 J	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	12	25	14	0.47	0.026	0.049	0.019

52-FC-1-06	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	8.3	1.2	0.087	ND (0.067)	ND (0.067)

52-FC-1-10	0 - 0.5 In	0.5 - 1 In	1 - 2.5 In	2.5 - 3.5 In	3.5 - 4.5 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	0.0301	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	35	37	0.67	0.11	0.9

52-FC-1-08	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	ND (0.025)	NA	ND (0.025)	ND (0.025)	0.0174 J
Total PCBs - mg/kg	12	5.2	ND (0.067)	0.39	0.067

52-FC-1-07	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	85	94	7.4	0.47	0.07

WIC-007	NA
ASBESTOS	0%

WIC-008	NA
ASBESTOS	0%

WIC-004	
ASBESTOS - %	0
PCBs - mg/kg	<10.2
TCLP LEAD - mg/l	15.0

WIC-005	
ASBESTOS - %	0
PCBs - mg/kg	14.1
TCLP LEAD - mg/l	50.4

WIC-003	
ASBESTOS - %	0
PCBs - mg/kg	<6.10
TCLP LEAD - mg/l	15.0

ROF-020	
ASBESTOS - %	0
PCBs - mg/kg	<11.2
TCLP LEAD - mg/l	<0.5

WIC-005	
ASBESTOS - %	0
PCBs - mg/kg	<13.0
TCLP LEAD - mg/l	50.4

ROF-021	
ASBESTOS - %	0
PCBs - mg/kg	<13.5
TCLP LEAD - mg/l	<0.5

FLA-023	
ASBESTOS - %	17
PCBs - mg/kg	<13.6
TCLP LEAD - mg/l	<0.5

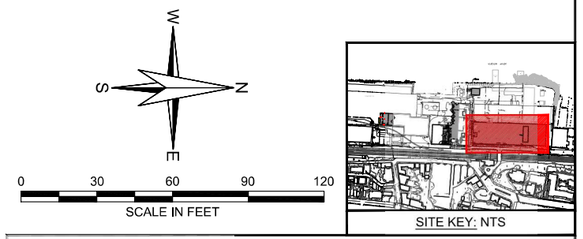
FLA-022	
ASBESTOS - %	27
PCBs - mg/kg	<13.6
TCLP LEAD - mg/l	<0.5

LEGEND:

- —W— WATER
- —G— GAS
- —E— ELECTRIC
- —S— SANITARY
- —UK— UNKNOWN UTILITY
- ◎ FOUNDATION CORE
- ⌖ OTHER SAMPLING

SAMPLE NAMING:
WC - WALL CORE
FC - FLOOR CORE
CR - FLOOR CORE (PARSONS)
CW- CEILING WIPE - CEILING IS UNDERSIDE OF ROOF DECK (LOCATION APPROXIMATE)
RC - ROOF CORE - CORED FROM TOP OF ROOF (LOCATION APPROXIMATE)
ROF - ROOFING MATERIAL (LOCATION APPROXIMATE)
FLA - ROOF FLASHING (LOCATION APPROXIMATE)
WIC - WINDOW CAULKING (LOCATION APPROXIMATE)
WIG - WINDOW GLAZING (LOCATION APPROXIMATE)
EXJ - EXPANSION JOINT CAULK (LOCATION APPROXIMATE)

NOTES:
1. DURING SUBSURFACE INVESTIGATIONS IN 2006, COMPOSITE CONCRETE CORES WERE ANALYZED BY PARSONS. SCREENING OF THE CORES, USING WIPES, WAS COMPLETED PRIOR TO COMPOSITING.
2. SAMPLES OF VARIOUS BUILDING MATERIALS WERE COLLECTED BETWEEN 2009 AND 2010 FOR PRELIMINARY WASTE STREAM DETERMINATION.
3. IN PREPARATION FOR BUILDING STRUCTURAL INSPECTIONS IN 2010, WIPE SAMPLES OF THE UNDERSIDE OF THE ROOF DECK WERE COMPLETED AS PART OF HEALTH AND SAFETY PLANNING TO SCREEN FOR POTENTIAL PCB EXPOSURE.
4. BASE PLAN PROVIDED BY BOSWELL ENGINEERING DRAWING NO. 04-209-MW (JANUARY 2006).
5. HISTORICAL SURVEY INFORMATION PROVIDED BY PARSONS IN JULY 2005.
6. INTERIOR BUILDING FEATURES BASED ON DRAWINGS PROVIDED BY PARSONS IN NOVEMBER 2004.
7. QUALIFIERS:
   - ND - NOT DETECTED
   - J OR B - ESTIMATED RESULT
   - NA - NOT AVAILABLE
8. RESULTS SEPARATED BY A SLASH (/) SHOW A SAMPLE AND THE CORRESPONDING FIELD DUPLICATE RESULT.
9. "SURF WASH" AND "PAINT REMOVE" DENOTE HOW THE SAMPLE WAS PREPARED PRIOR TO BEING ANALYZED.



SITE KEY: NTS

HALEY ALDRICH

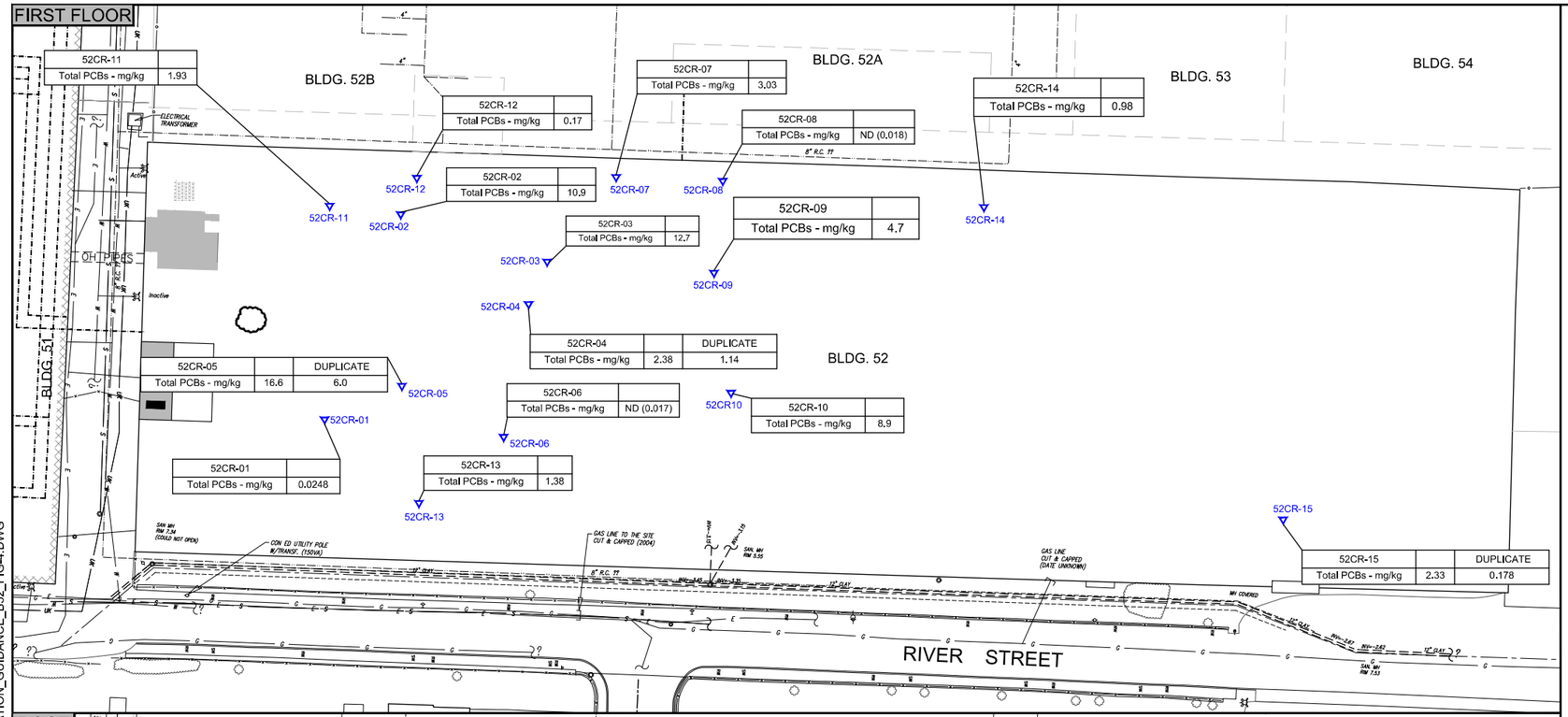
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

BUILDING 52 SCREENING SAMPLE LOCATIONS AND RESULTS (FLOOR AND OTHER ROOF MATERIALS)

SCALE: AS SHOWN
JUNE 2015

FIGURE 5

\\DT\COMMON\28612_HASTINGS\238 DEMOLITION SUPPORT\BUILDING 52 MATERIALS\2014 DECEMBER\28612-SEGREGATION_GUIDANCE_B52_FIG-3.DWG



LEGEND:

- —W— WATER
- —G— GAS
- —E— ELECTRIC
- —S— SANITARY
- —UK— UNKNOWN UTILITY

▽ FLOOR CORE (PARSONS)

SAMPLE NAMING:
CR - FLOOR CORE (PARSONS)

CRITERIA SCREENING:

NON-HAZARDOUS WASTE, BELOW SUBSURFACE REMOVAL CRITERIA (DEPENDING UPON TSCA APPLICABILITY DETERMINATION)

PCBs: <10 MG/KG

NON-HAZARDOUS WASTE, EXCEEDS SUBSURFACE REMOVAL CRITERIA (DEPENDING UPON TSCA APPLICABILITY DETERMINATION):

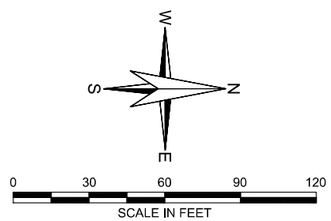
PCBs: >10 MG/KG, <50 MG/KG

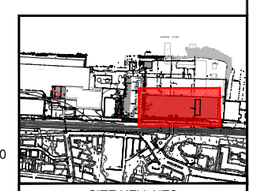
HAZARDOUS WASTE, EXCEEDS SUBSURFACE REMOVAL CRITERIA (DEPENDING UPON TSCA APPLICABILITY DETERMINATION) :

PCBs: >50 MG/KG

NOTES:

1. DURING SUBSURFACE INVESTIGATIONS IN 2006, COMPOSITE CONCRETE CORES WERE ANALYZED BY PARSONS. SCREENING OF THE CORES, USING WIPES, WAS COMPLETED PRIOR TO COMPOSITING.
2. SAMPLES OF VARIOUS BUILDING MATERIALS WERE COLLECTED BETWEEN 2009 AND 2010 FOR PRELIMINARY WASTE STREAM DETERMINATION.
3. IN PREPARATION FOR BUILDING STRUCTURAL INSPECTIONS IN 2010, WIPE SAMPLES OF THE UNDERSIDE OF THE ROOF DECK WERE COMPLETED AS PART OF HEALTH AND SAFETY PLANNING TO SCREEN FOR POTENTIAL PCB EXPOSURE.
4. BASE PLAN PROVIDED BY BOSWELL ENGINEERING DRAWING NO. 04-209-MW (JANUARY 2006).
5. HISTORICAL SURVEY INFORMATION PROVIDED BY PARSONS IN JULY 2005.
6. INTERIOR BUILDING FEATURES BASED ON DRAWINGS PROVIDED BY PARSONS IN NOVEMBER 2004.
7. QUALIFIERS:
   - ND - NOT DETECTED
   - J OR B - ESTIMATED RESULT
   - NA - NOT AVAILABLE
8. RESULTS SEPARATED BY A SLASH (/) SHOW A SAMPLE AND THE CORRESPONDING FIELD DUPLICATE RESULT.





SITE KEY: NTS

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

BUILDING 52 FLOOR SCREENING SAMPLE LOCATIONS AND RESULTS (COMPOSITE)

SCALE: AS SHOWN
JUNE 2015

FIGURE 6

\\DTRCOMMON\28612_HASTINGS\238 DEMOLITION SUPPORT\BUILDING 52 MATERIALS\2014 DECEMBER\28612-SEGREGATION_GUIDANCE_B52_FIG-4.DWG

Four borings at at 5' centers

Four borings at at 5' centers

RIVER STREET

PENN CENTRAL RAILROAD - HUDSON DIVISION
(formerly New York Central Railroad Company)

Floor Sampling Results >50 PPM (2009)

Floor Sampling Results <50 PPM (2009)

2015 Proposed Floor Sampling Locations

2015 Proposed Interior Wall Sampling Locations
(4 samples per location @ ~0.5 ft, ~4 ft, ~11 ft, and ~22 ft above finished floor)

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S

0 60 120
SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

B52 FLOOR AND WALL (INTERIOR) SAMPLING PLAN

AS SHOWN
JUNE 2015

FIGURE 7

G:\28612\GLOBAL\CAD\28612-324-0027 B52 EXCAVATION AREAS.DWG

Appendix B

Tables and Figures from Building 52 Materials Sampling Plan

TABLES

TABLE I
BUILDING MATERIALS SAMPLING
ARCO
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

Building Component	Waste Stream	Current screening data information	Sampling Rationale	Analyte of concern	Sample Frequency	Sample type	Sampling Methodology	Total approximate number of sample locations	Resulting Sampling Frequency (per CY)	Resulting Sampling Frequency (sf)	Potential Waste Stream Disposition
Roof	Membrane	Non-haz level lead, PCBs	Confirm C&D	Asbestos PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	bulk	knife; fill container	8	N/A	13,750	Dispose
	Flashing	Non-haz level lead, PCBs; positive for asbestos	no samples required	Asbestos PCBs TCLP lead	N/A	N/A	N/A	0	N/A	N/A	Dispose
	Roof deck	Non-haz level lead, PCBs	Provide contractors option to separate roofing material from roof deck	PCBs Total lead TCLP lead	1 sample per 900 sf	core	<3 cm dia. drill, concrete dust or core	8	170	N/A	Dispose
	Monitor window caulk	Haz levels of lead, Non-haz levels of PCBs, Asbestos present	Additional samples may indicate portion of windows do not have to be managed as haz, PCB, or asbestos waste	Asbestos PCBs TCLP lead	3 samples per monitor	bulk	knife; fill container	22	N/A	N/A	Dispose
	Monitor window glaze	Haz levels of lead, Non-haz levels of PCBs, Asbestos present	Additional samples may indicate portion of windows do not have to be managed as haz, PCB, or asbestos waste	Asbestos PCBs TCLP lead	3 samples per monitor	bulk	knife; fill container	22	N/A	N/A	Dispose
	Monitor end wall paint	No data	Determine whether paint is lead based and requires scraping and additional HSSE during demo	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	chips	scraper	22	N/A	N/A	Dispose
	Ceiling	No data	Determine if coating (currently peeling from the ceiling) is lead based and requires scraping and additional HSSE during demo	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	chips	scraper	10	N/A	N/A	Dispose
	Steel trusses	No data	Determine whether paint is lead based and requires scraping and additional HSSE during demo	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	chips	scraper	10	N/A	N/A	Recycle
	Piping	No data	Determine whether pipes are empty and contain hazardous levels of PCBs or lead	PCBs TCLP lead	N/A	wipe/bulk	Tap or cut pipe	10	N/A	N/A	Recycle/dispose

TABLE I
BUILDING MATERIALS SAMPLING
ARCO
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

Building Component	Waste Stream	Current screening data information	Sampling Rationale	Analyte of concern	Sample Frequency	Sample type	Sampling Methodology	Total approximate number of sample locations	Resulting Sampling Frequency (per CY)	Resulting Sampling Frequency (sf)	Potential Waste Stream Disposition
Floor	Concrete	Most areas contain PCB <50 PPM in top 1 - 2 inches; two areas contain PCBs >50 PPM in top 1 - 2 inches.	Determine whether additional areas of the concrete contain PCBs > 50 PPM; delineate existing areas > 50 PPM	PCBs TCLP lead	1 sample per 2,750 sf; targeting locations with historic PCB operations	core	<3 cm dia. drill, concrete dust or core	36	N/A	2,720	Leave in place
	Explansion Joint caulking	Haz concentrations of PCBs	Determine whether additional expansion joints contain PCBs > 50 PPM	PCBs	1 per expansion joint	bulk	knife; fill container	Add'l as required	N/A	N/A	Leave in place/dispose
	Sumps	No data; may have been evacuated during previous work	Access to determine whether contains liquids or solids; collect samples as appropriate. Collect PCB wipe sampes to potentially support subsurface investigation program	PCBs TCLP lead	1 per sump	wipe/bulk	scoop material into container; or complete wipe sample	As required	N/A	N/A	Dispose
Walls	Interior brick	Non-haz levels of PCBs; some areas haz levels of TCLP lead, total lead exceed ROD requirements in some areas	Determine waste characterization for disposal	PCBs Total lead TCLP lead	1 sample per 900 sf	core	<3 cm dia. drill, concrete dust or core	64	14	769	Dispose
	Exterior brick	No data	Determine waste characterization for disposal	PCBs Total lead TCLP lead	1 sample per 2,700 sf (PCBs not expected since no operations outside)	core	<3 cm dia. drill, concrete dust or core	12	76	4,103	Dispose
	Window Caulking	No data	Additional samples may indicate portion of windows do not have to be managed as haz, PCB, or asbestos waste	PCBs TCLP lead	1 sample per 50 linear feet of wall	bulk	knife; fill container	22	N/A	N/A	Dispose
	Window Glazing	No data	Additional samples may indicate portion of windows do not have to be managed as haz, PCB, or asbestos waste	Asbestos PCBs TCLP lead	1 sample per 50 linear feet of wall	bulk	knife; fill container	22	N/A	N/A	Dispose

TABLE I
BUILDING MATERIALS SAMPLING
ARCO
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

Building Component	Waste Stream	Current screening data information	Sampling Rationale	Analyte of concern	Sample Frequency	Sample type	Sampling Methodology	Total approximate number of sample locations	Resulting Sampling Frequency (per CY)	Resulting Sampling Frequency (sf)	Potential Waste Stream Disposition
Walls	Steel beams	No data	Determine whether paint is lead based and requires scraping and additional HSSE during demo	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	chips	scraper	10	N/A	N/A	Recycle
	Interior CMU wall	No data	Determine waste characterization for disposal	PCBs Total Lead TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	core	<3 cm dia. drill, concrete dust or core	4	N/A	N/A	Dispose
Second floor	Walls	No data	Determine whether haz concentrations of PCBs or lead present	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	core	<3 cm dia. drill, concrete dust or core	4	N/A	N/A	Dispose
	Floor	No data	Determine whether haz concentrations of PCBs or lead present	PCBs TCLP lead	Screening, determine presence of CoCs; additional samples to delineate may be required	core	<3 cm dia. drill, concrete dust or core	4	N/A	N/A	Dispose

FIGURES

SITE COORDINATES: 40°59'36"N 73°53'9"W

N
W
E
S

U.S.G.S. QUADRANGLE: HASTINGS-ON-HUDSON, NEW YORK

HALEY ALDRICH

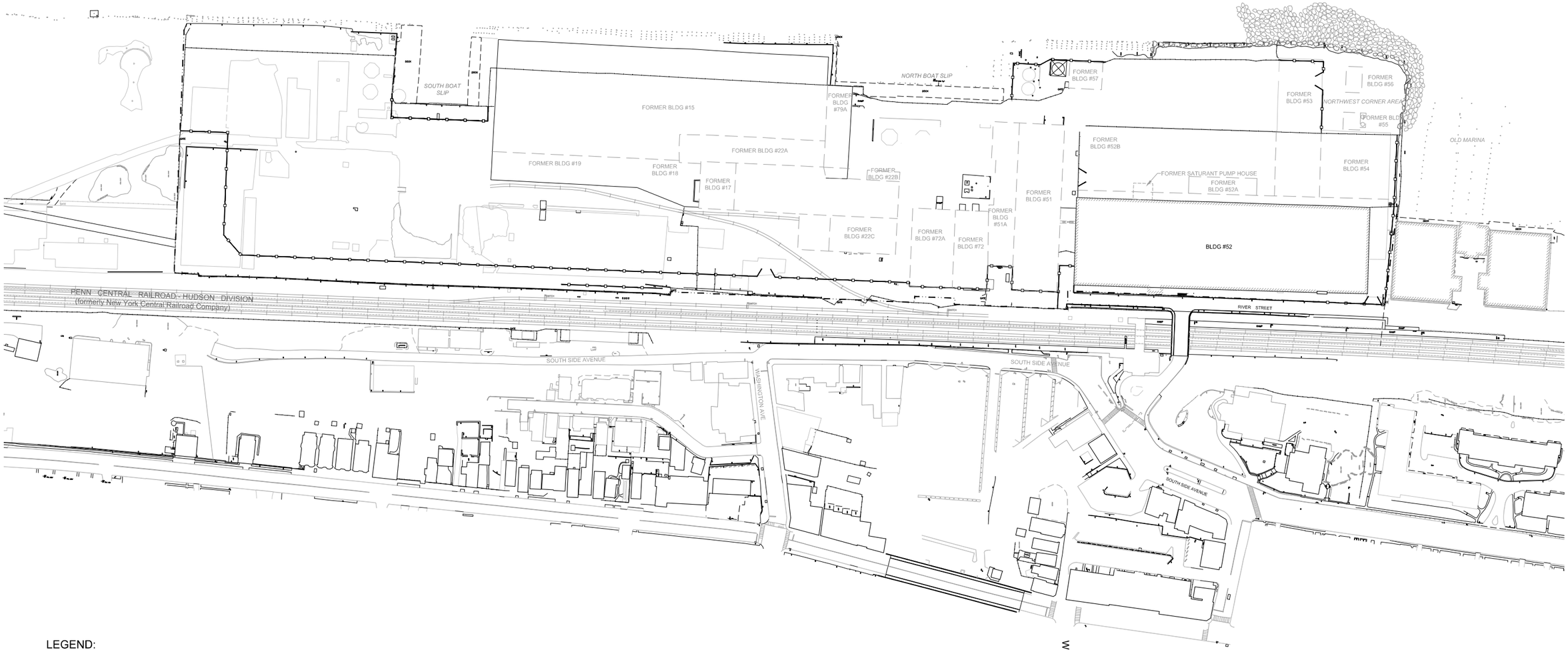
OU-1 REMEDIATION
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

PROJECT LOCUS

SCALE: 1:24000
JUNE 2015

FIGURE 1

G:\PROJECTS\28612 HASTINGS\H&S MASTER\HASPS\258_BUILDING 52 ASBESTOS\FIGURES\28612-LOCUS.DWG



G:\28612\GLOBAL\CAD\28612-SITEPLAN_R1.AIR.DWG

LEGEND:

- PROPERTY LINE
- RAIL ROAD
- EXISTING STRUCTURES
- FORMER STRUCTURES
- EXISTING FENCE
- NEW FENCE (MATCH EXISTING CHAIN LINK)
- TEMPORARY FENCE MOUNTED ON JERSEY BARRIER. (8 FOOT MIN.)
- RIP-RAP
- UG DRAINS / SEWER TO RIVER

NOTES:

1. BASE PLAN PROVIDED BY BOSWELL ENGINEERING DRAWING NO. 04-209-MW (01/27/2006).
2. HISTORICAL SURVEY INFORMATION PROVIDED BY PARSONS IN JULY 2005.
3. MEAN HIGH AND MEAN LOW WATER ARE EL. +2.2 AND EL. -2.0, BASED ON HISTORICAL SITE REPORTS. THE MEAN HIGH LINE IS ESTIMATED AT ELEVATION +2.2 FEET. MEAN LOW IS SHOWN AT ELEVATION -1.0 FEET, BUT IS UNDERSTOOD TO BE AT APPROXIMATELY ELEVATION -2.0 FEET.
4. RIP-RAP DESIGNATION IN THE RIVER IS BASED ON INTERPRETATION OF SIDE SCAN SONAR DATA PROVIDED BY AQUASURVEY INC. IN NOVEMBER 2007.

W S Z E

0 100 200 300 400

SCALE IN FEET

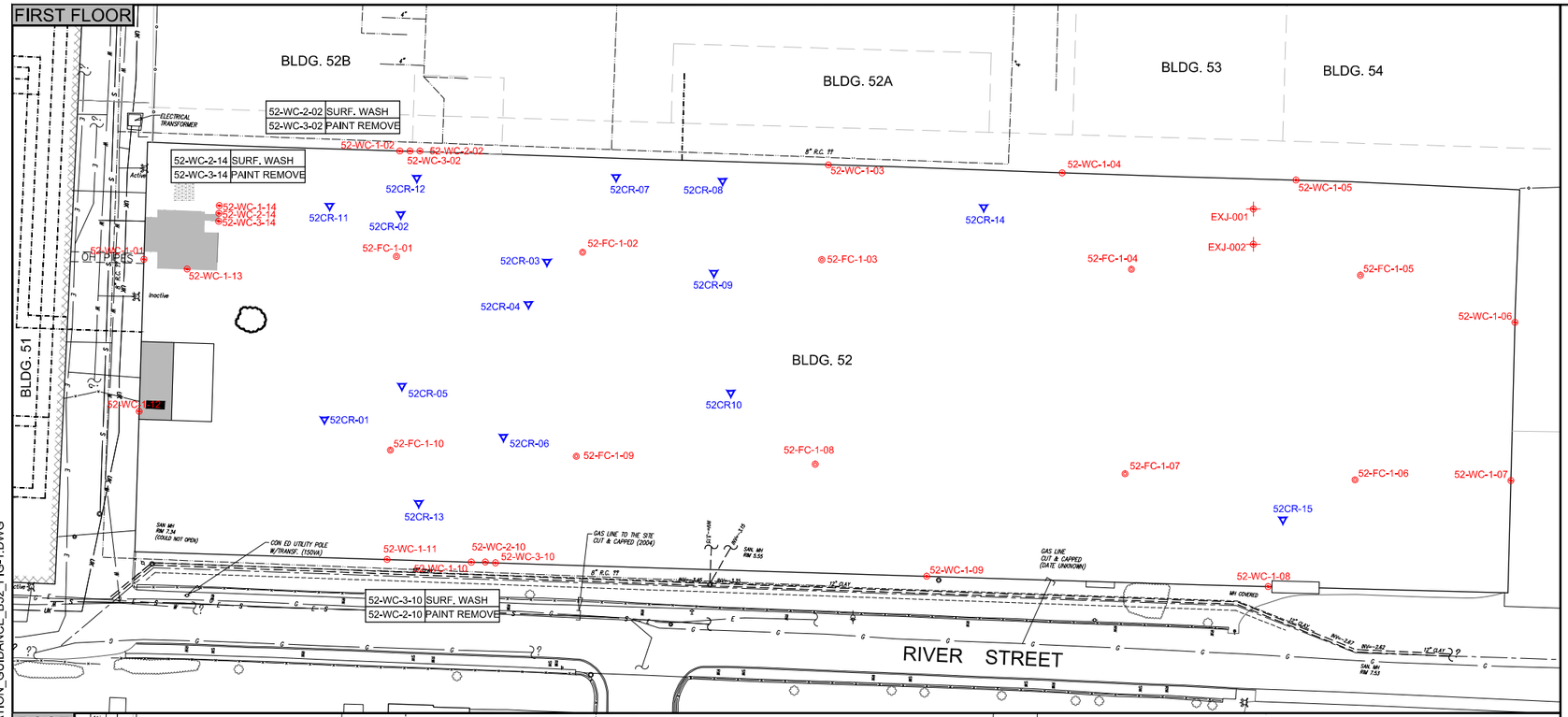
HALEY ALDRICH

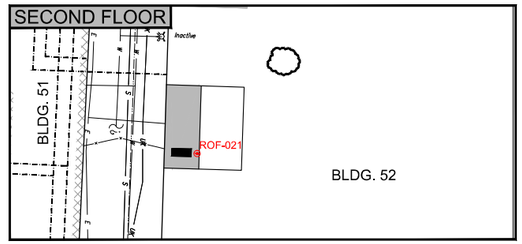
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

SITE PLAN

SCALE: AS SHOWN
JUNE 2015

FIGURE 2





LEGEND:

—W—	WATER
—G—	GAS
—E—	ELECTRIC
—S—	SANITARY
—UK—	UNKNOWN UTILITY
◎	FOUNDATION CORE
◉	WALL CORE
○	ROOF CORE
⊕	OTHER SAMPLING
□	CEILING WIPE
▽	FLOOR CORE (PARSONS)

SAMPLE NAMING:
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FC - FLOOR CORE
CR - FLOOR CORE (PARSONS)
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RC - ROOF CORE - CORED FROM TOP OF ROOF (LOCATION APPROXIMATE)
ROF - ROOFING MATERIAL (LOCATION APPROXIMATE)
FLA - ROOF FLASHING (LOCATION APPROXIMATE)
WIC - WINDOW CAULKING (LOCATION APPROXIMATE)
WIG - WINDOW GLAZING (LOCATION APPROXIMATE)
EXJ - EXPANSION JOINT CAULK (LOCATION APPROXIMATE)

NOTES:
1. DURING SUBSURFACE INVESTIGATIONS IN 2006, COMPOSITE CONCRETE CORES WERE ANALYZED BY PARSONS. SCREENING OF THE CORES, USING WIPES, WAS COMPLETED PRIOR TO COMPOSITING.
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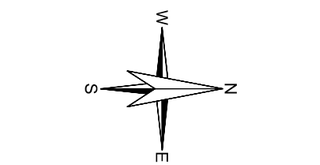


SITE KEY: NTS

HALEY ALDRICH

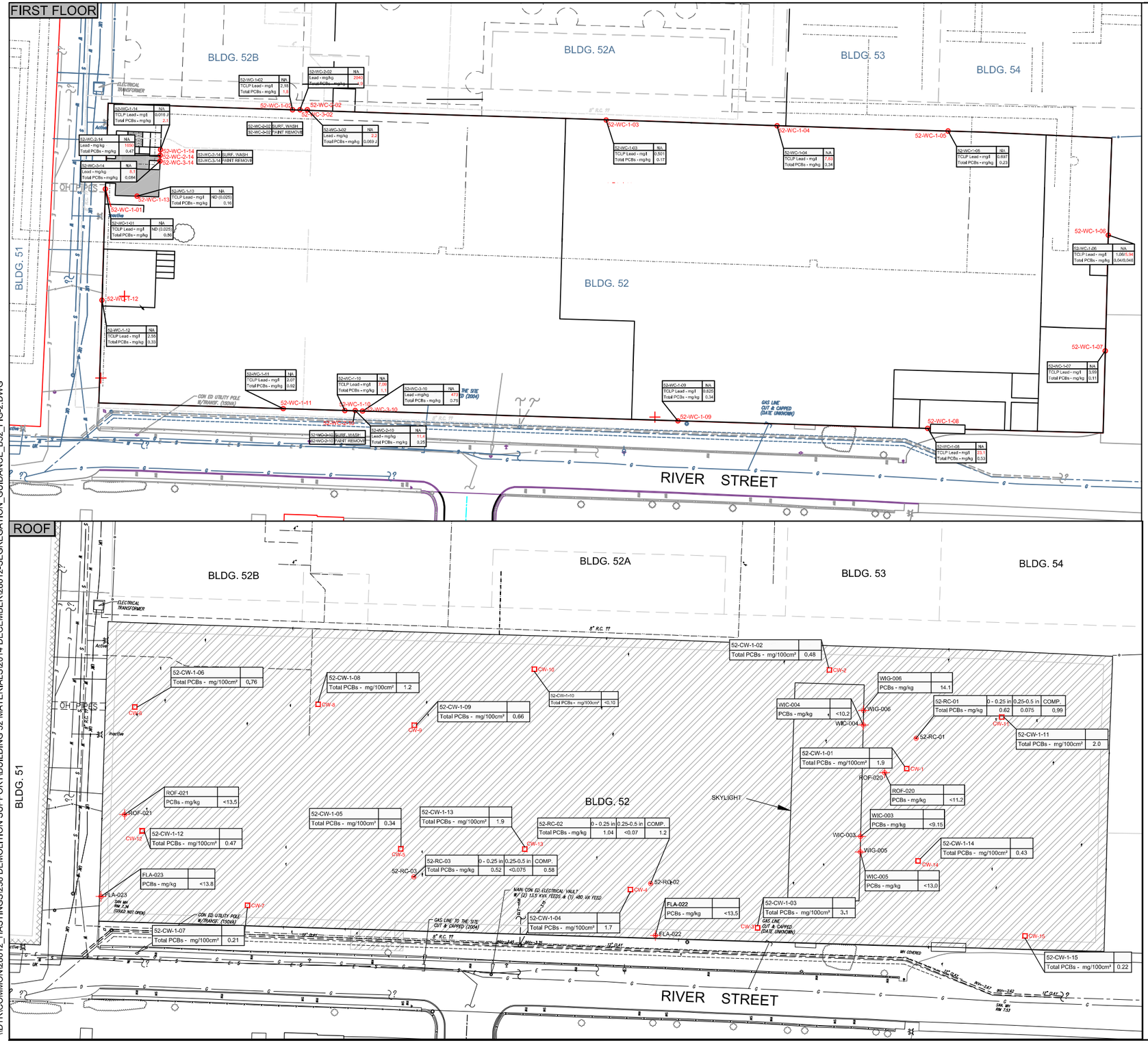
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

BUILDING 52 SCREENING SAMPLE LOCATIONS

SCALE: AS SHOWN
JUNE 2015

FIGURE 3

\\DTRCOMMON\28612_HASTINGS\238 DEMOLITION SUPPORT\BUILDING 52 MATERIALS\2014 DECEMBER\28612-SEGREGATION_GUIDANCE_B52_FIG-1.DWG



LEGEND:

—W—	WATER	●	WALL CORE
—G—	GAS	○	ROOF CORE
—E—	ELECTRIC	⊕	OTHER SAMPLING
—S—	SANITARY	□	CEILING WIPE
—UK—	UNKNOWN UTILITY		

SAMPLE NAMING:
WC - WALL CORE
FC - FLOOR CORE
CR - FLOOR CORE (PARSONS)
CW- CEILING WIPE - CEILING IS UNDERSIDE OF ROOF DECK (LOCATION APPROXIMATE)
RC - ROOF CORE - CORED FROM TOP OF ROOF (LOCATION APPROXIMATE)
ROF - ROOFING MATERIAL (LOCATION APPROXIMATE)
FLA - ROOF FLASHING (LOCATION APPROXIMATE)
WIC - WINDOW CAULKING (LOCATION APPROXIMATE)
WIG - WINDOW GLAZING (LOCATION APPROXIMATE)
EXJ - EXPANSION JOINT CAULK (LOCATION APPROXIMATE)

NOTES:
1. DURING SUBSURFACE INVESTIGATIONS IN 2006, COMPOSITE CONCRETE CORES WERE ANALYZED BY PARSONS. SCREENING OF THE CORES, USING WIPES, WAS COMPLETED PRIOR TO COMPOSITING.
2. SAMPLES OF VARIOUS BUILDING MATERIALS WERE COLLECTED BETWEEN 2009 AND 2010 FOR PRELIMINARY WASTE STREAM DETERMINATION.
3. IN PREPARATION FOR BUILDING STRUCTURAL INSPECTIONS IN 2010, WIPE SAMPLES OF THE UNDERSIDE OF THE ROOF DECK WERE COMPLETED AS PART OF HEALTH AND SAFETY PLANNING TO SCREEN FOR POTENTIAL PCB EXPOSURE.
4. BASE PLAN PROVIDED BY BOSWELL ENGINEERING DRAWING NO. 04-209-MW (JANUARY 2006).
5. HISTORICAL SURVEY INFORMATION PROVIDED BY PARSONS IN JULY 2005.
6. INTERIOR BUILDING FEATURES BASED ON DRAWINGS PROVIDED BY PARSONS IN NOVEMBER 2004.
7. QUALIFIERS:
   - ND - NOT DETECTED
   - J OR B - ESTIMATED RESULT
   - NA - NOT AVAILABLE
8. RESULTS SEPARATED BY A SLASH (/) SHOW A SAMPLE AND THE CORRESPONDING FIELD DUPLICATE RESULT.
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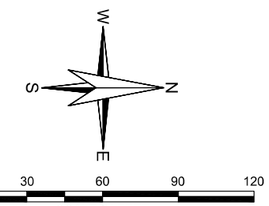


SITE KEY: NTS

HALEY ALDRICH

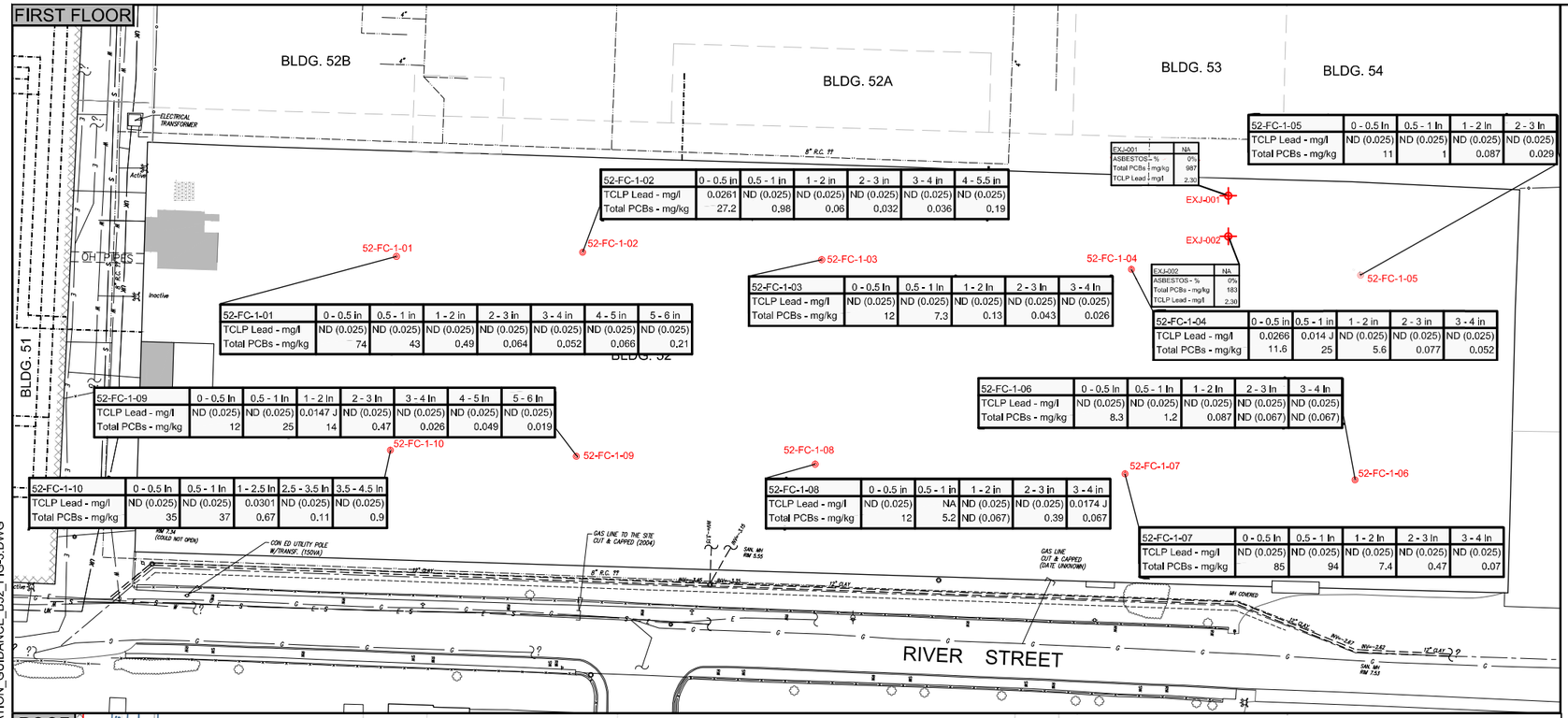
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

BUILDING 52 SCREENING SAMPLE LOCATIONS AND RESULTS (WALLS AND ROOF)

SCALE: AS SHOWN
JUNE 2015

FIGURE 4

\\DTRICOMMON\28612_HASTINGS\238 DEMOLITION SUPPORT\BUILDING 52 MATERIALS\2014 DECEMBER\28612-SEGREGATION_GUIDANCE_B52_FIG-2.DWG



52-FC-1-02	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In	4 - 5.5 In
TCLP Lead - mg/l	0.0261	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	27.2	0.98	0.06	0.032	0.036	0.19

52-FC-1-05	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	11	1	0.087	0.029

EXJ-001	NA
ASBESTOS - %	0%
Total PCBs - mg/kg	987
TCLP Lead - mg/l	2.30

52-FC-1-01	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In	4 - 5 In	5 - 6 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	74	43	0.49	0.064	0.052	0.066	0.21

52-FC-1-03	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	12	7.3	0.13	0.043	0.026

EXJ-002	NA
ASBESTOS - %	0%
Total PCBs - mg/kg	183
TCLP Lead - mg/l	2.30

52-FC-1-04	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	0.0266	0.014 J	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	11.6	25	5.6	0.077	0.052

52-FC-1-09	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In	4 - 5 In	5 - 6 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	0.0147 J	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	12	25	14	0.47	0.026	0.049	0.019

52-FC-1-06	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	8.3	1.2	0.087	ND (0.067)	ND (0.067)

52-FC-1-10	0 - 0.5 In	0.5 - 1 In	1 - 2.5 In	2.5 - 3.5 In	3.5 - 4.5 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	0.0301	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	35	37	0.67	0.11	0.9

52-FC-1-08	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	ND (0.025)	NA	ND (0.025)	ND (0.025)	0.0174 J
Total PCBs - mg/kg	12	5.2	ND (0.067)	0.39	0.067

52-FC-1-07	0 - 0.5 In	0.5 - 1 In	1 - 2 In	2 - 3 In	3 - 4 In
TCLP Lead - mg/l	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)	ND (0.025)
Total PCBs - mg/kg	85	94	7.4	0.47	0.07

WIC-007	NA
ASBESTOS	0%

WIC-008	NA
ASBESTOS	0%

WIC-004	
ASBESTOS - %	0
PCBs - mg/kg	<10.2
TCLP LEAD - mg/l	15.0

WIC-005	
ASBESTOS - %	0
PCBs - mg/kg	14.1
TCLP LEAD - mg/l	50.4

WIC-003	
ASBESTOS - %	0
PCBs - mg/kg	<6.10
TCLP LEAD - mg/l	15.0

ROF-020	
ASBESTOS - %	0
PCBs - mg/kg	<11.2
TCLP LEAD - mg/l	<0.5

WIC-005	
ASBESTOS - %	0
PCBs - mg/kg	<13.0
TCLP LEAD - mg/l	50.4

ROF-021	
ASBESTOS - %	0
PCBs - mg/kg	<13.5
TCLP LEAD - mg/l	<0.5

FLA-023	
ASBESTOS - %	17
PCBs - mg/kg	<13.6
TCLP LEAD - mg/l	<0.5

FLA-022	
ASBESTOS - %	27
PCBs - mg/kg	<13.6
TCLP LEAD - mg/l	<0.5

LEGEND:

- —W— WATER
- —G— GAS
- —E— ELECTRIC
- —S— SANITARY
- —UK— UNKNOWN UTILITY
- ◎ FOUNDATION CORE
- ⌖ OTHER SAMPLING

SAMPLE NAMING:
WC - WALL CORE
FC - FLOOR CORE
CR - FLOOR CORE (PARSONS)
CW- CEILING WIPE - CEILING IS UNDERSIDE OF ROOF DECK (LOCATION APPROXIMATE)
RC - ROOF CORE - CORED FROM TOP OF ROOF (LOCATION APPROXIMATE)
ROF - ROOFING MATERIAL (LOCATION APPROXIMATE)
FLA - ROOF FLASHING (LOCATION APPROXIMATE)
WIC - WINDOW CAULKING (LOCATION APPROXIMATE)
WIG - WINDOW GLAZING (LOCATION APPROXIMATE)
EXJ - EXPANSION JOINT CAULK (LOCATION APPROXIMATE)

NOTES:
1. DURING SUBSURFACE INVESTIGATIONS IN 2006, COMPOSITE CONCRETE CORES WERE ANALYZED BY PARSONS. SCREENING OF THE CORES, USING WIPES, WAS COMPLETED PRIOR TO COMPOSITING.
2. SAMPLES OF VARIOUS BUILDING MATERIALS WERE COLLECTED BETWEEN 2009 AND 2010 FOR PRELIMINARY WASTE STREAM DETERMINATION.
3. IN PREPARATION FOR BUILDING STRUCTURAL INSPECTIONS IN 2010, WIPE SAMPLES OF THE UNDERSIDE OF THE ROOF DECK WERE COMPLETED AS PART OF HEALTH AND SAFETY PLANNING TO SCREEN FOR POTENTIAL PCB EXPOSURE.
4. BASE PLAN PROVIDED BY BOSWELL ENGINEERING DRAWING NO. 04-209-MW (JANUARY 2006).
5. HISTORICAL SURVEY INFORMATION PROVIDED BY PARSONS IN JULY 2005.
6. INTERIOR BUILDING FEATURES BASED ON DRAWINGS PROVIDED BY PARSONS IN NOVEMBER 2004.
7. QUALIFIERS:
   - ND - NOT DETECTED
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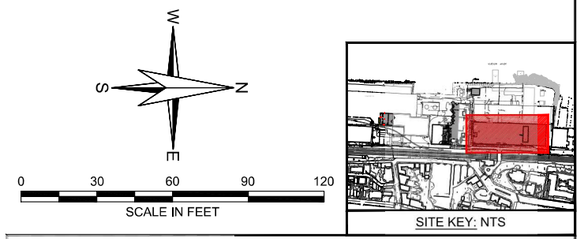
   - NA - NOT AVAILABLE
8. RESULTS SEPARATED BY A SLASH (/) SHOW A SAMPLE AND THE CORRESPONDING FIELD DUPLICATE RESULT.
9. "SURF WASH" AND "PAINT REMOVE" DENOTE HOW THE SAMPLE WAS PREPARED PRIOR TO BEING ANALYZED.



SITE KEY: NTS

HALEY ALDRICH

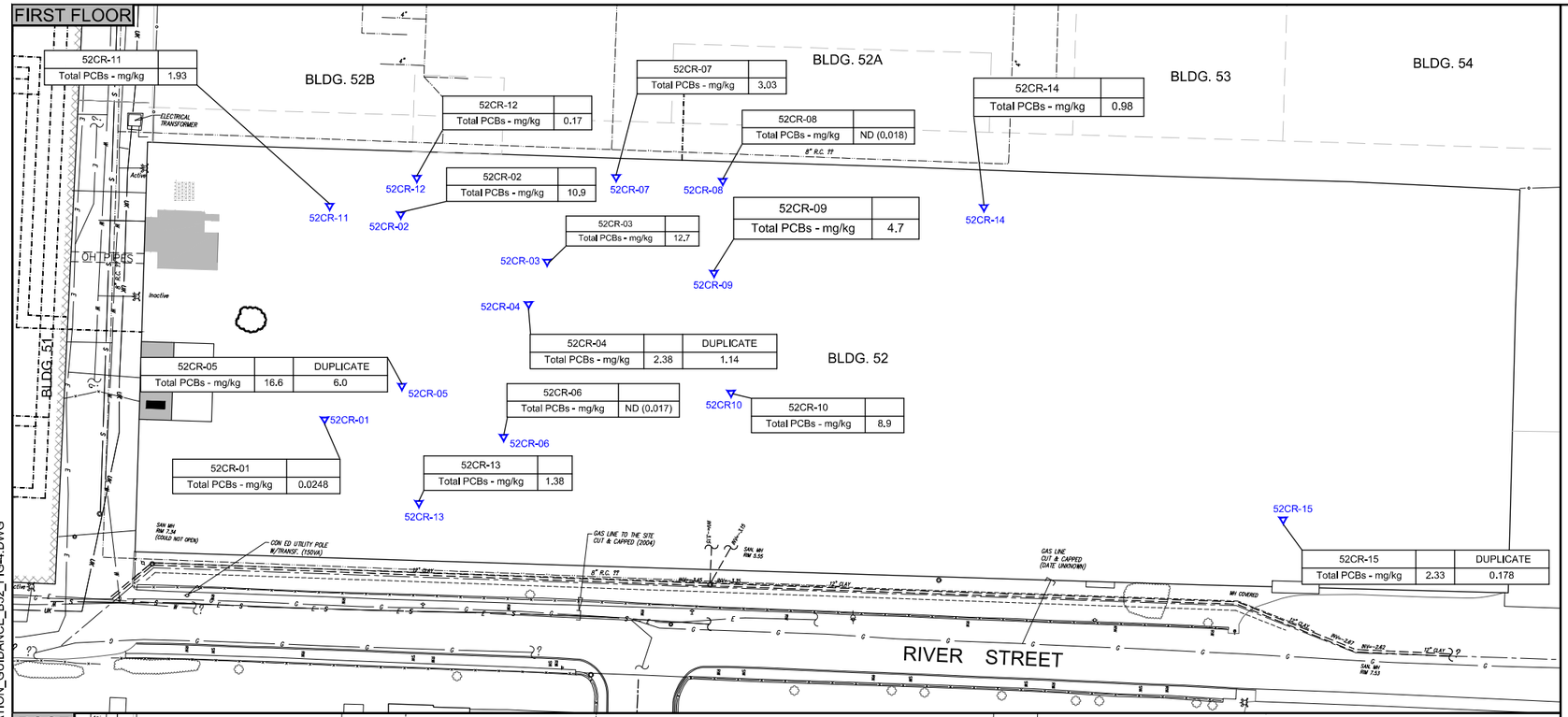
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

BUILDING 52 SCREENING SAMPLE LOCATIONS AND RESULTS (FLOOR AND OTHER ROOF MATERIALS)

SCALE: AS SHOWN
JUNE 2015

FIGURE 5

\\DT\COMMON\28612_HASTINGS\238 DEMOLITION SUPPORT\BUILDING 52 MATERIALS\2014 DECEMBER\28612-SEGREGATION_GUIDANCE_B52_FIG-3.DWG



LEGEND:

- —W— WATER
- —G— GAS
- —E— ELECTRIC
- —S— SANITARY
- —UK— UNKNOWN UTILITY

▽ FLOOR CORE (PARSONS)

SAMPLE NAMING:
CR - FLOOR CORE (PARSONS)

CRITERIA SCREENING:

NON-HAZARDOUS WASTE, BELOW SUBSURFACE REMOVAL CRITERIA (DEPENDING UPON TSCA APPLICABILITY DETERMINATION)

PCBs: <10 MG/KG

NON-HAZARDOUS WASTE, EXCEEDS SUBSURFACE REMOVAL CRITERIA (DEPENDING UPON TSCA APPLICABILITY DETERMINATION):

PCBs: >10 MG/KG, <50 MG/KG

HAZARDOUS WASTE, EXCEEDS SUBSURFACE REMOVAL CRITERIA (DEPENDING UPON TSCA APPLICABILITY DETERMINATION) :

PCBs: >50 MG/KG

NOTES:

1. DURING SUBSURFACE INVESTIGATIONS IN 2006, COMPOSITE CONCRETE CORES WERE ANALYZED BY PARSONS. SCREENING OF THE CORES, USING WIPES, WAS COMPLETED PRIOR TO COMPOSITING.
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6. INTERIOR BUILDING FEATURES BASED ON DRAWINGS PROVIDED BY PARSONS IN NOVEMBER 2004.
7. QUALIFIERS:
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   - NA - NOT AVAILABLE
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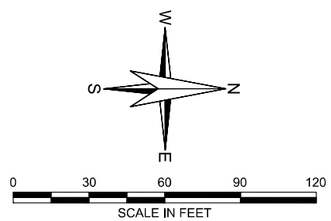
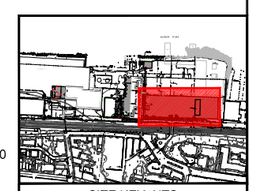




SITE KEY: NTS

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

BUILDING 52 FLOOR SCREENING SAMPLE LOCATIONS AND RESULTS (COMPOSITE)

SCALE: AS SHOWN
JUNE 2015

FIGURE 6

\\DTRCOMMON\28612_HASTINGS\238 DEMOLITION SUPPORT\BUILDING 52 MATERIALS\2014 DECEMBER\28612-SEGREGATION_GUIDANCE_B52_FIG-4.DWG

Four borings at at 5' centers

Four borings at at 5' centers

RIVER STREET

PENN CENTRAL RAILROAD - HUDSON DIVISION
(formerly New York Central Railroad Company)

Floor Sampling Results >50 PPM (2009)

Floor Sampling Results <50 PPM (2009)

2015 Proposed Floor Sampling Locations

2015 Proposed Interior Wall Sampling Locations
(4 samples per location @ ~0.5 ft, ~4 ft, ~11 ft, and ~22 ft above finished floor)

N
W E
S

0 60 120
SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

B52 FLOOR AND WALL (INTERIOR) SAMPLING PLAN

AS SHOWN
JUNE 2015

FIGURE 7

G:\28612\GLOBAL\CAD\28612-324-0027 B52 EXCAVATION AREAS.DWG

Appendix C

PCB Sampling Results (tables and figures)

Tables

Figures

TABLE C.1
TOTAL PCBs - CONCRETE FLOOR SAMPLES, SURFICIAL SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
FLR-CON-001	12/10/2015	6.892	-
FLR-CON-002	12/10/2015	870	-
FLR-CON-003	12/10/2015	ND	-
FLR-CON-004	12/10/2015	49.64	-
FLR-CON-005	12/9/2015	0.05	2.62
FLR-CON-006	12/9/2015	0.517	-
FLR-CON-007	12/9/2015	0.0273	-
FLR-CON-008	12/9/2015	0.249	-
FLR-CON-009	12/9/2015	21.4	-
FLR-CON-010	12/9/2015	0.0965	-
FLR-CON-011	12/10/2015	4.769	-
FLR-CON-012	12/10/2015	17.67	-
FLR-CON-013	12/10/2015	0.0457	-
FLR-CON-014	12/10/2015	0.0542	-
FLR-CON-015	12/10/2015	53.6	-
FLR-CON-016	12/10/2015	19366	84.25
FLR-CON-017	12/10/2015	3.497	-
FLR-CON-018	12/10/2015	0.7347	-
FLR-CON-019	12/9/2015	ND	-
FLR-CON-020	12/9/2015	ND	-
FLR-CON-021	12/10/2015	4.115	-
FLR-CON-022	12/10/2015	62.96	-
FLR-CON-023	12/10/2015	22.62	-
FLR-CON-024	12/10/2015	0.1608	-
FLR-CON-025	12/10/2015	2.52	-
FLR-CON-026	12/9/2015	15.25	-
FLR-CON-027	12/9/2015	24.41	19.85
FLR-CON-028	12/9/2015	16.44	-
FLR-CON-029	12/9/2015	40.85	-
FLR-CON-030	12/9/2015	29.1	-
FLR-CON-031	12/14/2015	45.5	-
FLR-CON-032	12/14/2015	13.5	-
FLR-CON-033	12/14/2015	19.59	-
FLR-CON-034	12/14/2015	0.692	-
FLR-CON-035	12/14/2015	14.19	-
FLR-CON-036	12/14/2015	5.427	-
FLR-CON-037	12/14/2015	8	-
FLR-CON-038	12/14/2015	2.598	-
FLR-CON-039	2/29/2016	11.8	-
FLR-CON-041	2/26/2016	7.67	28.5
FLR-CON-101	2/22/2016	7.47	37.9
FLR-CON-102	2/22/2016	14.2	-
FLR-CON-103	2/22/2016	66.3	-
FLR-CON-104	2/22/2016	495	-
FLR-CON-105	2/22/2016	13.88	-
FLR-CON-106	2/22/2016	0.0322	-
FLR-CON-107	2/22/2016	38.59	7.47
FLR-CON-108	2/22/2016	5.29	-

TABLE C.1
TOTAL PCBs - CONCRETE FLOOR SAMPLES, SURFICIAL SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
FLR-CON-109	2/22/2016	25.9	49.7
FLR-CON-110	2/22/2016	58.18	-
FLR-CON-111	2/22/2016	19.35	-
FLR-CON-112	2/22/2016	14.9	-
FLR-CON-113	2/22/2016	3386	3018
FLR-CON-114	2/22/2016	1090	-
FLR-CON-115	2/22/2016	826	-
FLR-CON-116	2/22/2016	190	-
FLR-CON-117	2/22/2016	0.754	0.311
FLR-CON-118	2/22/2016	15.8	-
FLR-CON-119	2/22/2016	10	-
FLR-CON-120	2/23/2016	15.3	-
FLR-CON-121	2/23/2016	128	-
FLR-CON-201	2/25/2016	40.1	-
FLR-CON-203	2/25/2016	209	-
FLR-CON-204	2/25/2016	1170	-
FLR-CON-206	2/25/2016	79.6	46.7
FLR-CON-207	2/25/2016	3580	-
FLR-CON-208	2/25/2016	385	-
FLR-CON-217	2/24/2016	25.37	34.53
FLR-CON-218	2/24/2016	19.55	-
FLR-CON-221	2/24/2016	17.62	-
FLR-CON-222	2/24/2016	46.52	-
FLR-CON-224	2/24/2016	55.84	-
FLR-CON-225	2/24/2016	14400	-
FLR-CON-226	2/24/2016	196	-
FLR-CON-227	2/24/2016	2620	-
FLR-CON-228	2/24/2016	249	-
FLR-CON-229	2/24/2016	1090	1690
FLR-CON-230	2/24/2016	789	-
FLR-CON-231	2/24/2016	1580	-
FLR-CON-232	2/24/2016	1910	-
FLR-CON-241	2/26/2016	0.2	-
FLR-CON-242	2/26/2016	43.8	-
FLR-CON-243	2/26/2016	85	-
FLR-CON-244	3/1/2016	92.8	-
FLR-CON-245	3/1/2016	40.1	-
FLR-CON-301	2/29/2016	4950	-
FLR-CON-302	2/29/2016	1100	-
FLR-CON-303	2/29/2016	1260	-
FLR-CON-304	2/29/2016	25.1	-
FLR-CON-305	2/29/2016	2560	-
FLR-CON-306	2/29/2016	286	-
FLR-CON-307	2/29/2016	695	-
FLR-CON-308	2/29/2016	461	-
FLR-CON-309	2/29/2016	1820	-
FLR-CON-310	2/29/2016	379	-
FLR-CON-311	2/29/2016	487	-

TABLE C.1
TOTAL PCBs - CONCRETE FLOOR SAMPLES, SURFICIAL SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
FLR-CON-312	2/29/2016	95.8	519
FLR-CON-313	3/7/2016	217	-
FLR-CON-314	3/7/2016	133	-
FLR-CON-315	3/7/2016	41	0.0621
FLR-CON-316	3/7/2016	80.2	-
FLR-CON-317	3/7/2016	426	236
FLR-CON-318	3/7/2016	23100	-
FLR-CON-319	3/7/2016	30.3	-
FLR-CON-320	3/7/2016	1130	-
FLR-CON-321	3/9/2016	0.501	2.413
FLR-CON-322	3/9/2016	0.653	-
FLR-CON-323	3/7/2016	5.76	-
FLR-CON-324	3/7/2016	10.7	-
FLR-CON-325	3/7/2016	3.79	-
FLR-CON-326	3/7/2016	37	-
FLR-CON-327	3/9/2016	179	-
FLR-CON-401	3/7/2016	207	34.9
FLR-CON-402	3/7/2016	241	-
FLR-CON-403	3/7/2016	466	-
FLR-CON-404	3/7/2016	85.4	32.9
FLR-CON-409	3/7/2016	295	-
FLR-CON-411	3/7/2016	3550	-
FLR-CON-412	3/7/2016	6470	-
FLR-CON-413	3/7/2016	21.5	-
FLR-CON-414	3/7/2016	20.7	-
FLR-CON-415	3/7/2016	38.5	-
FLR-CON-416	3/7/2016	10.9	-
FLR-CON-417	3/7/2016	22.9	-
FLR-CON-418	3/14/2016	569	333
FLR-CON-419	3/14/2016	24.8	-
FLR-CON-420	3/14/2016	9.6	-
FLR-CON-421	3/14/2016	399	-
FLR-CON-422	3/15/2016	18.1	-
FLR-CON-423	3/14/2016	19.5	-
FLR-CON-431	3/15/2016	13.5	-
FLR-CON-433	3/15/2016	62	-
FLR-CON-434	3/21/2016	15.4	-
FLR-CON-435	3/21/2016	31.3	-
FLR-CON-436	3/21/2016	67.4	-
FLR-CON-437	3/22/2016	8.69	-
FLR-CON-501	3/14/2016	44.6	-
FLR-CON-502	3/14/2016	44.7	-
FLR-CON-503	3/14/2016	16.7	-
FLR-CON-504	3/14/2016	67.7	-
FLR-CON-505	3/14/2016	77.1	-
FLR-CON-506	3/14/2016	85.3	-
FLR-CON-507	3/14/2016	5410	769
FLR-CON-508	3/14/2016	2710	-

TABLE C.1
TOTAL PCBs - CONCRETE FLOOR SAMPLES, SURFICIAL SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
FLR-CON-509	3/14/2016	10.3	-
FLR-CON-511	3/21/2016	157	-
FLR-CON-512	3/21/2016	42.1	74.7
FLR-CON-513	3/21/2016	45.1	-
FLR-CON-514	3/21/2016	101	-
FLR-CON-515	3/21/2016	50.2	-
FLR-CON-516	3/21/2016	6.4	-
FLR-CON-519	3/22/2016	30.6	-
FLR-CON-521	3/22/2016	32.6	-
FLR-CON-522	3/22/2016	0.916	-
FLR-CON-523	3/22/2016	3.95	-
FLR-CON-524	3/22/2016	111	-
FLR-CON-525	4/7/2016	34.7	-
FLR-CON-526	4/7/2016	78.4	-
FLR-CON-527	4/7/2016	27.1	-
FLR-CON-528	4/7/2016	10.37	-
FLR-CON-529	4/7/2016	22	-

Notes & Abbreviations

ND: Not detected above laboratory detection limit;

N: Normal Sample (Primary Sample); FD: Field Duplicate Sample

- : Not collected/analyzed for PCBs

FLR-CON: Floor concrete sample

1. Results are in mg/kg.
2. Surficial samples are collected from the top three inches of the concrete slab.
3. Total PCBs results in red are greater than 50 mg/kg.

TABLE C.2
TOTAL PCBs - CONCRETE FLOOR SAMPLES, BOTTOM ONE-INCH SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

	Total PCBs (N)	
Location ID	**Bottom 1-inch Sample**	**Surficial Sample**
AREA C		
FLR-CON-015	ND	53.6
FLR-CON-110	0.0512	58.18
AREA D		
FLR-CON-016	0.3369	19366
FLR-CON-113	0.139	3386
FLR-CON-115	1.19	826
FLR-CON-121	0.152	128
FLR-CON-225	135	14400
FLR-CON-227	0.35	2620
FLR-CON-229	0.452	1090
FLR-CON-231	0.11	1580
FLR-CON-232	ND	1910
FLR-CON-301	40.6	4950
FLR-CON-302	0.815	1100
FLR-CON-303	0.192	1260
FLR-CON-305	0.195	2560
FLR-CON-307	0.332	695
FLR-CON-308	10.8	461
FLR-CON-309	0.726	1820
FLR-CON-312	0.0251	95.8
FLR-CON-327	0.285	179
FLR-CON-401	0.184	207
FLR-CON-403	0.0447	466
FLR-CON-411	0.118	3550
FLR-CON-412	1.77	6470
FLR-CON-506	0.0806	85.3
FLR-CON-507	0.158	5410
FLR-CON-508	0.0634	2710
FLR-CON-511	0.041	157
FLR-CON-524	ND	111
AREA E		
FLR-CON-204	107	1170
FLR-CON-206	0.0256	79.6
FLR-CON-207	0.121	3580
FLR-CON-313	0.0833	217
FLR-CON-317	0.0741	426
FLR-CON-318	0.371	23100
FLR-CON-320	0.813	1130
FLR-CON-418	160	569
FLR-CON-421	0.183	399

Notes & Abbreviations
ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample)
- : Not collected/analyzed for PCBs
FLR-CON: Floor concrete sample
1. Results are in mg/kg.
2. Total PCBs results in red are greater than 50 mg/kg.
3. Bottom 1-inch samples were collected from the bottom of the concrete slab. Surficial samples were collected from the top three inches of the concrete slab.

TABLE C.3
TOTAL PCBs - WALL AND SECOND FLOOR SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

Location ID	Height above finished floor (ft)	Sample Date	Total PCBs	
			N	FD
Interior Brick Wall				
WAL-INB-001	1	12/11/2015	133.1	-
WAL-INB-001	4	12/1/2015	2.033	-
WAL-INB-001	11	12/1/2015	0.725	4.52
WAL-INB-001	22	12/1/2015	1.005	-
WAL-INB-002	1	12/11/2015	0.1663	-
WAL-INB-002	4	12/11/2015	0.0909	-
WAL-INB-002	11	12/3/2015	0.103	-
WAL-INB-002	22	12/3/2015	0.321	-
WAL-INB-003	1	12/11/2015	0.1451	-
WAL-INB-003	4	12/11/2015	0.1016	0.1161
WAL-INB-003	11	12/3/2015	0.1829	-
WAL-INB-003	22	12/3/2015	0.0788	-
WAL-INB-004	1	12/11/2015	0.0959	-
WAL-INB-004	4	12/11/2015	0.0564	-
WAL-INB-004	11	12/1/2015	1.008	-
WAL-INB-004	22	12/1/2015	0.836	-
WAL-INB-005	1	12/11/2015	0.1228	-
WAL-INB-005	4	12/11/2015	2.326	0.308
WAL-INB-005	11	12/2/2015	0.592	-
WAL-INB-005	22	12/2/2015	0.78	-
WAL-INB-006	1	12/11/2015	0.0904	-
WAL-INB-006	4	12/11/2015	0.857	-
WAL-INB-006	11	12/2/2015	0.446	-
WAL-INB-006	22	12/2/2015	0.569	ND
WAL-INB-007	1	12/11/2015	ND	-
WAL-INB-007	4	12/11/2015	0.279	0.0293
WAL-INB-007	11	12/2/2015	0.2005	-
WAL-INB-007	22	12/2/2015	ND	-
WAL-INB-008	1	12/11/2015	ND	-
WAL-INB-008	4	12/11/2015	0.1382	-
WAL-INB-008	11	12/2/2015	0.219	-
WAL-INB-008	22	12/2/2015	0.2112	-
WAL-INB-009	1	12/11/2015	0.724	-
WAL-INB-009	4	12/11/2015	0.315	-
WAL-INB-009	11	12/2/2015	ND	1.369
WAL-INB-009	22	12/2/2015	0.1578	-
WAL-INB-010	1	12/11/2015	1.083	-
WAL-INB-010	4	12/11/2015	0.0289	0.404
WAL-INB-010	11	12/2/2015	0.889	-
WAL-INB-010	22	12/2/2015	0.0358	-
WAL-INB-011	1	12/11/2015	0.26	-
WAL-INB-011	4	12/11/2015	ND	-
WAL-INB-011	11	12/2/2015	4.02	-
WAL-INB-011	22	12/2/2015	0.1547	-
WAL-INB-012	1	12/11/2015	4.8	-
WAL-INB-012	4	12/11/2015	0.1966	-
WAL-INB-012	11	12/1/2015	0.519	-
WAL-INB-012	22	12/1/2015	9.79	-

TABLE C.3
TOTAL PCBs - WALL AND SECOND FLOOR SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

Location ID	Height above finished floor (ft)	Sample Date	Total PCBs	
			N	FD
WAL-INB-013	1	12/11/2015	62.4	-
WAL-INB-013	4	12/11/2015	0.1099	-
WAL-INB-013	11	12/1/2015	0.0656	-
WAL-INB-013	22	12/1/2015	0.0311	-
WAL-INB-014	1	12/11/2015	2.383	-
WAL-INB-014	4	12/11/2015	1.3498	-
WAL-INB-014	11	12/1/2015	0.942	-
WAL-INB-014	22	12/1/2015	24.6	-
WAL-INB-015	1	12/11/2015	ND	-
WAL-INB-015	4	12/11/2015	ND	-
WAL-INB-015	11	12/3/2015	0.911	0.0519
WAL-INB-015	22	12/3/2015	0.0332	-
WAL-INB-016	1	12/11/2015	2.505	-
WAL-INB-016	4	12/11/2015	0.2639	-
WAL-INB-016	11	12/3/2015	0.369	-
WAL-INB-016	22	12/3/2015	3.89	-
WAL-INB-017	1	12/15/2015	0.626	-
WAL-INB-017	4	12/15/2015	5.68	-
WAL-INB-017	11	12/15/2015	1.001	-
WAL-INB-017	22	12/15/2015	1.404	-
WAL-INB-101	1	2/23/2016	1.43	-
WAL-INB-102	1	2/23/2016	41.1	-
WAL-INB-104	1	2/23/2016	0.0314	-
WAL-INB-105	1	2/23/2016	ND	2.61
WAL-INB-211	1	3/7/2016	9.47	15
WAL-INB-212	1	3/7/2016	15.9	-
WAL-INB-213	1	3/7/2016	6.31	-
WAL-INB-214	1	3/21/2016	5.69	-
Exterior Brick Wall				
WAL-EXB-001	18-19	12/3/2015	0.122	-
WAL-EXB-002	18	12/3/2015	ND	-
WAL-EXB-003	15	12/3/2015	ND	ND
WAL-EXB-004	15	12/3/2015	0.0535	-
WAL-EXB-005	18	12/3/2015	ND	-
WAL-EXB-006	15	12/3/2015	ND	-
WAL-EXB-007	15	12/3/2015	ND	-
WAL-EXB-008	15	12/4/2015	ND	-
WAL-EXB-009	15	12/4/2015	ND	-
WAL-EXB-010	15	12/4/2015	ND	ND
WAL-EXB-011	18.5	12/3/2015	0.0895	-
WAL-EXB-012	18.5	12/3/2015	ND	-
Wall CMU				
WAL-CMU-001	20	12/2/2015	0.1497	-
WAL-CMU-002	4	12/17/2015	ND	-
WAL-CMU-003	-	12/3/2015	0.785	-
WAL-CMU-004	4	12/17/2015	0.088	-

TABLE C.3
TOTAL PCBs - WALL AND SECOND FLOOR SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

Location ID	Height above finished floor (ft)	Sample Date	Total PCBs	
			N	FD
Second Floor Materials				
SFL-FLR-001	-	12/14/2015	1.303	-
SFL-FLR-002	-	12/14/2015	3.904	-
SFL-FLR-003	-	12/14/2015	2.907	-
SFL-FLR-004	-	12/14/2015	0.59	0.0309
SFL-WAL-001	4	12/14/2015	ND	-
SFL-WAL-002	4	12/14/2015	0.387	-
SFL-WAL-003	4	12/14/2015	0.365	-
SFL-WAL-004	4	12/14/2015	0.1372	4.064

Notes & Abbreviations

ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);
FD: Field Duplicate Sample
- : Not collected/analyzed for PCBs
WAL-INB: Wall interior brick samples
WAL-EXB: Wall exterior brick samples
WAL-CMU: Wall Concrete Masonry Unit
SFL-FLR: Second floor concrete slab sample
SFL-WAL: Second floor wall sample
1. Results are in mg/kg.
2. Total PCBs results in red are greater than 50 mg/kg.

TABLE C.4
TOTAL PCBs - EXPANSION JOINT AND SUMP SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
Expansion Joint			
FLR-EXJ-003	12/14/2015	20.51	-
FLR-EXJ-004	12/14/2015	732	-
FLR-EXJ-005	12/14/2015	124.6	66.9
FLR-EXJ-006	12/14/2015	208	-
FLR-EXJ-007	12/14/2015	111.1	-
FLR-EXJ-008	12/14/2015	106.2	-
FLR-EXJ-009	12/14/2015	186.2	-
FLR-EXJ-010	12/14/2015	864	-
FLR-EXJ-011	12/14/2015	265.4	-
FLR-EXJ-012	12/14/2015	173.3	250
FLR-EXJ-013	12/14/2015	321.7	-
FLR-EXJ-014	12/22/2015	280	-
FLR-EXJ-015	12/22/2015	3040	-
FLR-EXJ-016	12/22/2015	286.7	-
FLR-EXJ-017	12/22/2015	772	-
FLR-EXJ-018	12/22/2015	774	-
FLR-EXJ-019	2/25/2016	114.6	-
FLR-EXJ-020	2/25/2016	675	-
Sump			
FLR-SMP-001	12/17/2015	6.13	-
FLR-SMP-008	12/18/2015	218	-

Notes & Abbreviations

ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);

FD: Field Duplicate Sample

- : Not collected/analyzed for PCBs

FLR-EXJ: Expansion joint sample (concrete floor)

FLR-SMP: Sump sample

1. Results are in mg/kg.

2. Total PCBs results in red are greater than 50 mg/kg.

TABLE C.5
TOTAL PCBs - CAULK AND GLAZING SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
Monitor Window Caulk			
ROF-WIC-001	12/14/2015	42.7	-
ROF-WIC-002	12/14/2015	133.7	58.2
ROF-WIC-003	12/14/2015	95.2	-
ROF-WIC-004	12/14/2015	84.7	-
ROF-WIC-005	12/14/2015	45.7	-
ROF-WIC-006	12/14/2015	65.3	-
ROF-WIC-007	12/14/2015	68	-
ROF-WIC-008	12/14/2015	76.5	-
ROF-WIC-009	12/15/2015	115.7	-
ROF-WIC-010	12/15/2015	50.51	-
ROF-WIC-011	12/14/2015	97.8	-
ROF-WIC-012	12/11/2015	103.5	-
ROF-WIC-013	12/15/2015	61.24	-
ROF-WIC-014	12/14/2015	62.1	-
Monitor Window Glazing			
ROF-WIG-001	12/11/2015	94.2	-
ROF-WIG-002	12/11/2015	192.6	-
ROF-WIG-003	12/14/2015	6.89	-
ROF-WIG-004	12/14/2015	10.45	5.66
ROF-WIG-005	12/14/2015	9.57	-
ROF-WIG-006	12/14/2015	10.03	-
ROF-WIG-007	12/14/2015	28.16	-
ROF-WIG-008	12/15/2015	15.97	-
ROF-WIG-009	12/15/2015	28.3	-
ROF-WIG-010	12/14/2015	53	-
ROF-WIG-011	12/14/2015	15.73	-
ROF-WIG-012	12/14/2015	53.6	-
ROF-WIG-013	12/14/2015	29.93	-
ROF-WIG-014	12/14/2015	33.01	-
ROF-WIG-015	12/14/2015	33.2	-
Window Caulk			
WAL-WIC-001	12/8/2015	37.25	-
WAL-WIC-002	12/8/2015	4.94	-
WAL-WIC-003	12/8/2015	47.5	-
WAL-WIC-004	12/8/2015	81	-
WAL-WIC-005	12/9/2015	41.5	48.1
WAL-WIC-006	12/9/2015	28.82	-
WAL-WIC-007	12/9/2015	36.8	-
WAL-WIC-008	12/9/2015	38.2	-
WAL-WIC-009	12/9/2015	59.32	-
WAL-WIC-010	12/9/2015	52.9	-
WAL-WIC-011	12/9/2015	23.5	-
WAL-WIC-012	12/9/2015	33.66	-
WAL-WIC-013	12/9/2015	34.3	-
WAL-WIC-014	12/10/2015	30.77	-
WAL-WIC-015	12/10/2015	19.07	-
WAL-WIC-016	12/10/2015	73.1	-
WAL-WIC-017	12/10/2015	64.4	-
WAL-WIC-018	12/10/2015	171.1	-
WAL-WIC-019	12/10/2015	41.45	26.71

TABLE C.5
TOTAL PCBs - CAULK AND GLAZING SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
WAL-WIC-020	12/10/2015	71.1	-
WAL-WIC-021	12/10/2015	18.05	-
WAL-WIC-022	12/10/2015	21.74	-
WAL-WIC-023	12/10/2015	25.1	-
WAL-WIC-024	12/11/2015	57	-
WAL-WIC-025	12/11/2015	17.01	-
Window Glazing			
WAL-WIG-001	12/8/2015	48.2	-
WAL-WIG-002	12/8/2015	36.8	-
WAL-WIG-003	12/8/2015	1.895	-
WAL-WIG-004	12/8/2015	9.42	-
WAL-WIG-005	12/9/2015	4.65	5.1
WAL-WIG-006	12/9/2015	1.82	-
WAL-WIG-007	12/9/2015	11.68	-
WAL-WIG-008	12/9/2015	3.7	-
WAL-WIG-009	12/9/2015	2.99	-
WAL-WIG-010	12/9/2015	6.7	-
WAL-WIG-011	12/9/2015	3.29	-
WAL-WIG-012	12/9/2015	6.04	-
WAL-WIG-013	12/9/2015	15.35	-
WAL-WIG-014	12/10/2015	27.69	-
WAL-WIG-015	12/10/2015	12.18	-
WAL-WIG-016	12/10/2015	17.11	-
WAL-WIG-017	12/10/2015	33.98	-
WAL-WIG-018	12/10/2015	35.87	-
WAL-WIG-019	12/10/2015	7.15	8.95
WAL-WIG-020	12/10/2015	7.23	-
WAL-WIG-021	12/10/2015	4.92	-
WAL-WIG-022 (teal glaze)	12/10/2015	7.86	-
WAL-WIG-022	12/10/2015	6.95	-
WAL-WIG-023 (teal glaze)	12/10/2015	3.134	-
WAL-WIG-023	12/10/2015	21.15	-
WAL-WIG-024 (gray glaze)	12/11/2015	5.382	-
WAL-WIG-024	12/11/2015	5.68	-
WAL-WIG-025	12/11/2015	6.57	-
WAL-WIG-026	12/11/2015	10.13	-

Notes & Abbreviations

ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);
FD: Field Duplicate Sample
- : Not collected/analyzed for PCBs
ROF-WIC: Monitor Window Caulk (Roof)
WAL-WIC: Window Caulk (Wall)
ROF-WIG: Monitor Window Glazing (Roof)
WAL-WIG: Window Glazing (Wall)
1. Results are in mg/kg.
2. Total PCBs results in red are greater than 50 mg/kg.

TABLE C.6
TOTAL PCBs - PAINT SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
Monitor End Wall Paint			
ROF-PAI-001	12/7/2015	2.867	-
ROF-PAI-002	12/7/2015	8.28	-
ROF-PAI-003	12/7/2015	1.93	-
ROF-PAI-004	12/7/2015	2.6	1.856
ROF-PAI-005	12/7/2015	1.629	-
ROF-PAI-006	12/7/2015	2.733	-
ROF-PAI-007	12/7/2015	3.67	-
ROF-PAI-008	12/7/2015	2.534	-
ROF-PAI-009	12/7/2015	3.27	-
ROF-PAI-010	12/7/2015	3.32	-
ROF-PAI-011	12/7/2015	4.4	-
ROF-PAI-012	12/8/2015	3.81	-
ROF-PAI-013	12/7/2015	6.8	-
ROF-PAI-014	12/8/2015	4.74	-
ROF-PAI-015	12/7/2015	6.26	-
ROF-PAI-016	12/8/2015	5.5	-
ROF-PAI-017	12/7/2015	6.19	-
ROF-PAI-018	12/8/2015	6.43	-
ROF-PAI-019	12/7/2015	3.98	-
ROF-PAI-020	12/8/2015	6.97	-
ROF-PAI-021	12/7/2015	4.14	-
ROF-PAI-022	12/8/2015	5.44	-
Truss Paint			
ROF-TRU-001	12/3/2015	184.7	-
ROF-TRU-002	12/4/2015	132	262.7
ROF-TRU-003	12/3/2015	173.8	-
ROF-TRU-004	12/3/2015	162.6	-
ROF-TRU-005	12/4/2015	75.57	-
ROF-TRU-006	12/2/2015	97.2	-
ROF-TRU-007	12/2/2015	201.2	-
ROF-TRU-008	12/2/2015	242	-
ROF-TRU-009	12/2/2015	237.6	-
ROF-TRU-010	12/2/2015	299	325
Exterior Paint			
WAL-EXP-001	12/15/2015	22.8	26.6
WAL-EXP-002	12/15/2015	83.5	-
Interior Paint			
WAL-INP-001	12/15/2015	263.8	277.2
WAL-INP-002	12/15/2015	45.6	-
WAL-INP-003	12/15/2015	89.7	-
WAL-INP-004	12/15/2015	26.8	-
WAL-INP-005	12/15/2015	173.5	-
WAL-INP-006	12/15/2015	102.4	72.2
WAL-INP-007	12/15/2015	316	-
WAL-INP-008	12/15/2015	53.6	-
WAL-INP-009	12/15/2015	101.6	-

TABLE C.6
TOTAL PCBs - PAINT SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
Column Paint			
WAL-PAI-001	12/4/2015	120.6	-
WAL-PAI-002	12/4/2015	128.2	-
WAL-PAI-003	12/4/2015	144.7	-
WAL-PAI-004	12/4/2015	154.1	-
WAL-PAI-005	12/4/2015	204.7	-
WAL-PAI-006	12/4/2015	0.934	-
WAL-PAI-007	12/4/2015	204.3	-
WAL-PAI-008	12/4/2015	300.2	-
WAL-PAI-009	12/7/2015	86.3	-
WAL-PAI-010	12/4/2015	117.8	-

Notes & Abbreviations

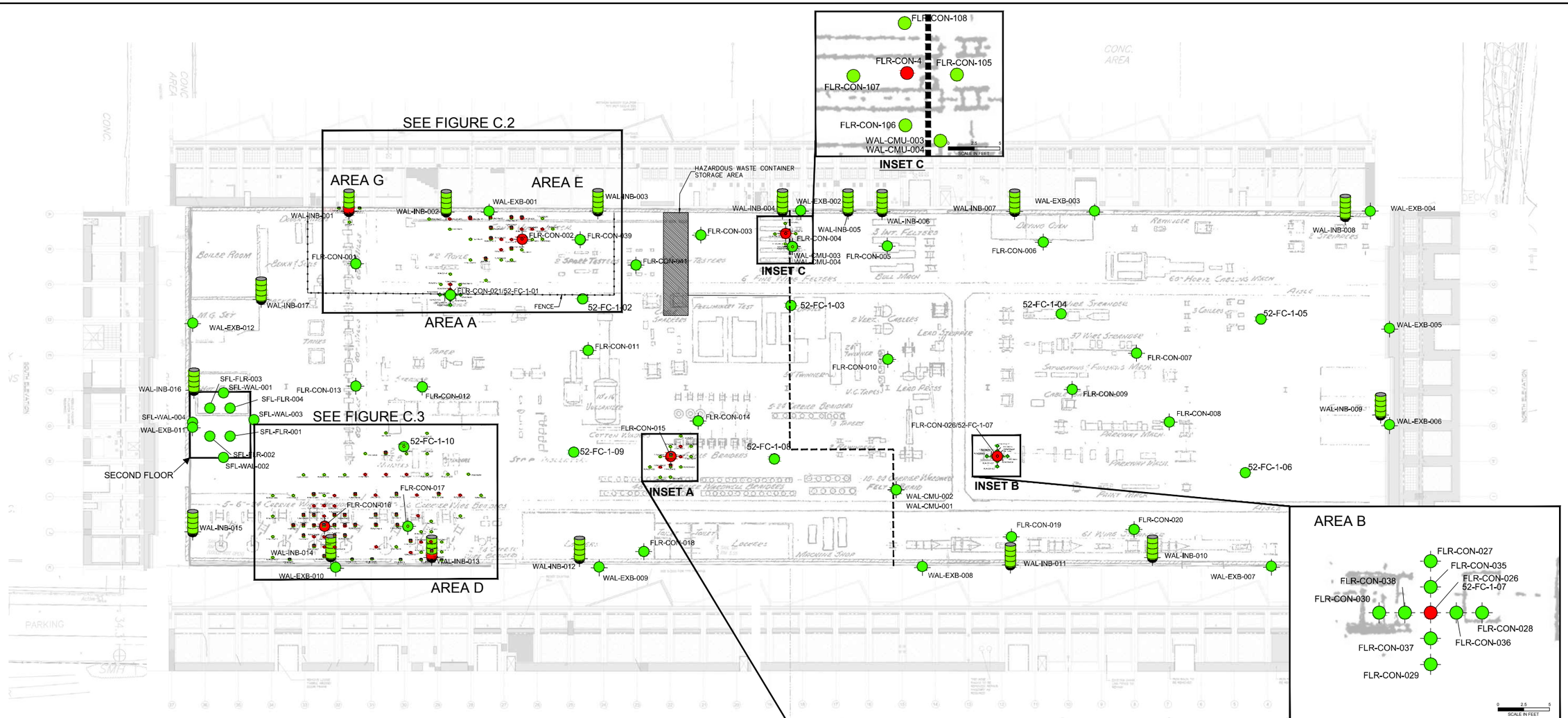
ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);
FD: Field Duplicate Sample
- : Not collected/analyzed for PCBs
ROF-PAI: Monitor end wall paint sample
ROF-TRU: Truss paint sample
WAL-EXP: Exterior paint sample
WAL-INP: Interior paint sample
WAL-PAI: Column paint sample
1. Results are in mg/kg.
2. Total PCBs results in red are greater than 50 mg/kg.

TABLE C.7
TOTAL PCBs - CEILING AND ROOF SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total PCBs	
Location ID	**Sample Date**	**N**	**FD**
Ceiling coating			
ROF-CEI-001	12/7/2015	33.91	-
ROF-CEI-002	12/7/2015	58.5	-
ROF-CEI-003	12/7/2015	27.11	38.8
ROF-CEI-004	12/7/2015	46	-
ROF-CEI-005	12/7/2015	59.3	-
ROF-CEI-006	12/7/2015	330	-
ROF-CEI-007	12/7/2015	492	-
ROF-CEI-008	12/7/2015	101.6	-
ROF-CEI-009	12/9/2015	119.7	-
ROF-CEI-010	12/9/2015	16.87	-
Roof Deck			
ROF-DEK-001	12/4/2015	0.4442	-
ROF-DEK-002	12/4/2015	0.1356	-
ROF-DEK-003	12/4/2015	206.6	-
ROF-DEK-004	12/7/2015	ND	-
ROF-DEK-005	12/7/2015	ND	-
ROF-DEK-006	12/7/2015	4.37	-
ROF-DEK-007	12/7/2015	28.1	-
ROF-DEK-008	12/2/2015	6.59	-
ROF-DEK-009	12/17/2015	0.973	-
ROF-DEK-010	12/17/2015	ND	-
ROF-DEK-011	12/17/2015	0.475	-
ROF-DEK-012	12/17/2015	0.948	-
ROF-DEK-013	12/17/2015	1.725	ND
Roof Membrane			
ROF-MEM-001	12/7/2015	0.22	-
ROF-MEM-002	12/7/2015	1.36	0.947
ROF-MEM-003	12/7/2015	4.165	-
ROF-MEM-004	12/7/2015	3.75	-
ROF-MEM-005	12/7/2015	0.477	-
ROF-MEM-006	12/7/2015	3.49	-
ROF-MEM-007	12/7/2015	0.602	-
ROF-MEM-008	12/7/2015	1.729	-
Cement/Tar			
WAL-RTR-001	12/11/2015	8.34	-
Electrical Insulator			
WAL-MIS-001	12/17/2015	0.398	-
ROF-MIS-002	12/22/2015	ND	-

Notes & Abbreviations

ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);
FD: Field Duplicate Sample
- : Not collected/analyzed for PCBs
ROF-CEI: Ceiling coating sample
ROF-DEK: Roof deck sample
ROF-MEM: roof membrane sample
WAL-RTR: Cement/Tar sample
WAL/ROF-MIS: Electrical insulator sample
1. Results are in mg/kg.
2. Total PCBs results in red are greater than 50 mg/kg.



LEGEND

FLR-CON-005	CONCRETE FLOOR SAMPLE
WAL-EXB-002	EXTERIOR BRICK WALL SAMPLE
WAL-INB-006	INTERIOR WALL BRICK SAMPLE
WAL-CMU-001	INTERIOR CONCRETE MASONARY UNIT SAMPLE
SFL-WAL-001	SECOND FLOOR WALL SAMPLE
SFL-FLR-001	SECOND FLOOR FLOOR SAMPLE
52-FC-1-02	CONCRETE FLOOR SAMPLE (2009)
– – – – – –	CONCRETE MASONARY WALL (APPROXIMATE)
	TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM
	TOTAL PCBS LESS THAN 50 PPM

INTERIOR BRICK SAMPLE

- 22 FT ABOVE GROUND SURFACE
- 11 FT ABOVE GROUND SURFACE
- 4 FT ABOVE GROUND SURFACE
- 1 FT ABOVE GROUND SURFACE

CONCRETE FLOOR SAMPLE

- TOP SAMPLE
- BOTTOM SAMPLE

TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM

TOTAL PCBS LESS THAN 50 PPM

NOTES

1. 2009 FLOOR SAMPLING LOCATIONS WERE COMPLETED WITH 2 INCH CORES AT 0.5 OR 1 INCH INTERVALS.
2. 2009 WALL SAMPLING LOCATIONS NOT SHOWN ON FIGURE.

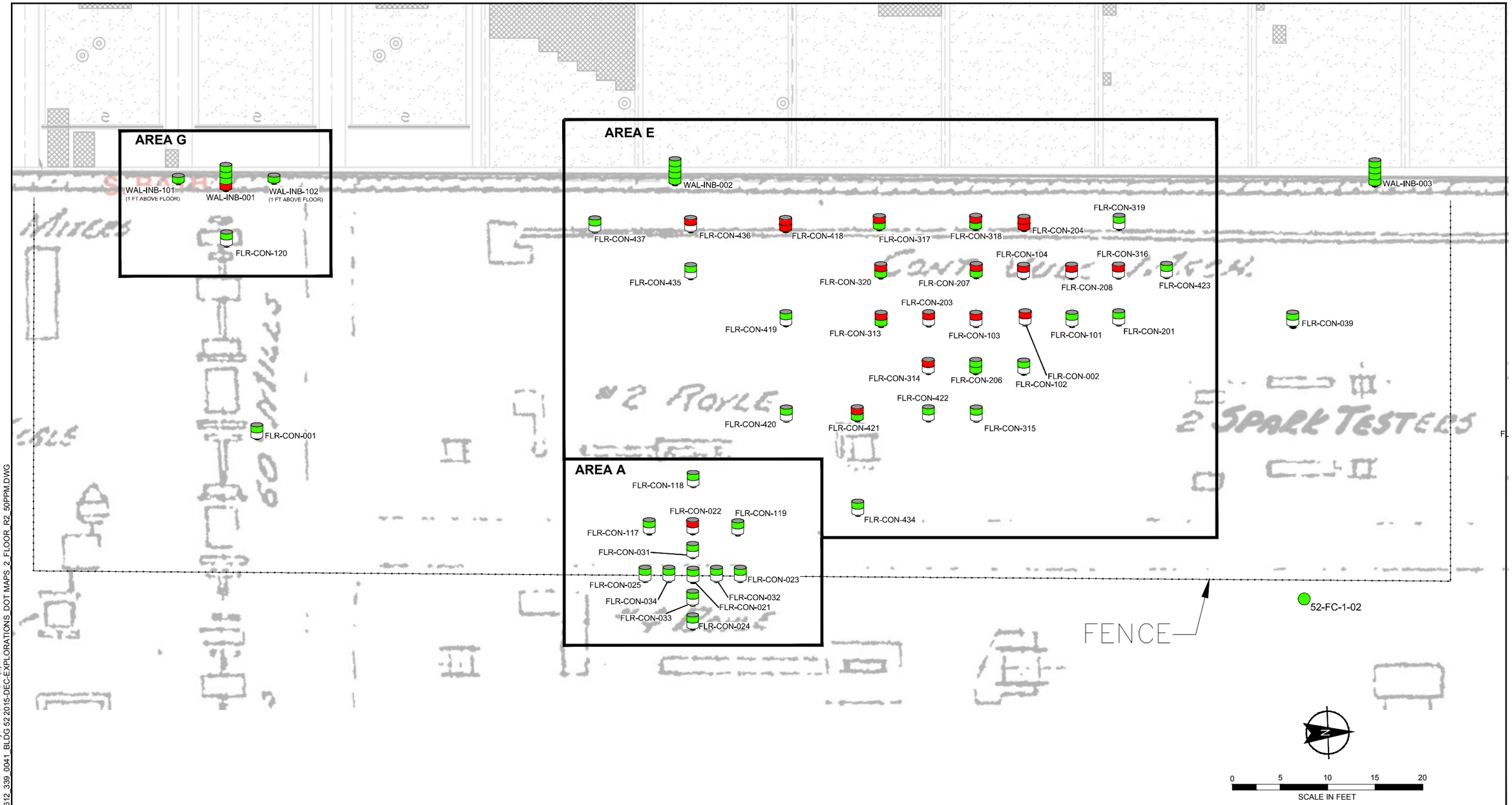
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

DRAFT

FLOOR AND WALL (INTERIOR) (PCBs)

SCALE: AS SHOWN
JUNE 2016

FIGURE C.1



LEGEND

FLR-CON-005	CONCRETE FLOOR SAMPLE
WAL-INB-006	INTERIOR WALL BRICK SAMPLE
	TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM
	TOTAL PCBS LESS THAN 50 PPM

INTERIOR BRICK SAMPLE (WAL-INB-XXX)

- 22 FT ABOVE GROUND SURFACE
- 11 FT ABOVE GROUND SURFACE
- 4 FT ABOVE GROUND SURFACE
- 1 FT ABOVE GROUND SURFACE

CONCRETE FLOOR SAMPLE (FLR-CON-XXX)

- TOP SAMPLE
- BOTTOM SAMPLE

- TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM
- TOTAL PCBS LESS THAN 50 PPM
- INTERVAL NOT SAMPLED

HALEY ALDRICH

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1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

FLOOR CORE STEP OUTS (PCBs) AREAS A, E, G

SCALE: AS SHOWN
JUNE 2016

FIGURE C.2

SATANEK, MELANIE Printed: 6/21/2016 11:46 AM Layout: F&W FIG 1 (2)
\\NEWCOMMON\28612GLOBAL\CAD\28612_339_0041_BLDG 52 2015-DEC-EXPLORATIONS_DOT MAPS_2_FLOOR_R2_50PPM.DWG

AREA D

FLR-CON-519
FLR-CON-521
52-FC-1-10
FLR-CON-516
FLR-CON-511
FLR-CON-512
FLR-CON-522
FLR-CON-501
FLR-CON-502
FLR-CON-503
FLR-CON-504
FLR-CON-505
FLR-CON-513
FLR-CON-523
FLR-CON-525
FLR-CON-529
FLR-CON-304
FLR-CON-414
FLR-CON-413
FLR-CON-401
FLR-CON-402
FLR-CON-403
FLR-CON-404
FLR-CON-506
FLR-CON-514
FLR-CON-524
FLR-CON-526
FLR-CON-528
FLR-CON-228
FLR-CON-310
FLR-CON-311
FLR-CON-116
FLR-CON-232
FLR-CON-415
FLR-CON-309
FLR-CON-231
FLR-CON-312
FLR-CON-411
FLR-CON-507
FLR-CON-515
FLR-CON-527
FLR-CON-227
FLR-CON-016
FLR-CON-225
FLR-CON-017
FLR-CON-431
FLR-CON-303
FLR-CON-115
FLR-CON-113
FLR-CON-301
FLR-CON-412
FLR-CON-508
FLR-CON-322
FLR-CON-230
FLR-CON-229
FLR-CON-245
FLR-CON-416
FLR-CON-308
FLR-CON-114
FLR-CON-305
FLR-CON-244
FLR-CON-243
FLR-CON-327
FLR-CON-321
FLR-CON-226
FLR-CON-307
FLR-CON-306
FLR-CON-409
FLR-CON-509
FLR-CON-121
FLR-CON-242
FLR-CON-241
FLR-CON-433
WAL-INB-013
FLR-CON-417
FLR-CON-302
WAL-INB-014
WAL-INB-105
WAL-INB-104
1 FT (ABOVE FLOOR)
WAL-INB-211
1 FT (ABOVE FLOOR)
WAL-INB-212
1 FT (ABOVE FLOOR)
WAL-INB-213
1 FT (ABOVE FLOOR)
WAL-INB-214
1 FT (ABOVE FLOOR)

5-6-24 Coreing Wire Beaders
3-7-24 Coreing Wire Beaders
STOP

LEGEND

FLR-CON-005 CONCRETE FLOOR SAMPLE

WAL-INB-006 INTERIOR WALL BRICK SAMPLE

TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM

TOTAL PCBS LESS THAN 50 PPM

INTERIOR BRICK SAMPLE (WAL-INB-XXX)

22 FT ABOVE GROUND SURFACE
11 FT ABOVE GROUND SURFACE
4 FT ABOVE GROUND SURFACE
1 FT ABOVE GROUND SURFACE

CONCRETE FLOOR SAMPLE (FLR-CON-XXX)

TOP SAMPLE
BOTTOM SAMPLE

TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM

TOTAL PCBS LESS THAN 50 PPM

INTERVAL NOT SAMPLED

N

0 5 10 15 20
SCALE IN FEET

HALEY ALDRICH

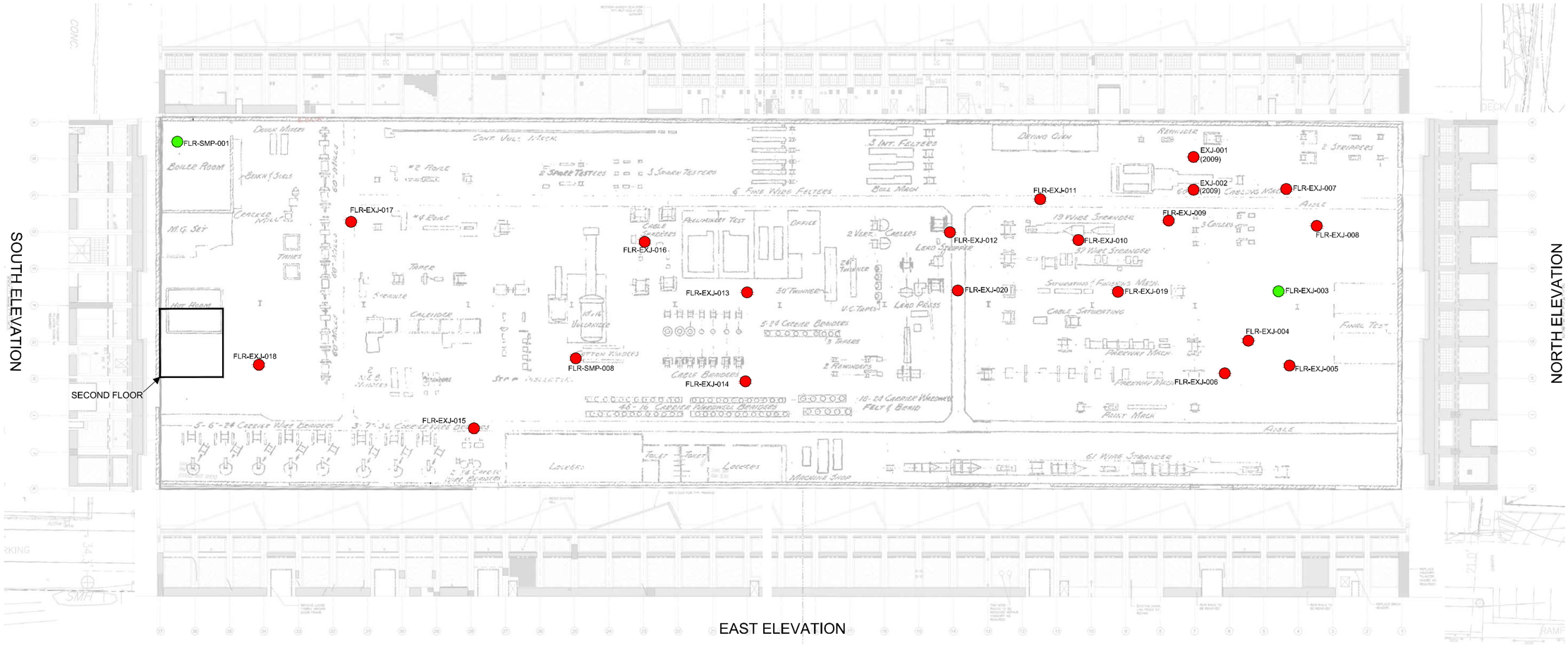
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

FLOOR CORE STEP OUTS (PCBs) AREA D

SCALE: AS SHOWN
JUNE 2016

FIGURE C.3

SATANEK, MELANIE Printed: 6/21/2016 11:47 AM Layout: F&W FIG 1 (3)
\\NEWCOMMON\28612\GLOBAL\CAD\28612_339_0041_BLDG 52 2015-DEC-EXPLORATIONS_DOT MAPS_2_FLOOR_R2_50PPM.DWG



LEGEND

FLR-EXJ-003	EXPANSION JOINT CAULK SAMPLE
FLR-SMP-001	FLOOR SUMP SAMPLE LOCATIONS
EXJ-001 (2009)	EXPANSION JOINT CHALK SAMPLE (2009)
	TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM
	TOTAL PCBS LESS THAN 50 PPM

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

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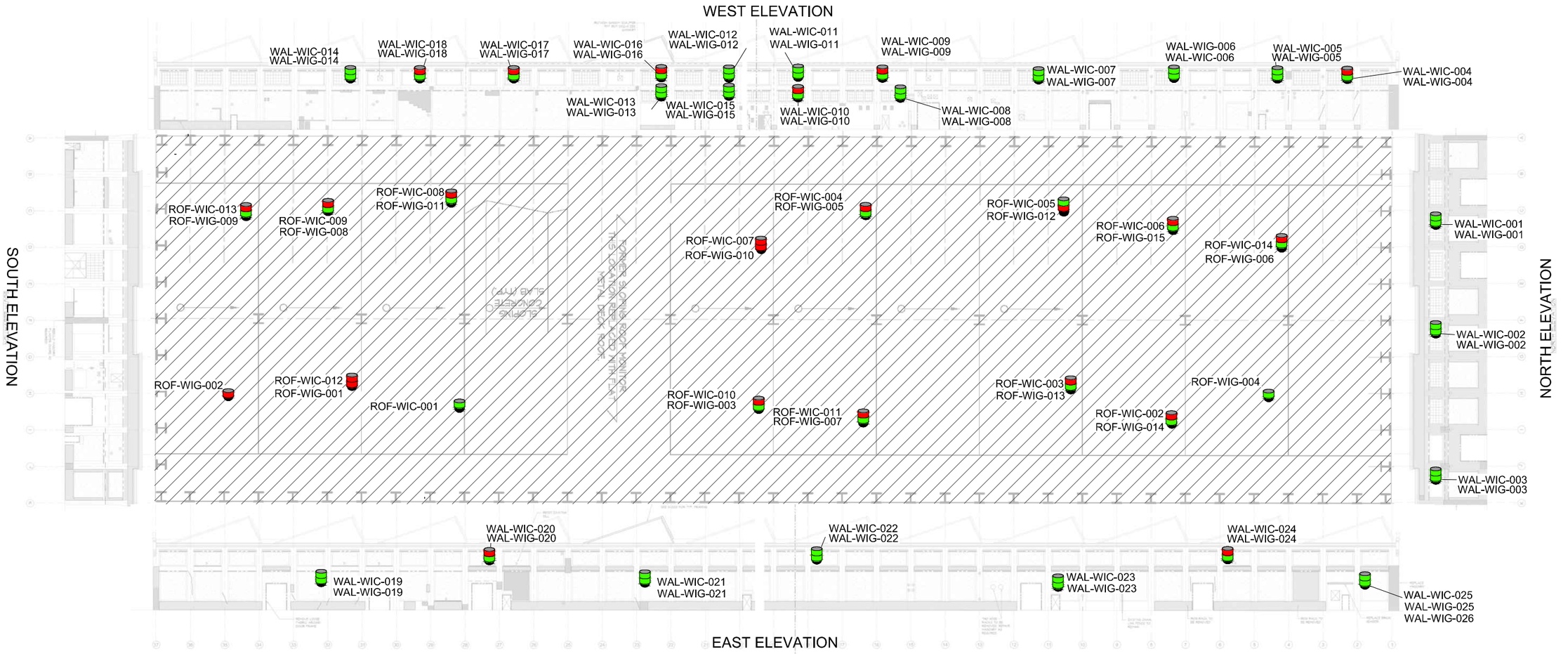
EXPANSION JOINT SAMPLES AND SUMPS (PCBs)

SCALE: AS SHOWN
JUNE 2016

FIGURE C.4

SATANEK, MELANIE Printed: 6/21/2016 4:45 PM Layout: EJ FIG 2
\\NEWCOMMON\28612\GLOBAL\CAD\28612_339_0041_BLDG 52 2015-DEC-EXPLORATIONS_DOT MAPS_2_50PPM.DWG



LEGEND

WAL-WIC-001	WALL WINDOW CAULK SAMPLE
WAL-WIG-002	WALL WINDOW GLAZE SAMPLE
ROF-WIC-001	ROOF WINDOW CAULK SAMPLE
ROF-WIG-002	ROOF WINDOW GLAZE SAMPLE
	TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM
	TOTAL PCBS LESS THAN 50 PPM

WINDOW SAMPLE

- WINDOW CAULK
- WINDOW GLAZE

TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM

TOTAL PCBS LESS THAN 50 PPM

NOTES

1. SAMPLE LOCATIONS ARE APPROXIMATE.

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

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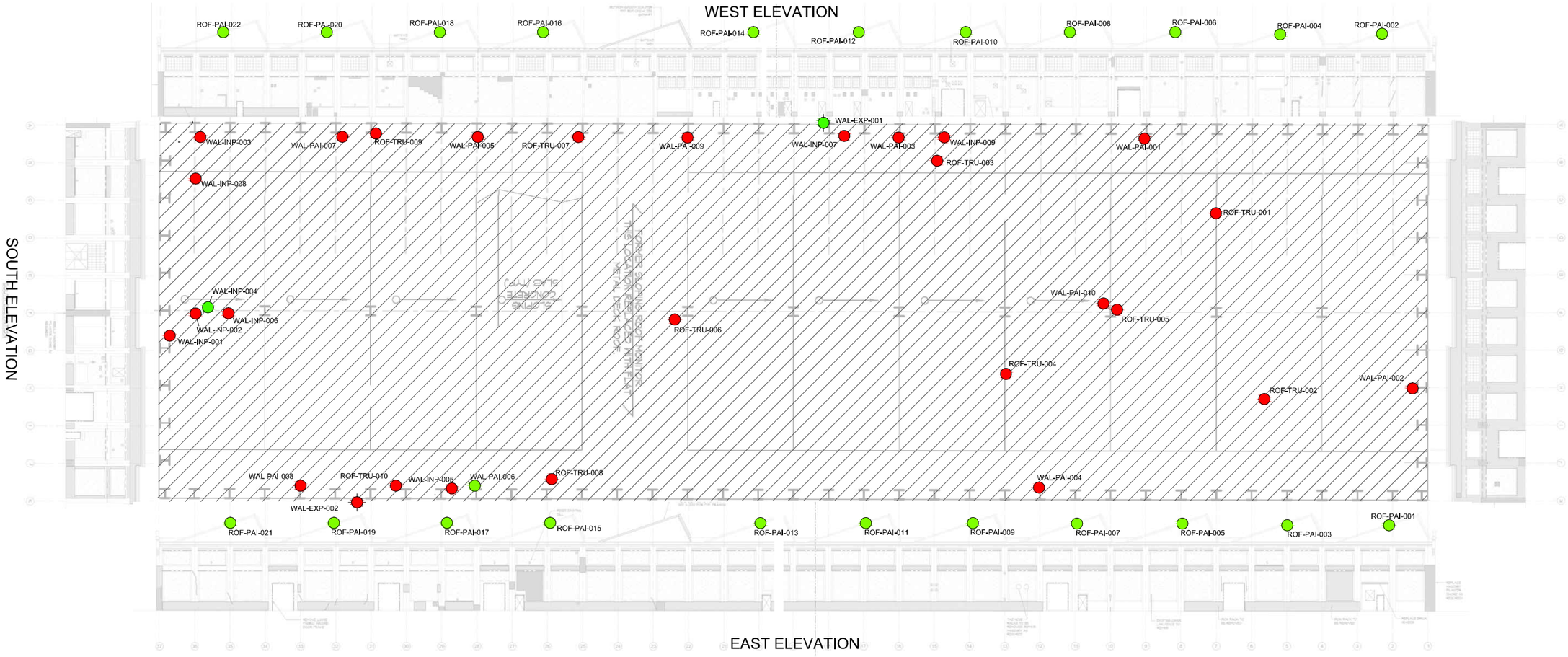
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

WINDOW SAMPLES (PCBs)

SCALE: AS SHOWN
JUNE 2016

FIGURE C.5

SATANEK, MELANIE Printed: 6/21/2016 1:10 PM Layout: WIG FIG 3
\\NEWCOMMON\28612\GLOBAL\CAD\28612_339_0041_BLDG 52 2015-DEC-EXPLORATIONS_DOT MAPS_2_50PPM.DWG



LEGEND

ROF-TRU-001	OVERHEAD STEEL PAINT SAMPLE
WAL-PAI-001	COLUMN PAINT SAMPLE
ROF-PAI-001	MONITOR END WALL PAINT SAMPLE
WAL-INP-001	INTERIOR BRICK PAINT SAMPLE
WAL-EXP-001	EXTERIOR PAINT SAMPLE
●	TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM
●	TOTAL PCBS LESS THAN 50 PPM

NOTES

1. WAL-EXP-002 REPRESENTS PAINT ON A ROLL UP DOOR.

0 25 50 75 100
SCALE IN FEET

HALEY ALDRICH

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1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

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PAINT SAMPLES (PCBs)

SCALE: AS SHOWN
JUNE 2016

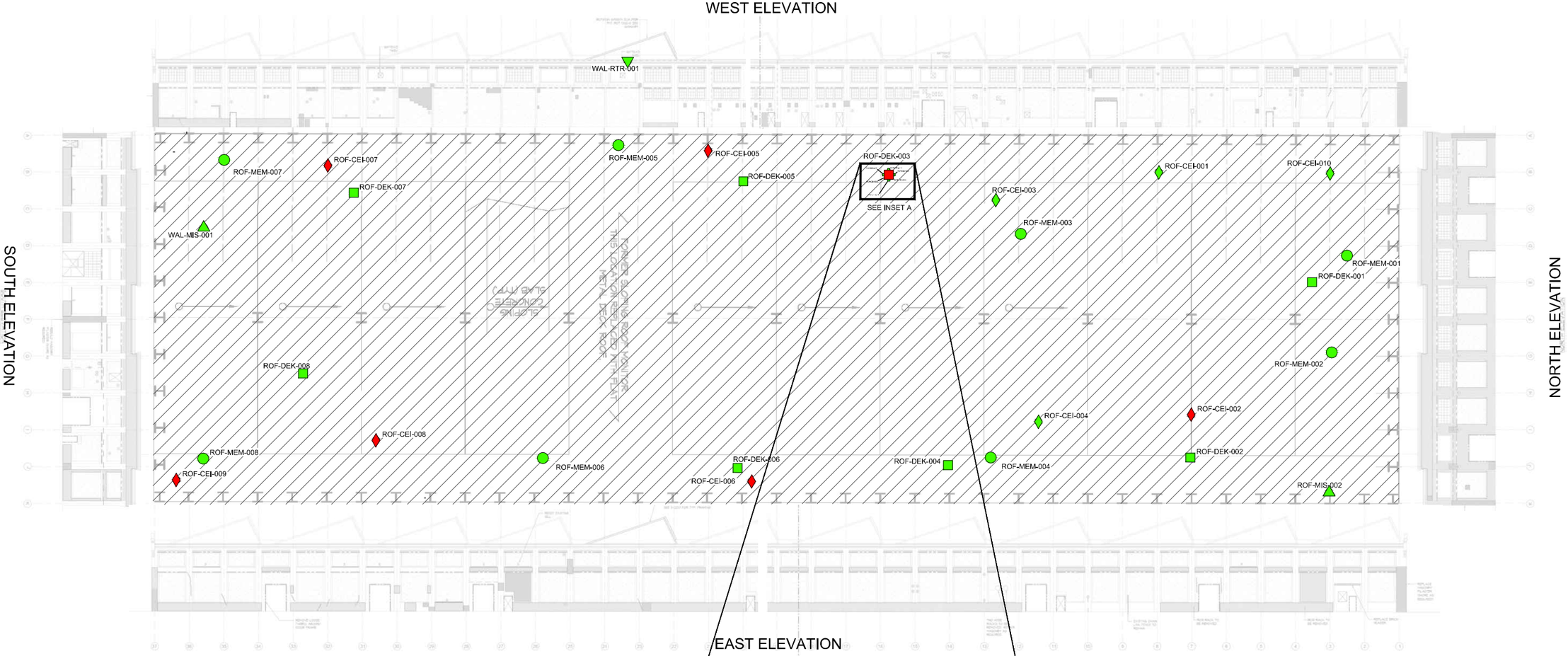
FIGURE C.6

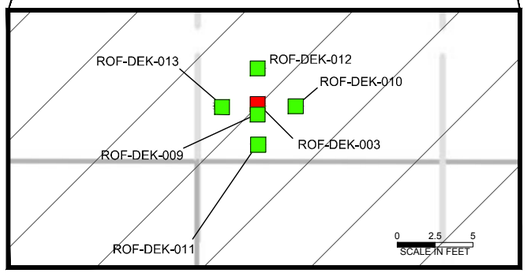
WEST ELEVATION

SOUTH ELEVATION

NORTH ELEVATION

EAST ELEVATION





INSET A

LEGEND

■	**ROF-DEK-001**	ROOF DECK SAMPLE
♦	**ROF-CEI-001**	CEILING COATING SAMPLE
●	**ROF-MEM-001**	MEMBRANE SAMPLE
▲	**ROF/WALL-MIS-001**	ELECTRICAL INSULATOR SAMPLE
▼	**WAL-RTR-001**	ROOFING TAR SAMPLE
■♦●▲▼		TOTAL PCBS GREATER THAN OR EQUAL TO 50 PPM
■♦●▲▼		TOTAL PCBS LESS THAN 50 PPM

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

ROOF SAMPLES (PCBs)

SCALE: AS SHOWN
JUNE 2016

FIGURE C.7

SATANEK, MELANIE Printed: 6/21/2016 1:12 PM Layout: DEK FIG 5
\\NEW\COMMON\28612\GLOBAL\CAD\28612_339_0041_BLDG 52 2015-DEC-EXPLORATIONS_DOT MAPS_2_50PPM.DWG

INSET G (AREA G)

REMOVE BRICK

-101

-102

WALL FLOOR

-120

NOTE 3

SEE INSET G (AREA G)

AREA G

WALL

FLOOR

NOTE 3

AREA E

WALINB-001

SEE INSET E (AREA E)

SEE INSET A (AREA A)

AREA A

INSET F (AREA F)

AREA F

SEE INSET F (AREA F)

-108

-107

-105

-106

INSET E (AREA E)

INSET A (AREA A)

-118

-117

-119

-025

-023

-024

NOTE 6, TYP.

COLUMNS

AREA B

SEE INSET B (AREA B)

AREA C

SEE INSET C (AREA C)

AREA D

FLOOR

WALL

SEE INSET D (AREA D)

INSET D (AREA D)

INSET C (AREA C)

-324

-323

-322

-321

-326

-325

-327

INSET B (AREA B)

-027

-030

-028

-029

FLOOR

WALL

REMOVE BRICK

NOTE 3

N

0 25 50 75 100

SCALE IN FEET

LEGEND

FLR-CON-005 — CONCRETE FLOOR SAMPLE

CONCRETE MASONARY WALL (APPROXIMATE)

TOTAL PCBs GREATER THAN EQUAL TO 50 PPM

TOTAL PCBs LESS THAN 50 PPM

MINIMUM EXTENT OF CONCRETE SLAB TO BE REMOVED

WALL SAMPLE COLLECTED AT APPROXIMATELY 0.5', 4', 11', AND 22' ABOVE FIRST FLOOR

-324 — SAMPLE LOCATION ID

SAMPLE LOCATION INDICATING EXTENTS OF CONCRETE REMOVAL

INTERIOR TEMPORARY FENCE

NOTES:

1. EACH SAMPLING SQUARE IS REPRESENTED BY A 5' BY 5' SQUARE.
2. DELINEATION OF CUT OUT AREAS SHOWN REPRESENT THE MINIMUM REQUIRED EXTENTS.
3. ALL ITEMS SHOWN ABOVE THE WALL/FLOOR LINE INDICATES BRICK REMOVAL IS REQUIRED. ALL ITEMS BELOW THE WALL/FLOOR LINE INDICATE CONCRETE REMOVAL IS REQUIRED.

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NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

EXTENT OF CONCRETE SLAB REMOVAL

SCALE: AS SHOWN
JUNE 2016

FIGURE C.8

SATANEK, MELANIE Printed: 6/22/2016 9:05 AM Layout: CONC REMOVAL-D
\\NEW\COMMON\28612\GLOBAL\CAD\28612_CONCRETE REMOVAL PLAN-FIGURE.DWG

Appendix D

TCLP Lead Sampling Results (tables and figures)

Tables

Figures

TABLES

TABLE D.1
TCLP LEAD - CONCRETE FLOOR SAMPLES, SURFICIAL SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		TCLP Lead	
Location ID	**Sample Date**	**N**	**FD**
FLR-CON-001	12/10/2015	0.0241	-
FLR-CON-002	12/10/2015	0.0225	-
FLR-CON-003	12/10/2015	0.0824	-
FLR-CON-004	12/10/2015	0.02	-
FLR-CON-005	12/9/2015	0.0353	0.0948
FLR-CON-006	12/9/2015	0.0322	-
FLR-CON-007	12/9/2015	0.0339	-
FLR-CON-008	12/9/2015	0.0544	-
FLR-CON-009	12/9/2015	0.0489	-
FLR-CON-010	12/9/2015	0.0512	-
FLR-CON-011	12/10/2015	0.049	-
FLR-CON-012	12/10/2015	0.0248	-
FLR-CON-013	12/10/2015	0.0508	-
FLR-CON-014	12/10/2015	0.02	-
FLR-CON-015	12/10/2015	0.02	-
FLR-CON-016	12/10/2015	0.0583	0.03
FLR-CON-017	12/10/2015	0.0736	-
FLR-CON-018	12/10/2015	0.02	-
FLR-CON-019	12/9/2015	0.0675	-
FLR-CON-020	12/9/2015	0.097	-
FLR-CON-021	12/10/2015	0.02	-
FLR-CON-022	12/10/2015	-	-
FLR-CON-023	12/10/2015	-	-
FLR-CON-024	12/10/2015	-	-
FLR-CON-025	12/10/2015	-	-
FLR-CON-026	12/9/2015	0.0538	-
FLR-CON-027	12/9/2015	-	-
FLR-CON-028	12/9/2015	-	-
FLR-CON-029	12/9/2015	-	-
FLR-CON-030	12/9/2015	-	-
FLR-CON-031	12/14/2015	0.0924	-
FLR-CON-032	12/14/2015	0.0899	-
FLR-CON-033	12/14/2015	0.114	-
FLR-CON-034	12/14/2015	0.0312	-
FLR-CON-035	12/14/2015	0.0685	-
FLR-CON-036	12/14/2015	0.18	-
FLR-CON-037	12/14/2015	0.0685	-
FLR-CON-038	12/14/2015	0.0801	-

Notes & Abbreviations

ND: Not detected above laboratory detection limit;

N: Normal Sample (Primary Sample); FD: Field Duplicate Sample

- : Not analyzed/collected for TCLP lead

FLR-CON: Floor concrete sample

1. Results are in mg/L.
2. Surficial samples are collected from the top three inches of the concrete slab.
3. TCLP Lead results in red are greater than 5 mg/L.

TABLE D.2
TCLP LEAD - WALL AND SECOND FLOOR SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

Location ID	Height above finished floor (ft)	Sample Date	TCLP Lead	
			N	FD
Interior Brick Wall				
WAL-INB-001	1	12/11/2015	0.05	-
WAL-INB-001	4	12/1/2015	0.977	-
WAL-INB-001	11	12/1/2015	0.0729	0.197
WAL-INB-001	22	12/1/2015	0.0282	-
WAL-INB-002	1	12/11/2015	0.0403	-
WAL-INB-002	4	12/11/2015	0.02	-
WAL-INB-002	11	12/3/2015	0.0548	-
WAL-INB-002	22	12/3/2015	0.0306	-
WAL-INB-003	1	12/11/2015	0.0271	-
WAL-INB-003	4	12/11/2015	0.0624	0.0289
WAL-INB-003	11	12/3/2015	0.0425	-
WAL-INB-003	22	12/3/2015	0.088	-
WAL-INB-004	1	12/11/2015	0.579	-
WAL-INB-004	4	12/11/2015	0.0962	-
WAL-INB-004	11	12/1/2015	0.0205	-
WAL-INB-004	22	12/1/2015	0.0373	-
WAL-INB-005	1	12/11/2015	7.82	-
WAL-INB-005	4	12/11/2015	0.0854	2.2
WAL-INB-005	11	12/2/2015	0.02	-
WAL-INB-005	22	12/2/2015	0.502	-
WAL-INB-006	1	12/11/2015	6.13	-
WAL-INB-006	4	12/11/2015	1.85	-
WAL-INB-006	11	12/2/2015	0.195	-
WAL-INB-006	22	12/2/2015	0.02	0.0578
WAL-INB-007	1	12/11/2015	26.3	-
WAL-INB-007	4	12/11/2015	0.051	0.133
WAL-INB-007	11	12/2/2015	0.0348	-
WAL-INB-007	22	12/2/2015	0.0341	-
WAL-INB-008	1	12/11/2015	2.68	-
WAL-INB-008	4	12/11/2015	0.937	-
WAL-INB-008	11	12/2/2015	0.02	-
WAL-INB-008	22	12/2/2015	0.0378	-
WAL-INB-009	1	12/11/2015	1.72	-
WAL-INB-009	4	12/11/2015	0.0282	-
WAL-INB-009	11	12/2/2015	0.0203	0.0737
WAL-INB-009	22	12/2/2015	0.02	-
WAL-INB-010	1	12/11/2015	4.31	-
WAL-INB-010	4	12/11/2015	0.02	0.979
WAL-INB-010	11	12/2/2015	0.036	-
WAL-INB-010	22	12/2/2015	0.0416	-
WAL-INB-011	1	12/11/2015	6.36	-
WAL-INB-011	4	12/11/2015	0.477	-
WAL-INB-011	11	12/2/2015	0.658	-
WAL-INB-011	22	12/2/2015	0.11	-

TABLE D.2
TCLP LEAD - WALL AND SECOND FLOOR SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

Location ID	Height above finished floor (ft)	Sample Date	TCLP Lead	
			N	FD
WAL-INB-012	1	12/11/2015	0.55	-
WAL-INB-012	4	12/11/2015	4.85	-
WAL-INB-012	11	12/1/2015	0.02	-
WAL-INB-012	22	12/1/2015	0.02	-
WAL-INB-013	1	12/11/2015	1.32	-
WAL-INB-013	4	12/11/2015	4.15	-
WAL-INB-013	11	12/1/2015	0.02	-
WAL-INB-013	22	12/1/2015	0.0415	-
WAL-INB-014	1	12/11/2015	7.39	-
WAL-INB-014	4	12/11/2015	3.66	-
WAL-INB-014	11	12/1/2015	0.02	-
WAL-INB-014	22	12/1/2015	0.202	-
WAL-INB-015	1	12/11/2015	1.08	-
WAL-INB-015	4	12/11/2015	6.59	-
WAL-INB-015	11	12/3/2015	0.246	0.0381
WAL-INB-015	22	12/3/2015	0.219	-
WAL-INB-016	1	12/11/2015	0.232	-
WAL-INB-016	4	12/11/2015	0.118	-
WAL-INB-016	11	12/3/2015	0.52	-
WAL-INB-016	22	12/3/2015	0.0283	-
WAL-INB-017	1	12/15/2015	0.0569	-
WAL-INB-017	4	12/15/2015	0.0237	-
WAL-INB-017	11	12/15/2015	0.0276	-
WAL-INB-017	22	12/15/2015	0.0298	-
WAL-INB-101	1	2/23/2016	-	-
WAL-INB-102	1	2/23/2016	-	-
WAL-INB-104	1	2/23/2016	-	-
WAL-INB-105	1	2/23/2016	-	-
WAL-INB-211	1	3/7/2016	-	-
WAL-INB-212	1	3/7/2016	-	-
WAL-INB-213	1	3/7/2016	-	-
WAL-INB-214	1	3/21/2016	-	-
Exterior Brick Wall				
WAL-EXB-001	18-19	12/3/2015	0.0472	-
WAL-EXB-002	18	12/3/2015	0.199	-
WAL-EXB-003	15	12/3/2015	0.455	0.0923
WAL-EXB-004	15	12/3/2015	0.538	-
WAL-EXB-005	18	12/3/2015	0.252	-
WAL-EXB-006	15	12/3/2015	2.09	-
WAL-EXB-007	15	12/3/2015	1.25	-
WAL-EXB-008	15	12/4/2015	0.803	-
WAL-EXB-009	15	12/4/2015	0.0759	-
WAL-EXB-010	15	12/4/2015	0.192	0.192
WAL-EXB-011	18.5	12/3/2015	0.281	-
WAL-EXB-012	18.5	12/3/2015	0.16	-

TABLE D.2
TCLP LEAD - WALL AND SECOND FLOOR SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

Location ID	Height above finished floor (ft)	Sample Date	TCLP Lead	
			N	FD
Wall CMU				
WAL-CMU-001	20	12/2/2015	0.0262	-
WAL-CMU-002	4	12/17/2015	0.146	-
WAL-CMU-003	-	12/3/2015	0.0576	-
WAL-CMU-004	4	12/17/2015	0.766	-
Second Floor Materials				
SFL-FLR-001	-	12/14/2015	0.027	-
SFL-FLR-002	-	12/14/2015	0.0338	-
SFL-FLR-003	-	12/14/2015	0.0532	-
SFL-FLR-004	-	12/14/2015	0.0595	0.0632
SFL-WAL-001	4	12/14/2015	0.0376	-
SFL-WAL-002	4	12/14/2015	0.0539	-
SFL-WAL-003	4	12/14/2015	0.0709	-
SFL-WAL-004	4	12/14/2015	0.175	1.51

Notes & Abbreviations

ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);
FD: Field Duplicate Sample
- : Not analyzed/collected for TCLP lead
WAL-INB: Wall interior brick samples
WAL-EXB: Wall exterior brick samples
WAL-CMU: Wall Concrete Masonry Unit
SFL-FLR: Second floor concrete slab sample
SFL-WAL: Second floor wall sample
1. Results are in mg/L.
2. TCLP lead results in red are greater than 5 mg/L.

TABLE D.3
TCLP LEAD - EXPANSION JOINT AND SUMP SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		TCLP Lead
Location ID	**Sample Date**	**N**
Expansion Joint		
FLR-EXJ-003	12/14/2015	2.15
FLR-EXJ-004	12/14/2015	22.3
FLR-EXJ-005	12/14/2015	1.83
FLR-EXJ-006	12/14/2015	-
FLR-EXJ-007	12/14/2015	2.22
FLR-EXJ-008	12/14/2015	0.678
FLR-EXJ-009	12/14/2015	-
FLR-EXJ-010	12/14/2015	-
FLR-EXJ-011	12/14/2015	-
FLR-EXJ-012	12/14/2015	71.5
FLR-EXJ-013	12/14/2015	-
FLR-EXJ-014	12/22/2015	5.14
FLR-EXJ-015	12/22/2015	-
FLR-EXJ-016	12/22/2015	-
FLR-EXJ-017	12/22/2015	0.763
FLR-EXJ-018	12/22/2015	1.96
FLR-EXJ-019	2/25/2016	0.779
FLR-EXJ-020	2/25/2016	7.31
Sump		
FLR-SMP-001	12/17/2015	0.148
FLR-SMP-008	12/18/2015	2.33

Notes & Abbreviations

ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);

- : Not analyzed/collected for TCLP lead

FLR-EXJ: Expansion joint sample (concrete floor)

FLR-SMP: Sump sample

1. Results are in mg/L.

2. TCLP Lead results in red are greater than 5 mg/L.

TABLE D.4
TCLP LEAD - CAULK AND GLAZING SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		TCLP Lead	
Location ID	**Sample Date**	**N**	**FD**
Monitor Window Caulk			
ROF-WIC-001	12/14/2015	38.9	-
ROF-WIC-002	12/14/2015	207	112
ROF-WIC-003	12/14/2015	252	-
ROF-WIC-004	12/14/2015	139	-
ROF-WIC-005	12/14/2015	78	-
ROF-WIC-006	12/14/2015	35.3	-
ROF-WIC-007	12/14/2015	176	-
ROF-WIC-008	12/14/2015	32.7	-
ROF-WIC-009	12/15/2015	66.1	-
ROF-WIC-010	12/15/2015	23.7	-
ROF-WIC-011	12/14/2015	-	-
ROF-WIC-012	12/11/2015	-	-
ROF-WIC-013	12/15/2015	-	-
ROF-WIC-014	12/14/2015	-	-
Monitor Window Glazing			
ROF-WIG-001	12/11/2015	89.7	-
ROF-WIG-002	12/11/2015	142	-
ROF-WIG-003	12/14/2015	4.9	-
ROF-WIG-004	12/14/2015	115	-
ROF-WIG-005	12/14/2015	75.3	-
ROF-WIG-006	12/14/2015	13.2	-
ROF-WIG-007	12/14/2015	146	-
ROF-WIG-008	12/15/2015	11.9	-
ROF-WIG-009	12/15/2015	5.98	-
ROF-WIG-010	12/14/2015	-	-
ROF-WIG-011	12/14/2015	-	-
ROF-WIG-012	12/14/2015	-	-
ROF-WIG-013	12/14/2015	-	-
ROF-WIG-014	12/14/2015	-	-
ROF-WIG-015	12/14/2015	-	-
Window Caulk			
WAL-WIC-001	12/8/2015	5.29	-
WAL-WIC-002	12/8/2015	11	-
WAL-WIC-003	12/8/2015	9.69	-
WAL-WIC-004	12/8/2015	5.54	-
WAL-WIC-005	12/9/2015	0.04	0.154
WAL-WIC-006	12/9/2015	0.378	-
WAL-WIC-007	12/9/2015	0.432	-
WAL-WIC-008	12/9/2015	6.12	-
WAL-WIC-009	12/9/2015	1.84	-
WAL-WIC-010	12/9/2015	3.86	-
WAL-WIC-011	12/9/2015	1.65	-
WAL-WIC-012	12/9/2015	14.8	-
WAL-WIC-013	12/9/2015	5.81	-
WAL-WIC-014	12/10/2015	10.6	-
WAL-WIC-015	12/10/2015	5.43	-
WAL-WIC-016	12/10/2015	10.9	-

TABLE D.4
TCLP LEAD - CAULK AND GLAZING SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		TCLP Lead	
Location ID	**Sample Date**	**N**	**FD**
WAL-WIC-017	12/10/2015	3.84	-
WAL-WIC-018	12/10/2015	10.9	-
WAL-WIC-019	12/10/2015	24.3	25.2
WAL-WIC-020	12/10/2015	6.17	-
WAL-WIC-021	12/10/2015	8.81	-
WAL-WIC-022	12/10/2015	7.54	-
WAL-WIC-023	12/10/2015	17.9	-
WAL-WIC-024	12/11/2015	16.3	-
WAL-WIC-025	12/11/2015	10.7	-
Window Glazing			
WAL-WIG-001	12/8/2015	6.95	-
WAL-WIG-002	12/8/2015	11.5	-
WAL-WIG-003	12/8/2015	10.2	-
WAL-WIG-004	12/8/2015	5.7	-
WAL-WIG-005	12/9/2015	3.76	0.87
WAL-WIG-006	12/9/2015	2.38	-
WAL-WIG-007	12/9/2015	4.96	-
WAL-WIG-008	12/9/2015	4.68	-
WAL-WIG-009	12/9/2015	2.49	-
WAL-WIG-010	12/9/2015	3.92	-
WAL-WIG-011	12/9/2015	0.84	-
WAL-WIG-012	12/9/2015	4.72	-
WAL-WIG-013	12/9/2015	1.98	-
WAL-WIG-014	12/10/2015	0.995	-
WAL-WIG-015	12/10/2015	1.6	-
WAL-WIG-016	12/10/2015	3.26	-
WAL-WIG-017	12/10/2015	5.49	-
WAL-WIG-018	12/10/2015	2.79	-
WAL-WIG-019	12/10/2015	11.8	5.39
WAL-WIG-020	12/10/2015	5.27	-
WAL-WIG-021	12/10/2015	7.71	-
WAL-WIG-022 (teal glaze)	12/10/2015	0.859	-
WAL-WIG-022	12/10/2015	94.8	-
WAL-WIG-023 (teal glaze)	12/10/2015	1.84	-
WAL-WIG-023	12/10/2015	3.05	-
WAL-WIG-024 (gray glaze)	12/11/2015	0.86	-
WAL-WIG-024	12/11/2015	2.86	-
WAL-WIG-025	12/11/2015	10.4	-
WAL-WIG-026	12/11/2015	19.9	-

Notes & Abbreviations

ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);
FD: Field Duplicate Sample
- : Not analyzed/collected for TCLP lead
ROF-WIC: Monitor Window Caulk (Roof)
WAL-WIC: Window Caulk (Wall)
ROF-WIG: Monitor Window Glazing (Roof)
WAL-WIG: Window Glazing (Wall)
1. Results are in mg/L.
2. TCLP Lead results in red are greater than 5 mg/L.

TABLE D.5
TCLP LEAD - PAINT SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		TCLP Lead	
Location ID	**Sample Date**	**N**	**FD**
Monitor End Wall Paint			
ROF-PAI-001	12/7/2015	230	-
ROF-PAI-002	12/7/2015	174	-
ROF-PAI-003	12/7/2015	223	-
ROF-PAI-004	12/7/2015	257	389
ROF-PAI-005	12/7/2015	354	-
ROF-PAI-006	12/7/2015	376	-
ROF-PAI-007	12/7/2015	681	-
ROF-PAI-008	12/7/2015	316	-
ROF-PAI-009	12/7/2015	563	-
ROF-PAI-010	12/7/2015	408	-
ROF-PAI-011	12/7/2015	739	-
ROF-PAI-012	12/8/2015	204	-
ROF-PAI-013	12/7/2015	234	-
ROF-PAI-014	12/8/2015	418	-
ROF-PAI-015	12/7/2015	365	-
ROF-PAI-016	12/8/2015	723	-
ROF-PAI-017	12/7/2015	499	-
ROF-PAI-018	12/8/2015	617	-
ROF-PAI-019	12/7/2015	259	-
ROF-PAI-020	12/8/2015	370	-
ROF-PAI-021	12/7/2015	446	-
ROF-PAI-022	12/8/2015	641	-
Truss Paint			
ROF-TRU-001	12/3/2015	58.1	-
ROF-TRU-002	12/4/2015	21.9	12.7
ROF-TRU-003	12/3/2015	75.9	-
ROF-TRU-004	12/3/2015	34.4	-
ROF-TRU-005	12/4/2015	39.9	-
ROF-TRU-006	12/2/2015	31.4	-
ROF-TRU-007	12/2/2015	19.5	-
ROF-TRU-008	12/2/2015	22.4	-
ROF-TRU-009	12/2/2015	54.3	-
ROF-TRU-010	12/2/2015	0.02	111
Exterior Paint			
WAL-EXP-001	12/15/2015	1.37	1.72
WAL-EXP-002	12/15/2015	41.1	-
Interior Paint			
WAL-INP-001	12/15/2015	2.2	1.37
WAL-INP-002	12/15/2015	1.38	-
WAL-INP-003	12/15/2015	31.1	-
WAL-INP-004	12/15/2015	0.231	-
WAL-INP-005	12/15/2015	17.5	-
WAL-INP-006	12/15/2015	0.202	0.262
WAL-INP-007	12/15/2015	58	-
WAL-INP-008	12/15/2015	78.3	-
WAL-INP-009	12/15/2015	20	-

TABLE D.5
TCLP LEAD - PAINT SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		TCLP Lead	
Location ID	**Sample Date**	**N**	**FD**
Column Paint			
WAL-PAI-001	12/4/2015	9.23	-
WAL-PAI-002	12/4/2015	12.8	-
WAL-PAI-003	12/4/2015	24.8	-
WAL-PAI-004	12/4/2015	19.7	-
WAL-PAI-005	12/4/2015	9.8	-
WAL-PAI-006	12/4/2015	17.6	-
WAL-PAI-007	12/4/2015	9.06	-
WAL-PAI-008	12/4/2015	8.77	-
WAL-PAI-009	12/7/2015	13.4	-
WAL-PAI-010	12/4/2015	51.9	-

Notes & Abbreviations

ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);
FD: Field Duplicate Sample
- : Not analyzed/collected for TCLP lead
ROF-PAI: Monitor end wall paint sample
ROF-TRU: Truss paint sample
WAL-EXP: Exterior paint sample
WAL-INP: Interior paint sample
WAL-PAI: Column paint sample
1. Results are in mg/L.
2. TCLP Lead results in red are greater than 5 mg/L.

TABLE D.6
TOTAL PCBs - CEILING AND ROOF SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		TCLP Lead	
Location ID	**Sample Date**	**N**	**FD**
Ceiling coating			
ROF-CEI-001	12/7/2015	0.696	-
ROF-CEI-002	12/7/2015	0.436	-
ROF-CEI-003	12/7/2015	0.0781	0.212
ROF-CEI-004	12/7/2015	0.275	-
ROF-CEI-005	12/7/2015	11.6	-
ROF-CEI-006	12/7/2015	4.25	-
ROF-CEI-007	12/7/2015	4.16	-
ROF-CEI-008	12/7/2015	1.16	-
ROF-CEI-009	12/9/2015	0.773	-
ROF-CEI-010	12/9/2015	0.499	-
Roof Deck			
ROF-DEK-001	12/4/2015	0.056	-
ROF-DEK-002	12/4/2015	0.0848	-
ROF-DEK-003	12/4/2015	0.0769	-
ROF-DEK-004	12/7/2015	0.4	-
ROF-DEK-005	12/7/2015	0.4	-
ROF-DEK-006	12/7/2015	0.4	-
ROF-DEK-007	12/7/2015	4.86	-
ROF-DEK-008	12/2/2015	0.02	-
ROF-DEK-009	12/17/2015	-	-
ROF-DEK-010	12/17/2015	-	-
ROF-DEK-011	12/17/2015	-	-
ROF-DEK-012	12/17/2015	-	-
ROF-DEK-013	12/17/2015	-	-
Roof Membrane			
ROF-MEM-001	12/7/2015	0.741	-
ROF-MEM-002	12/7/2015	0.661	1.16
ROF-MEM-003	12/7/2015	2.73	-
ROF-MEM-004	12/7/2015	4.15	-
ROF-MEM-005	12/7/2015	9.33	-
ROF-MEM-006	12/7/2015	1.02	-
ROF-MEM-007	12/7/2015	0.99	-
ROF-MEM-008	12/7/2015	1.49	-
Cement/Tar			
WAL-RTR-001	12/11/2015	0.479	-
Electrical Insulator			
WAL-MIS-001	12/17/2015	0.29	-
ROF-MIS-002	12/22/2015	0.0921	-

Notes & Abbreviations

ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);

FD: Field Duplicate Sample

- : Not analyzed/collected for TCLP lead

ROF-CEI: Ceiling coating sample

ROF-DEK: Roof deck sample

ROF-MEM: roof membrane sample

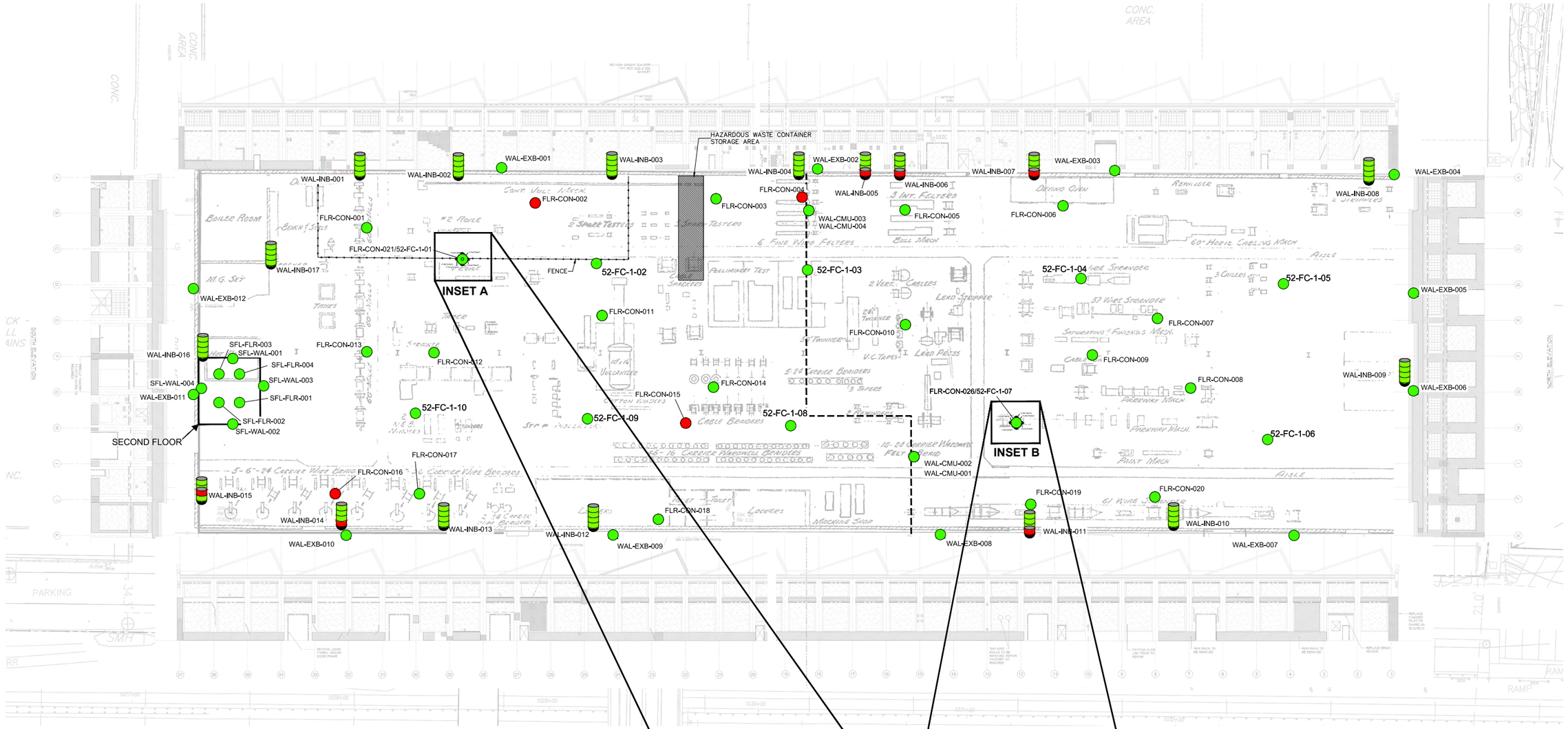
WAL-RTR: Cement/Tar sample

WAL/ROF-MIS: Electrical insulator sample

1. Results are in mg/L.

2. TCLP Lead results in red are greater than 5 mg/L.

FIGURES



LEGEND

FLR-CON-005	CONCRETE FLOOR SAMPLE
WAL-EXB-002	EXTERIOR BRICK WALL SAMPLE
WAL-INB-006	INTERIOR WALL BRICK SAMPLE
WAL-CMU-001	INTERIOR CONCRETE MASONARY UNIT SAMPLE
SFL-WAL-001	SECOND FLOOR WALL SAMPLE
SFL-FLR-001	SECOND FLOOR FLOOR SAMPLE
52-FC-1-02	CONCRETE FLOOR SAMPLE (2009)
– – – – – –	CONCRETE MASONARY WALL (APPROXIMATE)
	TCLP LEAD GREATER THAN OR EQUAL TO 5 PPM
	TCLP LEAD LESS THAN 5 PPM

INTERIOR BRICK SAMPLE

- 22 FT ABOVE GROUND SURFACE
- 11 FT ABOVE GROUND SURFACE
- 4 FT ABOVE GROUND SURFACE
- 1 FT ABOVE GROUND SURFACE

TCLP LEAD GREATER THAN OR EQUAL TO 5 PPM

TCLP LEAD LESS THAN 5 PPM

INSET A

INSET B

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

FLOOR AND WALL (INTERIOR) (TCLP LEAD)

SCALE: AS SHOWN
JUNE 2016

FIGURE D.1

SATANEK, MELANIE Printed: 6/21/2016 11:40 AM Layout: F&W FIG 1
\\NEWCOMMON\28612\GLOBAL\CAD\28612_339_0041_BLDG 52 2015-DEC-EXPLORATIONS_DOT MAPS_2_FLOOR-TCLP.DWG

WEST ELEVATION

SOUTH ELEVATION

NORTH ELEVATION

EAST ELEVATION

FLR-SMP-001
FLR-EXJ-017
FLR-EXJ-016
FLR-EXJ-013
FLR-EXJ-018
FLR-SMP-008
FLR-EXJ-014
FLR-EXJ-015
FLR-EXJ-012
FLR-EXJ-011
FLR-EXJ-010
FLR-EXJ-020
FLR-EXJ-019
EXJ-001 (2009)
EXJ-002 (2009)
FLR-EXJ-009
FLR-EXJ-007
FLR-EXJ-008
FLR-EXJ-003
FLR-EXJ-004
FLR-EXJ-005
FLR-EXJ-006

LEGEND

FLR-EXJ-003	EXPANSION JOINT CHALK SAMPLE
FLR-SMP-001	FLOOR SUMP SAMPLE LOCATIONS
EXJ-001	EXPANSION JOINT CHALK SAMPLE (2009)
	TCLP LEAD GREATER THAN EQUAL TO 5 PPM
	TCLP LEAD LESS THAN 5 PPM
	TCLP LEAD SAMPLE NOT COLLECTED

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

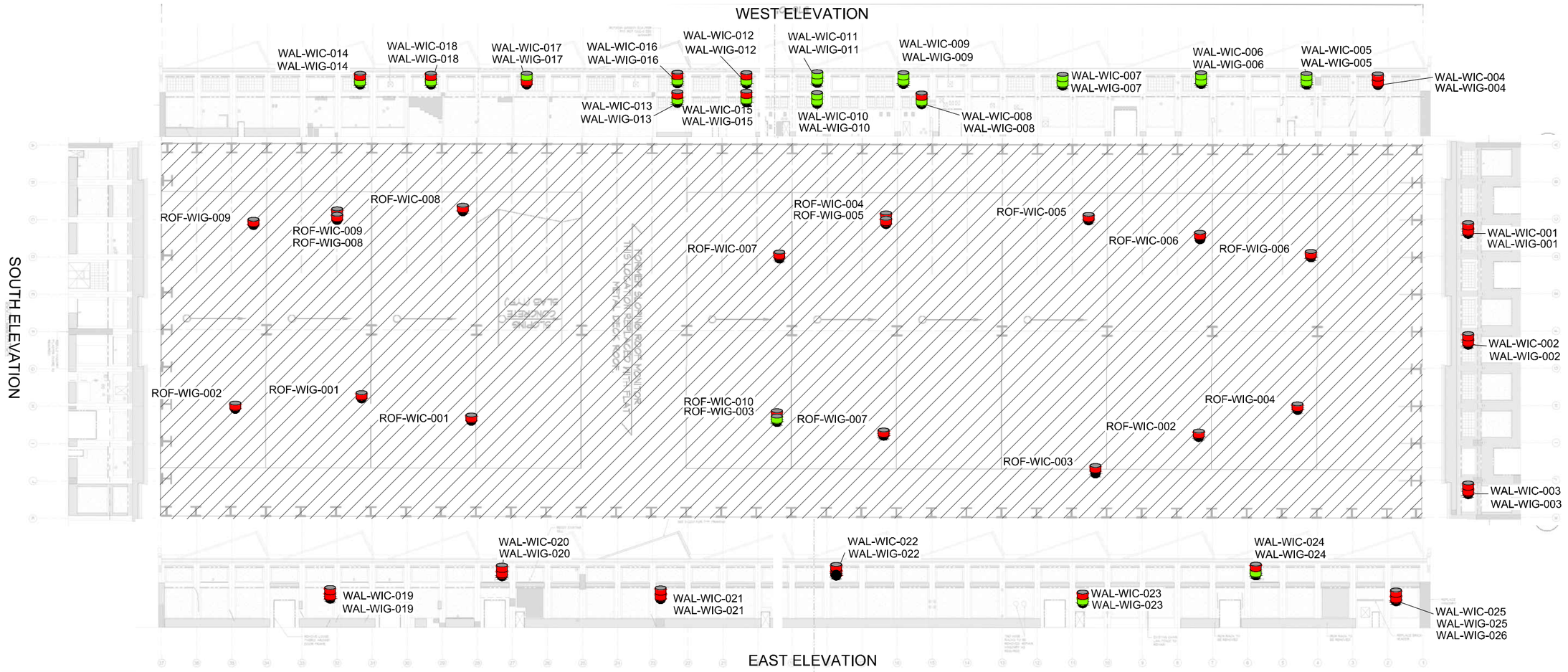
NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

EXPANSION JOINT SAMPLES AND SUMPS (TCLP LEAD)

SCALE: AS SHOWN
JUNE 2016

FIGURE D.2

SATANEK, MELANIE Printed: 6/21/2016 5:15 PM Layout: EJ FIG 2
\\NEWCOMMON\28612\GLOBAL\CAD\28612_339_0042_BLDG 52 2015-DEC-EXPLORATIONS_TCLP-DOT MAPS.DWG



LEGEND

WAL-WIC-001	WALL WINDOW CAULK SAMPLE
WAL-WIG-002	WALL WINDOW GLAZE SAMPLE
ROF-WIC-001	ROOF WINDOW CAULK SAMPLE
ROF-WIG-002	ROOF WINDOW GLAZE SAMPLE
	TCLP LEAD GREATER THAN EQUAL TO 5 PPM
	TCLP LEAD LESS THAN 5 PPM

WINDOW SAMPLE

-WINDOW CAULK
-WINDOW GLAZE

TCLP LEAD GREATER THAN OR EQUAL TO 5 PPM

TCLP LEAD LESS THAN 5 PPM

NOTES

1. SAMPLE LOCATIONS ARE APPROXIMATE.

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

WINDOW SAMPLES (TCLP LEAD)

SCALE: AS SHOWN
JUNE 2016

FIGURE D.3

SATANEK, MELANIE Printed: 6/21/2016 11:35 AM Layout: WIG FIG 4
\\NEWCOMMON\28612\GLOBAL\CAD\28612_339_0042_BLDG 52 2015-DEC-EXPLORATIONS_TCLP-DOT MAPS.DWG

LEGEND

ROF-TRU-001	ROOF STEEL PAINT SAMPLE
WAL-PAI-001	WALL STEEL COLUMN PAINT SAMPLE
ROF-PAI-001	MONITOR END WALL PAINT SAMPLE
WAL-INP-001	INTERIOR PAINT SAMPLE
WAL-EXP-001	EXTERIOR PAINT SAMPLE
●	TCLP LEAD GREATER THAN EQUAL TO 5 PPM
●	TCLP LEAD LESS THAN 5 PPM

N

0 25 50 75 100

SCALE IN FEET

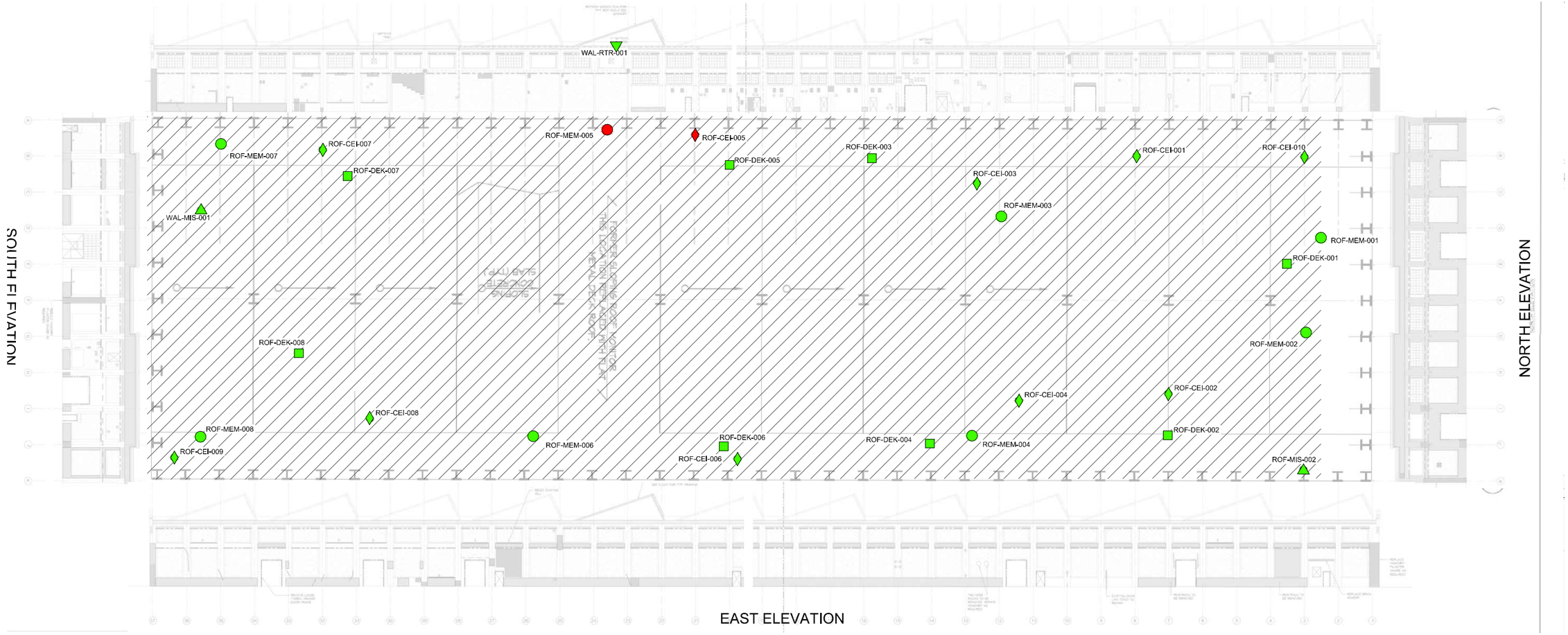
HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

PAINT SAMPLES (TCLP LEAD)

SCALE: AS SHOWN
JUNE 2016

FIGURE D.4



LEGEND

ROF-DEK-001	ROOF DECK SAMPLE
ROF-CEI-001	CEILING COATING SAMPLE
ROF-MEM-001	MEMBRANE SAMPLE
ROF/WALL-MIS-001	ELECTRICAL INSULATOR SAMPLE
WAL-RTR-001	ROOFING TAR SAMPLE
	TCLP LEAD GREATER THAN EQUAL TO 5 PPM
	TCLP LEAD LESS THAN 5 PPM

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

ROOF SAMPLES (TCLP LEAD)

SCALE: AS SHOWN
JUNE 2016

FIGURE D.5

SATANEK, MELANIE Printed: 6/21/2016 5:41 PM Layout: DEK FIG 6
\\NEW\COMMON\28612\GLOBAL\CAD\28612_339_0042_BLDG 52 2015-DEC-EXPLORATIONS_TCLP-DOT MAPS.DWG

Appendix E

Total Lead Sampling Results (tables and figures)

Tables

Figures

TABLES

TABLE E.1
TOTAL LEAD - CONCRETE FLOOR SAMPLES, SURFICIAL SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

		Total Lead	
Location ID	**Sample Date**	**N**	**FD**
FLR-CON-001	12/10/2015	4.1	-
FLR-CON-002	12/10/2015	2	-
FLR-CON-003	12/10/2015	22.2	-
FLR-CON-004	12/10/2015	21.1	-
FLR-CON-005	12/9/2015	0.9	1.6
FLR-CON-006	12/9/2015	4	-
FLR-CON-007	12/9/2015	2.1	-
FLR-CON-008	12/9/2015	1.3	-
FLR-CON-009	12/9/2015	3.1	-
FLR-CON-010	12/9/2015	34.6	-
FLR-CON-011	12/10/2015	2.5	-
FLR-CON-012	12/10/2015	12.6	-
FLR-CON-013	12/10/2015	1.9	-
FLR-CON-014	12/10/2015	1.6	-
FLR-CON-015	12/10/2015	1.5	-
FLR-CON-016	12/10/2015	1.6	1.5
FLR-CON-017	12/10/2015	1.1	-
FLR-CON-018	12/10/2015	1.6	-
FLR-CON-019	12/9/2015	1.6	-
FLR-CON-020	12/9/2015	4.2	-
FLR-CON-021	12/10/2015	1.7	-
FLR-CON-022	12/10/2015	1	-
FLR-CON-023	12/10/2015	9.4	-
FLR-CON-024	12/10/2015	3.6	-
FLR-CON-025	12/10/2015	2.3	-
FLR-CON-026	12/9/2015	0.5	-
FLR-CON-027	12/9/2015	1.9	1.1
FLR-CON-028	12/9/2015	2.8	-
FLR-CON-029	12/9/2015	2.2	-
FLR-CON-030	12/9/2015	13.2	-

Notes & Abbreviations

ND: Not detected above laboratory detection limit;

N: Normal Sample (Primary Sample); FD: Field Duplicate Sample

- : Not analyzed/collected for total lead

FLR-CON: Floor concrete sample

1. Results are in mg/kg.
2. Surficial samples are collected from the top three inches of the concrete slab.
3. Total Lead results in red are greater than 1000 mg/kg.

TABLE E.2
TOTAL LEAD - WALL AND SECOND FLOOR SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

Location ID	Height above finished floor (ft)	Sample Date	Lead	
			N	FD
Interior Brick Wall				
WAL-INB-001	1	12/11/2015	2.9	-
WAL-INB-001	4	12/1/2015	1300	-
WAL-INB-001	11	12/1/2015	5	52.8
WAL-INB-001	22	12/1/2015	1.8	-
WAL-INB-002	1	12/11/2015	3	-
WAL-INB-002	4	12/11/2015	1.3	-
WAL-INB-002	11	12/3/2015	11.4	-
WAL-INB-002	22	12/3/2015	5.3	-
WAL-INB-003	1	12/11/2015	-	-
WAL-INB-003	4	12/11/2015	37.5	29.3
WAL-INB-003	11	12/3/2015	1.5	-
WAL-INB-003	22	12/3/2015	1	-
WAL-INB-004	1	12/11/2015	9.6	-
WAL-INB-004	4	12/11/2015	0.8	-
WAL-INB-004	11	12/1/2015	8.1	-
WAL-INB-004	22	12/1/2015	2.5	-
WAL-INB-005	1	12/11/2015	57	-
WAL-INB-005	4	12/11/2015	413	3
WAL-INB-005	11	12/2/2015	3.4	-
WAL-INB-005	22	12/2/2015	13	-
WAL-INB-006	1	12/11/2015	240	-
WAL-INB-006	4	12/11/2015	2240	-
WAL-INB-006	11	12/2/2015	3.2	-
WAL-INB-006	22	12/2/2015	4.9	3.6
WAL-INB-007	1	12/11/2015	4.1	-
WAL-INB-007	4	12/11/2015	3.8	46.1
WAL-INB-007	11	12/2/2015	27.1	-
WAL-INB-007	22	12/2/2015	1.4	-
WAL-INB-008	1	12/11/2015	3.2	-
WAL-INB-008	4	12/11/2015	261	-
WAL-INB-008	11	12/2/2015	1.4	-
WAL-INB-008	22	12/2/2015	8	-
WAL-INB-009	1	12/11/2015	11.6	-
WAL-INB-009	4	12/11/2015	2.2	-
WAL-INB-009	11	12/2/2015	11.5	13.8
WAL-INB-009	22	12/2/2015	87.4	-
WAL-INB-010	1	12/11/2015	3.4	-
WAL-INB-010	4	12/11/2015	177	442
WAL-INB-010	11	12/2/2015	3.8	-
WAL-INB-010	22	12/2/2015	2	-
WAL-INB-011	1	12/11/2015	8.5	-
WAL-INB-011	4	12/11/2015	445	-
WAL-INB-011	11	12/2/2015	5.7	-
WAL-INB-011	22	12/2/2015	8.5	-
WAL-INB-012	1	12/11/2015	367	-
WAL-INB-012	4	12/11/2015	742	-
WAL-INB-012	11	12/1/2015	3.1	-
WAL-INB-012	22	12/1/2015	5.1	-

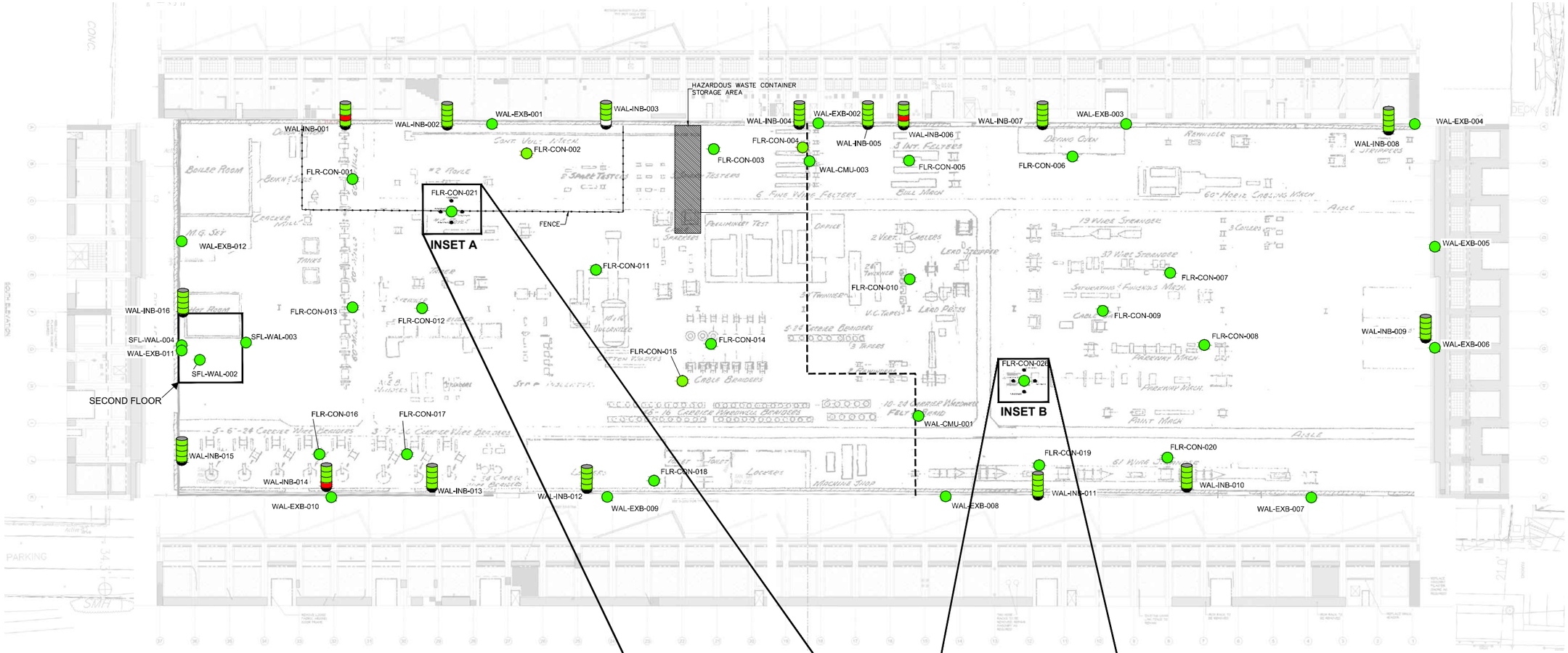
TABLE E.2
TOTAL LEAD - WALL AND SECOND FLOOR SAMPLES
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

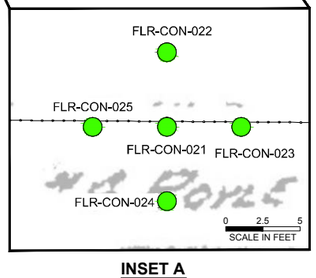
Location ID	Height above finished floor (ft)	Sample Date	Lead	
			N	FD
WAL-INB-013	1	12/11/2015	2.7	-
WAL-INB-013	4	12/11/2015	3.3	-
WAL-INB-013	11	12/1/2015	5.7	-
WAL-INB-013	22	12/1/2015	1.4	-
WAL-INB-014	1	12/11/2015	5910	-
WAL-INB-014	4	12/11/2015	4	-
WAL-INB-014	11	12/1/2015	3.9	-
WAL-INB-014	22	12/1/2015	2.2	-
WAL-INB-015	1	12/11/2015	1.9	-
WAL-INB-015	4	12/11/2015	3	-
WAL-INB-015	11	12/3/2015	42	6
WAL-INB-015	22	12/3/2015	2.7	-
WAL-INB-016	1	12/11/2015	135	-
WAL-INB-016	4	12/11/2015	40.5	-
WAL-INB-016	11	12/3/2015	9.1	-
WAL-INB-016	22	12/3/2015	7.6	-
Exterior Brick Wall				
WAL-EXB-001	18-19	12/3/2015	9.8	-
WAL-EXB-002	18	12/3/2015	6.8	-
WAL-EXB-003	15	12/3/2015	1.8	116
WAL-EXB-004	15	12/3/2015	200	-
WAL-EXB-005	18	12/3/2015	2.3	-
WAL-EXB-006	15	12/3/2015	49.4	-
WAL-EXB-007	15	12/3/2015	6.9	-
WAL-EXB-008	15	12/4/2015	2.4	-
WAL-EXB-009	15	12/4/2015	1.4	-
WAL-EXB-010	15	12/4/2015	33.7	11.1
WAL-EXB-011	18.5	12/3/2015	1.9	-
WAL-EXB-012	18.5	12/3/2015	9.3	-
Wall CMU				
WAL-CMU-001	20	12/2/2015	2.7	-
WAL-CMU-002	4	12/17/2015	-	-
WAL-CMU-003	-	12/3/2015	11.5	-
WAL-CMU-004	4	12/17/2015	-	-
Second Floor Materials				
SFL-WAL-001	4	12/14/2015	-	-
SFL-WAL-002	4	12/14/2015	0.6	-
SFL-WAL-003	4	12/14/2015	32.2	-
SFL-WAL-004	4	12/14/2015	2.3	4

Notes & Abbreviations

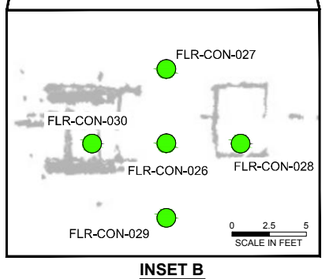
ND: Not detected above laboratory detection limit; N: Normal Sample (Primary Sample);
FD: Field Duplicate Sample
- : Not analyzed/collected for total lead
WAL-INB: Wall interior brick samples
WAL-EXB: Wall exterior brick samples
WAL-CMU: Wall concrete masonry unit
SFL-WAL: Second floor wall sample
1. Results are in mg/kg.
2. Total Lead results in red are greater than 1000 mg/kg.

FIGURES





INSET A



INSET B

LEGEND

FLR-CON-005	CONCRETE FLOOR SAMPLE
WAL-EXB-002	EXTERIOR BRICK WALL SAMPLE
WAL-INB-006	INTERIOR WALL BRICK SAMPLE
WAL-CMU-001	INTERIOR CONCRETE MASONARY UNIT SAMPLE
SFL-WAL-001	SECOND FLOOR WALL SAMPLE
SFL-FLR-001	SECOND FLOOR FLOOR SAMPLE
– – – – – –	CONCRETE MASONARY WALL (APPROXIMATE)
	LEAD GREATER THAN OR EQUAL TO 1000 PPM
	LEAD LESS THAN 1000 PPM

INTERIOR BRICK SAMPLE (WAL-INB-XXX)

- 22 FT ABOVE GROUND SURFACE
- 11 FT ABOVE GROUND SURFACE
- 4 FT ABOVE GROUND SURFACE
- 1 FT ABOVE GROUND SURFACE

LEAD GREATER THAN OR EQUAL TO 1000 PPM

LEAD LESS THAN 1000 PPM

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

FLOOR AND WALL (INTERIOR) (TOTAL LEAD)

SCALE: AS SHOWN
JUNE 2016

FIGURE E.1

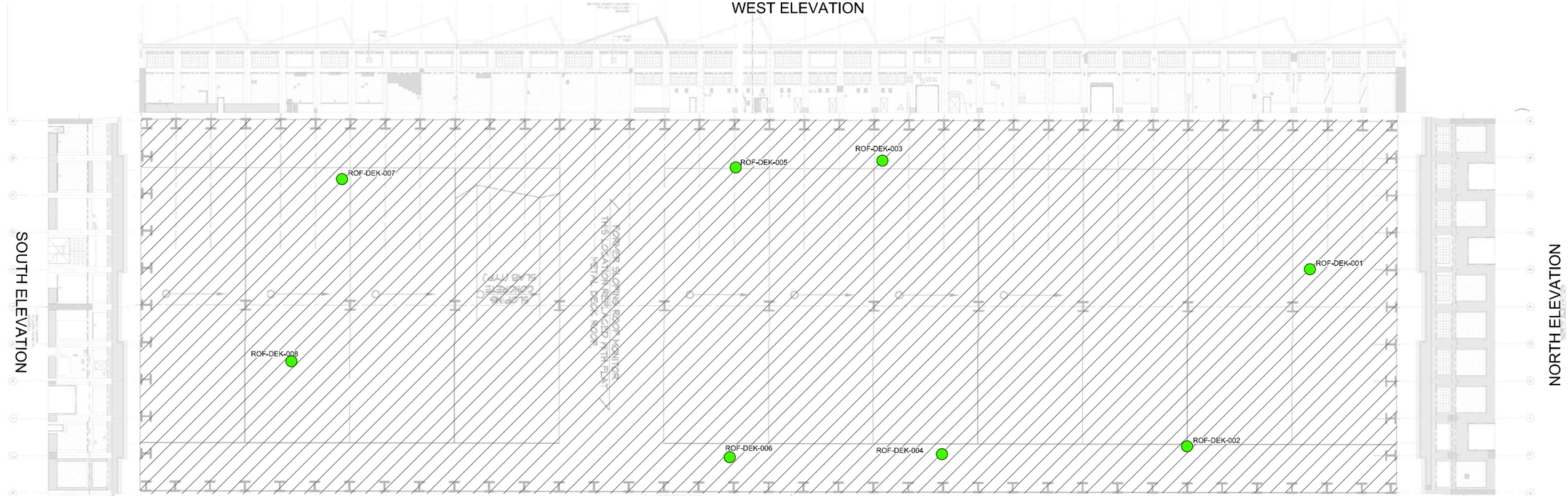
SATANEK, MELANIE Printed: 6/21/2016 1:35 PM Layout: F&W FIG 1
\\NEWCOMMON\28612\GLOBAL\CAD\28612_339_0041_BLDG 52 2015-DEC-EXPLORATIONS_DOT MAPS_2_FLOOR-LEAD.DWG

WEST ELEVATION

SOUTH ELEVATION

NORTH ELEVATION

EAST ELEVATION



LEGEND

ROF-DEK-001	ROOF DECK SAMPLE
●	LEAD GREATER THAN EQUAL TO 1000 PPM
●	LEAD LESS THAN 1000 PPM

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

ROOF DECK (TOTAL LEAD)

SCALE: AS SHOWN
JUNE 2016

FIGURE E.2

SATANEK, MELANIE Printed: 6/21/2016 1:33 PM Layout: DEK-FIG 6
\\NEWCOMMON\28612\GLOBALCAD\28612-339-0042_BLDG 52 2015-DEC-EXPLORATIONS_LEAD_ROOF-DOT MAPS.DWG

Appendix F

ACM Sampling Results (tables and figures)

Tables

Figures

TABLE

TABLE F.1
ASBESTOS SAMPLING LOCATIONS (PARADIGM)
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

Location ID	Sample Date	Total Asbestos (%)	Material	Location Comments
Dry Wall				
DWL-055	12/15/2015	0	Gray Drywall	2nd floor wall drywall
DWL-057	12/15/2015	0	Gray Drywall	2nd floor wall drywall
Fibrous Paper				
PAP-048	12/14/2015	80	Gray Fibrous Paper	Crane box panel insulation
PAP-049	12/14/2015	80	Gray Fibrous Paper	Crane box panel insulation
PAP-050	12/14/2015	67	Gray Fibrous Paper	Crane box panel insulation
Roof Membrane				
ROF-001	12/7/2015	<1	Black Roofing	Roof #1 Field
ROF-003	12/7/2015	<1	Black Roofing	Roof #2 Field
ROF-005	12/7/2015	<1	Black Roofing	Roof #3 Field
ROF-007	12/7/2015	<1	Black Roofing	Roof #4 Field
ROF-008	12/7/2015	0	Black Roofing	Roof #5 Field
ROF-009	12/7/2015	<1	Black Roofing	Roof #6 Field
ROF-010	12/7/2015	<1	Black Roofing	Roof #7 Field
ROF-011	12/7/2015	<1	Black Roofing	Roof #8 Field
Roofing Cement/Tar				
RTR-002	12/7/2015	5.3	Black Roofing Cement/Tar	Roof #1 Seam
RTR-004	12/7/2015	<1	Black Roofing Cement/Tar	Roof z#2 Seam
RTR-006	12/7/2015	<1	Black Roofing Cement/Tar	Roof #3 Seam
RTR-044	12/11/2015	3	Black Fibrous Roofing Cement/Tar	West Wall 20' Off Ground
RTR-045	12/11/2015	3.1	Black Fibrous Roofing Cement/Tar	West Wall 20' Off Ground
Wall Spackle				
SPK-056	12/15/2015	0	White Spackle	2rd floor wall spackle
SPK-058	12/15/2015	0	White Spackle	2rd floor wall spackle
SPK-065	12/15/2015	0	White Spackle	2nd floor NE corner wall (White)
SPK-066	12/15/2015	0	White Spackle	Main floor NE corner wall (White)
SPK-067	12/15/2015	0	White Spackle	Main floor NE corner wall (White)
Fibrous Transite				
TRN-053	12/14/2015	23	Gray Fibrous Transite	Crane electrical box transite
TRN-054	12/14/2015	27	Gray Fibrous Transite	Crane electrical box transite
Window Caulk				
WIC-014	12/14/2015	1.5	Gray Window Caulk	North Window #1, GRAY
WIC-015	12/14/2015	1	Gray Window Caulk	North Window #1, GRAY
WIC-018	12/14/2015	<1	Gray Window Caulk	North Window #2, GRAY
WIC-019	12/14/2015	<1	Gray Window Caulk	North Window #2, GRAY
WIC-022	12/8/2015	6.5	Gray Window Caulk	North Window #3, GRAY
WIC-023	12/8/2015	5.6	Gray Window Caulk	North Window #3, GRAY
WIC-026	12/8/2015	2.1	Gray Window Caulk	West Window #4, GRAY
WIC-027	12/8/2015	1.9	Gray Window Caulk	West Window #4, GRAY
WIC-030	12/9/2015	14	Gray Fibrous Window Caulk	West Window #5, GRAY
WIC-031	12/9/2015	9.8	Gray Window Caulk	West Window #5, GRAY
WIC-032	12/9/2015	2.1	Tan Window Caulk	West Window #13, TAN
WIC-033	12/9/2015	4	Tan Window Caulk	West Window #13, TAN
WIC-035	12/10/2015	<1	Tan Window Caulk	East Window #19, TAN
WIC-037	12/10/2015	7.9	Tan Window Caulk	East Window #20, TAN

TABLE F.1
ASBESTOS SAMPLING LOCATIONS (PARADIGM)
BUILDING 52, FORMER ANACONDA CABLE AND WIRE COMPANY
JUNE 2016

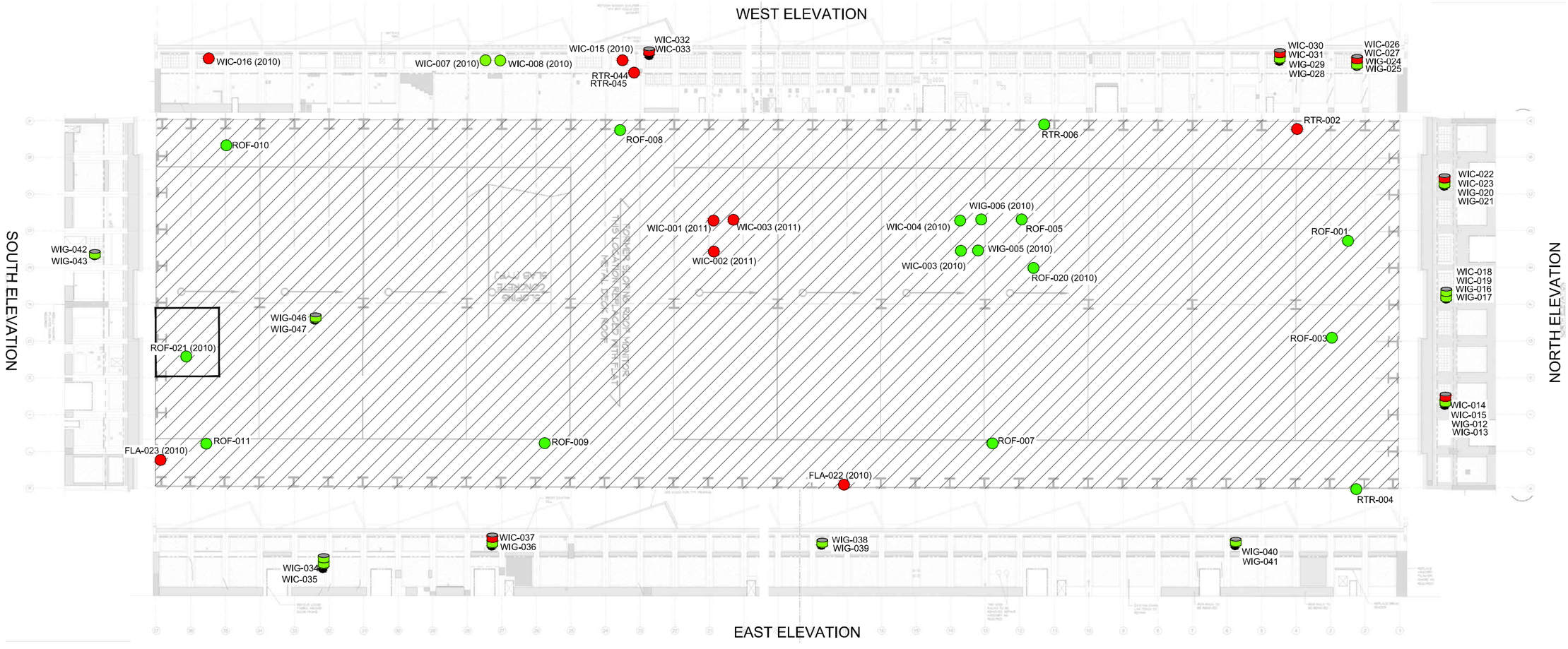
Location ID	Sample Date	Total Asbestos (%)	Material	Location Comments
Window Glaze				
WIG-012	12/14/2015	<1	Tan Window Glaze	North Window #1, TAN
WIG-013	12/14/2015	<1	Tan Window Glaze	North Window #1, TAN
WIG-016	12/14/2015	<1	Tan Window Glaze	North Window #2, TAN
WIG-017	12/14/2015	<1	Tan Window Glaze	North Window #2, TAN
WIG-020	12/14/2015	<1	Tan Window Glaze	North Window #3, TAN
WIG-021	12/14/2015	<1	Tan Window Glaze	North Window #3, TAN
WIG-024	12/8/2015	<1	Tan Window Glaze	West Window #4, TAN
WIG-025	12/8/2015	<1	Tan Window Glaze	West Window #4, TAN
WIG-028	12/9/2015	<1	Tan Window Glaze	West Window #5, TAN
WIG-029	12/9/2015	<1	Tan Window Glaze	West Window #5, TAN
WIG-034	12/10/2015	<1	Tan Window Glaze	East Window #19, TAN
WIG-036	12/10/2015	<1	Tan Window Glaze	East Window #20, TAN
WIG-038	12/10/2015	<1	Blue Window Glaze	East Window #22, BLUE
WIG-039	12/10/2015	<1	Blue Window Glaze	East Window #22, BLUE
WIG-040	12/11/2015	<1	Gray Window Glaze	East Window #24, GRAY
WIG-041	12/11/2015	<1	Gray Window Glaze	East Window #24, GRAY
WIG-042	12/11/2015	<1	Tan Window Glaze	South Window, Not enough material
WIG-043	12/11/2015	<1	Tan Window Glaze	South Window, Not enough material
WIG-046	12/11/2015	<1	Gray Window Glaze	Monitor #2
WIG-047	12/11/2015	<1	Gray Window Glaze	Monitor #2
Wire Insulation				
WIN-051	12/14/2015	0	White Fibrous Wire Insulation	Crane electric box wire
WIN-052	12/14/2015	0	White Fibrous Wire Insulation	Crane electric box wire
Wall Plaster				
WPL-059	12/15/2015	0	White Wall Plaster	South main entrance wall
WPL-060	12/15/2015	0	Gray Wall Plaster	South main entrance wall
WPL-061	12/15/2015	<1	White Wall Plaster	South main entrance wall
WPL-062	12/15/2015	0	Gray Wall Plaster	South main entrance wall
WPL-063	12/15/2015	<1	White Wall Plaster	South main entrance wall
WPL-064	12/15/2015	0	Gray Wall Plaster	South main entrance wall

Notes & Abbreviations:

DWL: Dry wall
PAP: Fibrous paper
ROF: Roof membrane
RTR: Roofing Cement/Tar
SPK: Wall spackle
TRN: Fibrous Transite
WIC: Window Caulk
WIG: Window Glaze
WIN: Wire Insulation
WPL: Wall Plaster

1. Total asbestos results in red are greater than 1% (asbestos detected in material).

FIGURES



LEGEND

WIC-006	WINDOW CAULK
WIG-004	WINDOW GLAZE
ROF-010	ROOF MEMBRANE
FLA-023	FLASHING
RTR-006	ROOF TAR
	ACM PRESENT IN SAMPLE
	ACM NOT PRESENT IN SAMPLE

WINDOW SAMPLE

- WINDOW CAULK
- WINDOW GLAZE
- ACM PRESENT IN SAMPLE
- ACM NOT PRESENT IN SAMPLE

NOTES

1. ALL ASBESTOS SAMPLING LOCATIONS ARE APPROXIMATE.

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

ASBESTOS SAMPLING LOCATIONS (PARADIGM) - EXTERIOR

SCALE: AS SHOWN
JUNE 2016

FIGURE F.1

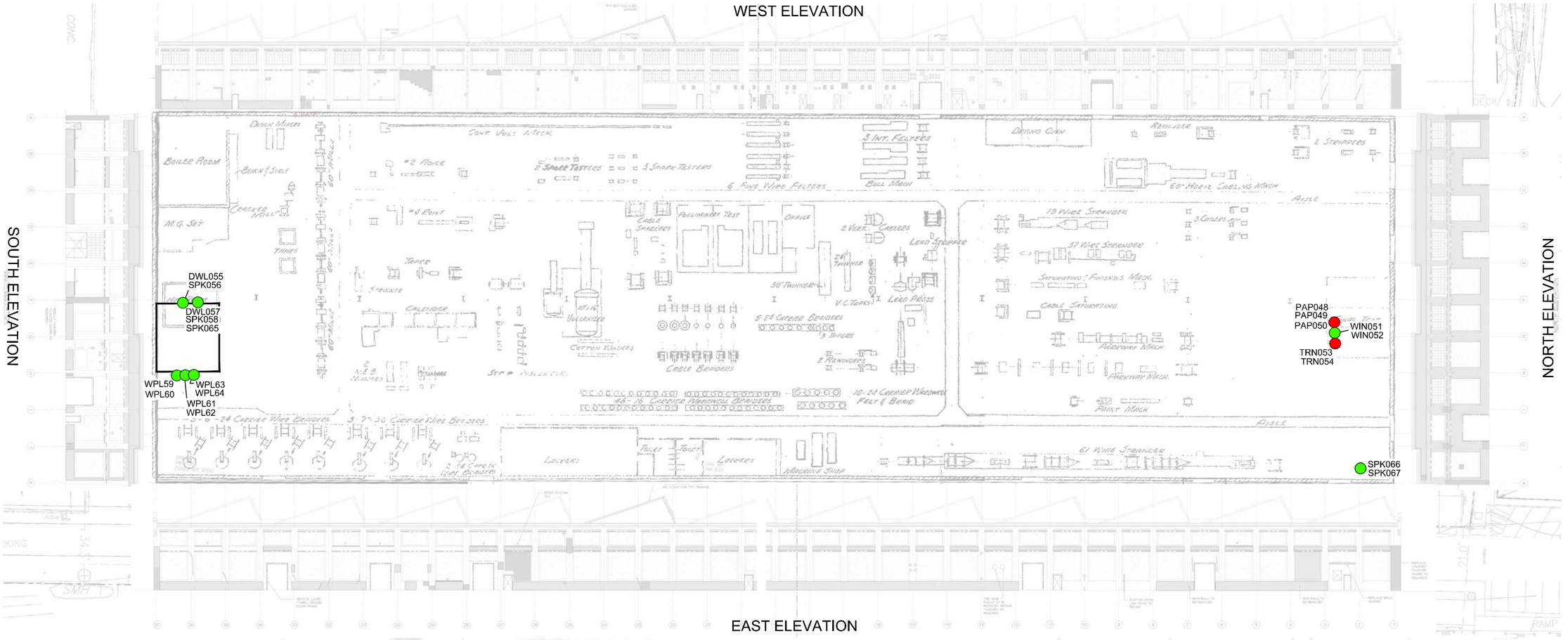
SATANEK, MELANIE Printed: 6/21/2016 5:08 PM Layout: ENVOY FIG 7
\\NE\WCOM\MON\28612\GLOBAL\CAD\28612_339_0043_BLDG 52 2015-DEC-EXPLORATIONS_ACM-DOT MAP-D4.DWG

WEST ELEVATION

SOUTH ELEVATION

NORTH ELEVATION

EAST ELEVATION



LEGEND

SPK066	WHITE SPACKLE
PAP048	GRAY FIBROUS PAPER ON CRANE PANEL BOX INSULATION
WIN051	WHITE FIBROUS WIRE INSULATION, CRANE ELECTRIC BOX WIRE
TRN053	FIBROUS TRANSITE ON CRANE ELECTRICAL BOX
DWL055	DRYWALL
WPL59	WALL PLASTER
●	ACM PRESENT IN SAMPLE
●	ACM NOT PRESENT IN SAMPLE

NOTES

1. ALL ASBESTOS SAMPLING LOCATIONS ARE APPROXIMATE.

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

ASBESTOS SAMPLING LOCATIONS (PARADIGM) - INTERIOR

SCALE: AS SHOWN
JUNE 2016

FIGURE F.2

SATANEK, MELANIE Printed: 6/21/2016 5:08 PM Layout: ENVOY FIG 7 (2)
\\NEWCOMMON\28612\GLOBAL\CAD\28612_339_0043_BLDG 52 2015-DEC-EXPLORATIONS_ACM-DOT MAP-D4.DWG

Appendix G

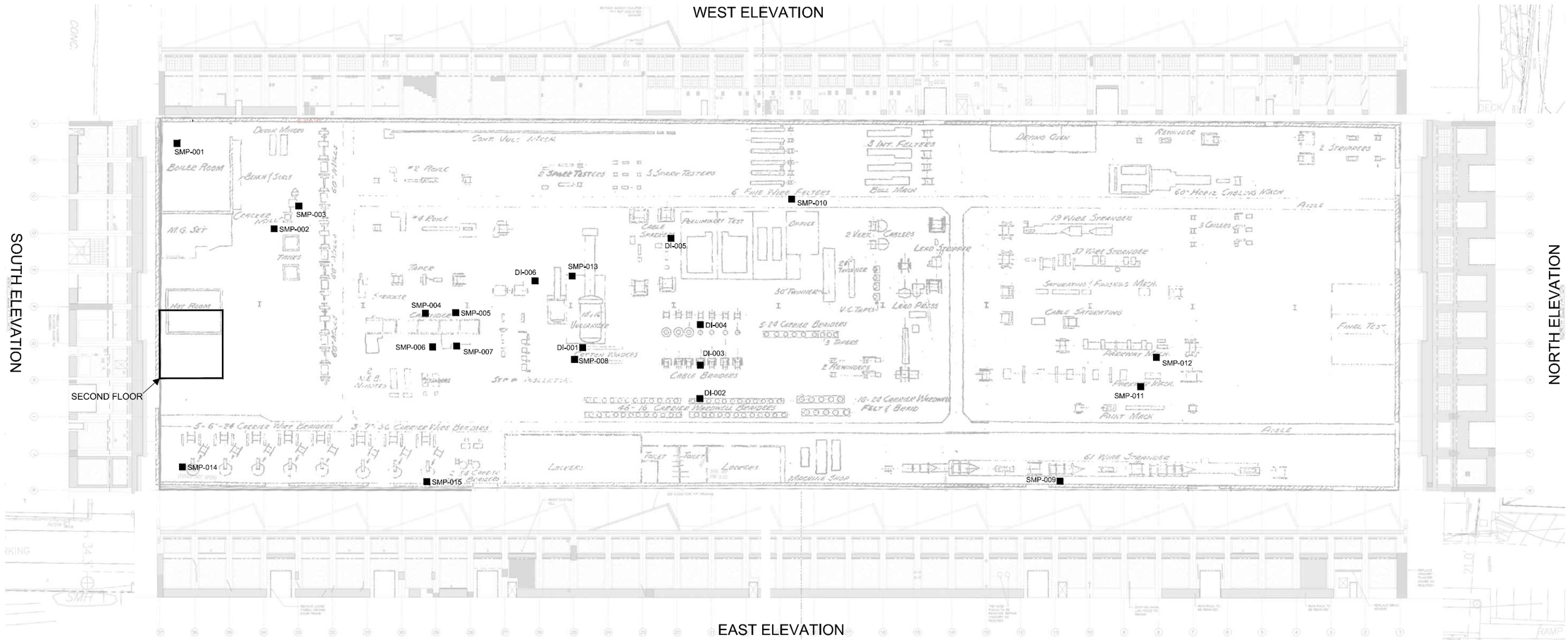
Additional Site Figure

WEST ELEVATION

SOUTH ELEVATION

NORTH ELEVATION

SECOND FLOOR



EAST ELEVATION

LEGEND

SMP-001	■	FLOOR SUMP LOCATIONS
DI-001	■	FLOOR DRAIN LOCATIONS

NOTES

1. SMP-004, 006, 007 AND 013 WERE WELDED SHUT OR FILLED WITH CONCRETE; NO SAMPLE COLLECTED.
2. SMP-002 AND 003 ARE SUSPECTED ELECTRICAL VAULTS; NO SAMPLE COLLECTED.
3. SMP-010 IS PARTIALLY FILLED WITH CONCRETE; NO SAMPLE COLLECTED.
4. SMP-012 IS LIKELY WELDED SHUT; NO SAMPLE COLLECTED.
5. SMP-011 IS A FORMER SCALE VAULT FILLED WITH WATER; NO SAMPLE COLLECTED. WATER WILL BE REMOVED AND SUMP INSPECTED DURING DEMOLITION. SEDIMENT SAMPLES WILL BE COLLECTED AS REQUIRED.
6. SMP-014 IS A WATER METER VAULT; NO SAMPLE COLLECTED.
7. SMP-015 IS FILLED WITH WATER AND SEDIMENT; NO SAMPLE COLLECTED. WATER WILL BE REMOVED AND SUMP INSPECTED DURING DEMOLITION. SEDIMENT SAMPLES WILL BE COLLETED AS REQUIRED.
8. SEDIMENT IS NOT PRESENT IN DRAINS; SAMPLES NOT COLLECTED. DRAINS WILL BE PLUGGED DURING DEMOLITION.

N

0 25 50 75 100

SCALE IN FEET

HALEY ALDRICH

NYSDEC SITE #3-60-022
1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

SUMPS AND DRAIN LOCATIONS

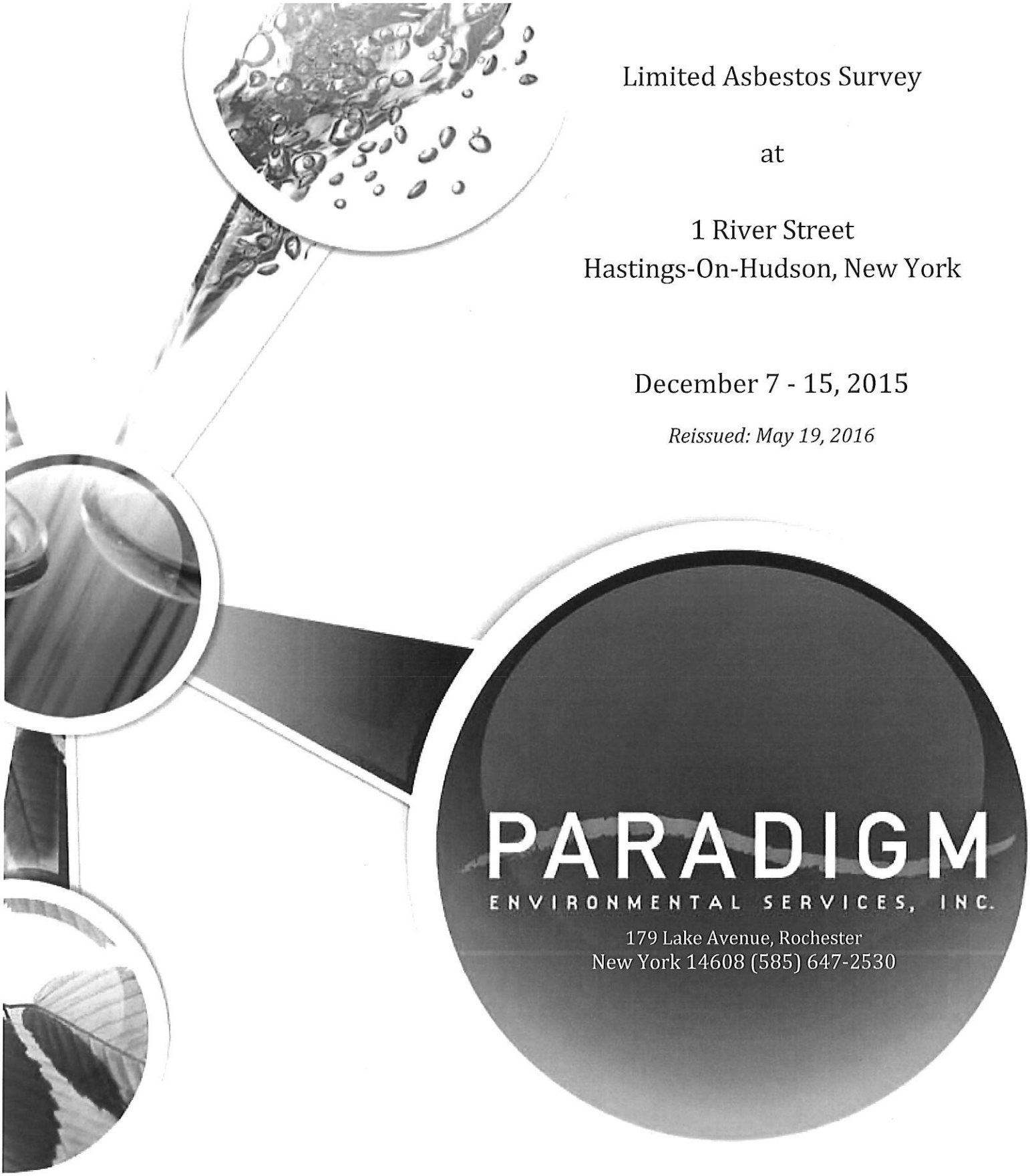
SCALE: AS SHOWN
JUNE 2016

FIGURE G.1

SATANEK, MELANIE Printed: 5/25/2016 4:13 PM Layout: SUMPS AND DRAINS FIGURE
\\NEWCOMMON\28612\GLOBAL\CAD\28612_339_0041_BLDG 52 2015-DEC-EXPLORATIONS_DOT MAPS_2.DWG

Appendix H

Asbestos Containing Materials Report



Limited Asbestos Survey

at

1 River Street
Hastings-On-Hudson, New York

December 7 - 15, 2015

Reissued: May 19, 2016

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester
New York 14608 (585) 647-2530

Prepared for:
Haley & Aldrich, Inc.
455 E. Eisenhower Parkway, Suite 210
Ann Arbor, MI 48103
Job Number: 15-1207

1 RIVER STREET
HASTINGS-ON-HUDSON, NEW YORK

TABLE OF CONTENTS

INTRODUCTION

Paradigm Environmental Services, Inc. was retained by **Haley & Aldrich, Inc.** on **December 7 - 15, 2015** to conduct an inspection for the detection of asbestos containing materials located at **1 River Street, Hastings-On-Hudson, New York.**

Reissued on May 19, 2016 to combine all the samples into one map and make corrections to the map.

The objective of this inspection was to identify and assess with due diligence the locations, quantities, friability and condition of all types of asbestos containing materials at the above referenced location. Paradigm Environmental performed all sample analysis and analytical reports for this project. Field services and survey reports were generated by Envoy Environmental Consultants as a subcontractor to Paradigm. Envoy Environmental Consultants inspector Joshua Scheuermann (AH#10-00221) conducted this inspection with the procedures and guidelines dictated by state and federal regulatory agencies. The inspectors of Envoy Environmental Consultants, Inc. selected materials for inclusion in this report through an understanding of the scope of the renovation as indicated by the building owner and the historical uses of asbestos in general. Generally, if a building material within a structure could contain asbestos the material was included in the survey.

Samples were collected from locations within each homogeneous sampling area. Samples consist of a small amount of the subject material. Sampling points were recorded and cross-referenced to prepared sketches. Individual samples were also recorded on a chain of custody document. Samples were then transported to the Paradigm analytical laboratory for asbestos analysis.

The Paradigm laboratory is accredited through NYSDOH/ELAP (Lab ID# 10958) for Solid and Hazardous Waste and Air and Emissions for Bulk Asbestos Fiber Analysis. The chain of custody record accompanies all samples from the point collected until they reach the laboratory. Samples are stored at the laboratory for 90 days then disposed of according to authoritative regulations.

The analysis methodology used is as follows:

Asbestos Bulk Samples:

New York State Department of Health, ELAP Method 198.1 and 198.6 ("Polarized Light Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.").
New York State Department of Health, ELAP Method 198.4 ("Transmission Electron Microscope Method for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples").

LIMITATIONS

The information provided in this report was compiled from field and laboratory data and was prepared for **Haley & Aldrich, Inc.** and referenced to **1 River Street, Hastings-On-Hudson, New York.** Materials noted and recorded are intended to represent subject site at the time and date that the observations were made. Conclusions and recommendations provided in this report are based on the assumption that materials identified are homogenous throughout their application. Determinations of suspect asbestos containing materials within the building were subject to the accessibility of each individual area or space. Determinations of asbestos containing materials were made by means of bulk sampling, physical assessment or visual assessment if the materials were not accessible. Envoy Environmental Consultants Inc. and Paradigm Environmental Services, Inc. accepts no responsibility for the content of building materials within areas or spaces that were unknown to us, not reasonably accessible, or not part of the scope of the project as defined by the client. Envoy Environmental Consultants Inc. and Paradigm Environmental Services, Inc. assumes no liability for any buildings that were not identified by the client that may fall under state or federal regulation. All conclusions provided in this report are based on the bulks sampling that was performed at the above mentioned site on the above mentioned dates.

As per the direction of the client, Haley & Aldrich, Inc., this survey was limited to suspect asbestos containing materials as listed in the materials tested table; if additional materials will be impacted by the renovation these materials should be considered asbestos containing until tested.

All quantities are approximations and must be field verified by the contractor prior to the submittal of bids. Contractor bids are expected to be based on their own determination of quantities and not the quantities stated in this report.

This asbestos survey report is not intended to be a bid document for a scope of work for the asbestos abatement contractor. The survey report only identifies and assesses the location, quantity and condition of ACM, PACM or asbestos materials at the subject site. The asbestos survey report is intended to be used as a tool in the development of an asbestos abatement project design or work scope. Under the Code Rule regulation this task can only be performed by a Certified Project Designer.

Energized mechanical or electrical systems were not sampled as part of the survey, and were visually assessed as ACM (Asbestos Containing Material). Suspect materials that are visually assessed by the inspector as ACM shall be treated as ACM, unless bulk sampling is conducted consistent with EPA and OSHA accepted methods, and the analysis meets the requirements of Code Rule 56 and the suspect material is found not to be asbestos containing. These systems may contain one or more of the following components, but are not limited to these components: brakes, clutches, gaskets, insulating panels, blocks or backer boards, wire insulation, explosion proof lighting gaskets and fitting packings, insulating papers, pipe sleeve packings, fire stops, caulks, paints and coatings.

CONCLUSIONS

Paradigm Environmental Services, Inc. was retained to perform a limited asbestos survey from **1 River Street, Hastings-On-Hudson, New York** on **December 7 - 15, 2015.** A New York State certified inspector sampled suspect asbestos containing materials from the above mentioned site. Sample locations and custody information were recorded and the samples were transported to the Paradigm laboratory for analysis.

Transmittal of Building/Structure Asbestos Survey Information – As required by New York State Industrial Code Rule 56, one (1) copy of the results of the building/structure asbestos survey shall be immediately transmitted by the building/structure owner as follows:

- One (1) copy of the completed asbestos survey shall be sent by the owner or their agent to the local entity charged with issuing a permit for such demolition, renovation, remodeling or repair work under State or local laws.

- The completed asbestos survey for controlled demolition (as per Subpart 56-11.5) or pre-demolition asbestos projects shall be submitted to the appropriate Asbestos Control Bureau district office.

- The completed asbestos survey shall be kept on the construction site with the asbestos notification and variance, if required, throughout the duration of the asbestos project and any associated demolition, renovation, remodeling or repair project.

The following is a brief description of the space by space survey.

Col. 1	*Col. 2*	*Col. 3*	*Col. 4*	*Col. 5*	*Col. 6*	*Col. 7*	*Col. 8*	*Col 9*	*Col 10*	*Col. 11*
Room #	*Sample #'s taken in Room*	*Positive Sample ID #*	*Positive Material Description*	*Location of Material*	*Condition*	*Friable Non-Friable NOB*	*Type of Material*	*SQ FT*	*Lin FT*	*Units*

1. Column 1: indicates the Room number, room description and estimated square footage of the room referenced to the attached map/drawing.
2. Column 2: indicates the bulk sample numbers that were taken in the Room indicated in column 1. i.e. 001-007 means samples one through seven were sampled in the room, none would indicate that no samples were taken in the room. You will not see the first three letters of the sample in this column. If you would like to know the materials that were tested in the room please refer to the analytical results which are documented in numerical order.
3. Column 3: indicates the sample number that proves the material is positive for asbestos content. This sample may have taken in the space in column 1 or determined a homogeneous area (material) by the inspector to a sample that was taken in another space. For the purpose of this report all samples are assigned a six digit alphanumeric sample identification number. The first three letters/numbers indicate the material, found in column 4. The last three numbers indicate the sample number in the sequence in which they were taken. If there is a letter after the last three numbers, this indicates that the laboratory or the inspector determines that there were multiple layers within the sample, requiring additional sampling under EPA protocols.
4. Column 4: gives a brief description of the asbestos containing material or the material that is to be treated as asbestos containing as determined by the inspector. At times non-asbestos materials are contaminated with asbestos, therefore must be treated as asbestos.
5. Column 5: indicates a brief description of the location of the material in the room and not the location where the sample was taken from. You will find locations of where each sample was taken from on the analytical sampling results.
6. Column 6: indicates the physical condition of the material as assessed by the inspector in the space indicated in column 1, according to the condition description described below. For the purpose of this report, the condition of the ACM will be reported in good, fair or poor condition. Conditions will be listed in column 6 of the survey report will be as follows;
   a. ***Good:*** means material is intact with no visible damage.
   b. ***Fair:*** means material contains fewer than 10% distributed damage or 25% localized damage.
   c. ***Poor:*** means material contains over 10% distributed damage or 25% localized damage.
   Conditions listed in column 6 of the space by space survey report are only related to the specific material for the specific space.
7. Column 7: indicates the friability of the material in that space as determined by the inspector and the analytical laboratory consistent with Code Rule 56 and EPA regulations.
8. Column 8: indicates the type of material in that space as determined by the inspector and the analytical laboratory consistent with Code Rule 56 and EPA regulations.
9. Column 9: indicates the square footage of ACM material found in the space.
10. Column 10: indicates the linear footage of ACM material found in the space. Pipe insulation that is two feet or greater in diameter is required to be reported in square feet according to code Rule 56.
11. Column 11: indicates the units of ACM material found in the space.

MATERIALS TESTED
1 River Street
Hastings-On-Hudson, New York

Sample ID	Description of Material	PLM Asbestos Fibers Type & Percentage	TEM Asbestos Fibers Type & Percentage	Friable Non-Friable NOB
Wall and Ceiling Materials				
DWL-055	Gray Drywall	None Detected	Not Required	Non-Friable
SPK-056	White Spackle	None Detected	Not Required	Non-Friable
DWL-057	Gray Drywall	None Detected	Not Required	Non-Friable
SPK-058	White Spackle	None Detected	Not Required	Non-Friable
WPL-059	White Wall Plaster	None Detected	Not Required	Non-Friable
WPL-060	Gray Wall Plaster	None Detected	Not Required	Non-Friable
WPL-061	White Wall Plaster	Trace Chrysotile <1.0%	Not Required	Non-Friable
WPL-062	Gray Wall Plaster	None Detected	Not Required	Non-Friable
WPL-063	White Wall Plaster	Trace Chrysotile <1.0%	Not Required	Non-Friable
WPL-064	Gray Wall Plaster	None Detected	Not Required	Non-Friable
SPK-065	White Spackle	None Detected	Not Required	Non-Friable
SPK-066	White Spackle	None Detected	Not Required	Non-Friable
SPK-067	White Spackle	None Detected	Not Required	Non-Friable
Miscellaneous Materials				
PAP-048	Gray Paper	Chrysotile 80%	Not Required	Friable
PAP-049	Gray Paper	Chrysotile 80%	Not Required	Friable
PAP-050	Gray Paper	Chrysotile 67%	Not Required	Friable
WIN-051	White Wire Insulation	None Detected	Not Required	Friable
WIN-052	White Wire Insulation	None Detected	Not Required	Friable
TRN-053	Gray Transite	Chrysotile 23%	Not Required	Non-Friable
TRN-054	Gray Transite	Chrysotile 27%	Not Required	Non-Friable
Roofing Materials				
ROF-001	Black Roofing	Inconclusive No Asbestos Detected	None Detected	NOB
RTR-002	Black Roofing Cement/Tar	Chrysotile 5.3%	Not Required	NOB
ROF-003	Black Roofing	Inconclusive Trace Chrysotile Detected	None Detected	NOB
RTR-004	Black Roofing Cement/Tar	Inconclusive Trace Chrysotile Detected	Trace Chrysotile <1.0%	NOB
ROF-005	Black Roofing	Inconclusive No Asbestos Detected	None Detected	NOB
RTR-006	Black Roofing Cement/Tar	Inconclusive Trace Chrysotile Detected	None Detected	NOB
ROF-007	Black Roofing	Inconclusive No Asbestos Detected	None Detected	NOB
ROF-008	Black Roofing	<1.0% Residue Remaining. PLM and TEM Not Required.	N/A	NOB
ROF-009	Black Roofing	Inconclusive Trace Chrysotile Detected	None Detected	NOB
ROF-010	Black Roofing	Inconclusive Trace Chrysotile Detected	None Detected	NOB
ROF-011	Black Roofing	Inconclusive No Asbestos Detected	None Detected	NOB
RTR-044	Black Roofing Cement/Tar	Chrysotile 3.0%	Not Required	NOB
RTR-045	Black Roofing Cement/Tar	Chrysotile 3.1%	Not Required	NOB
Window Glaze and Caulk				
WIG-012	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIG-013	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIC-014	Gray Window Caulk	Chrysotile 1.5%	Not Required	NOB

MATERIALS TESTED
1 River Street
Hastings-On-Hudson, New York

Sample ID	Description of Material	PLM Asbestos Fibers Type & Percentage	TEM Asbestos Fibers Type & Percentage	Friable Non-Friable NOB
WIC-015	Gray Window Caulk	Chrysotile 1.0%	Not Required	NOB
WIG-016	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIG-017	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIC-018	Gray Window Caulk	Inconclusive Trace Chrysotile Detected	None Detected	Non-Friable
WIC-019	Gray Window Caulk	Inconclusive No Asbestos Detected	Trace Chrysotile <1.0%	Non-Friable
WIG-020	Tan Window Glaze	Inconclusive No Asbestos Detected	Trace Chrysotile <1.0%	Non-Friable
WIG-021	Tan Window Glaze	Inconclusive No Asbestos Detected	Trace Chrysotile <1.0%	Non-Friable
WIC-022	Gray Window Caulk	Chrysotile 6.5%	Not Required	NOB
WIC-023	Gray Window Caulk	Chrysotile 5.6%	Not Required	NOB
WIG-024	Tan Window Glaze	Inconclusive No Asbestos Detected	Trace Chrysotile <1.0%	Non-Friable
WIG-025	Tan Window Glaze	Inconclusive No Asbestos Detected	Trace Chrysotile <1.0%	Non-Friable
WIC-026	Gray Window Caulk	Chrysotile 2.1%	Not Required	NOB
WIC-027	Gray Window Caulk	Chrysotile 1.9%	Not Required	NOB
WIG-028	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIG-029	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIC-030	Gray Window Caulk	Chrysotile 14%	Not Required	NOB
WIC-031	Gray Window Caulk	Chrysotile 9.8%	Not Required	NOB
WIC-032	Tan Window Caulk	Chrysotile 2.1%	Not Required	Non-Friable
WIC-033	Tan Window Caulk	Chrysotile 4.0%	Not Required	Non-Friable
WIG-034	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIC-035	Tan Window Caulk	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIG-036	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIC-037	Tan Window Caulk	Chrysotile 7.9%	Not Required	Non-Friable
WIG-038	Blue Window Glaze	Inconclusive Trace Chrysotile Detected	Trace Chrysotile <1.0%	Non-Friable
WIG-039	Blue Window Glaze	Inconclusive Trace Chrysotile Detected	Trace Chrysotile <1.0%	Non-Friable
WIG-040	Gray Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIG-041	Gray Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIG-042	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIG-043	Tan Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIG-046	Gray Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable
WIG-047	Gray Window Glaze	Inconclusive No Asbestos Detected	None Detected	Non-Friable

ASBESTOS CONTAINING MATERIALS
SPACE BY SPACE SUMMARY
1 River Street
Hastings-On-Hudson, New York

Room	Sample #'s taken in Room	Positive Sample ID #	Positive Material Description	Location of Material	Condition	Friable** Non-Friable NOB	Type of Material	SQ FT	Lin. FT	Units
Roof 1 2400 square feet	001, 002	RTR-002	Black Roofing Cement/Tar	Roof Seams, Edges, and Penetrations	Good	NOB	MISC	1250		
Roof 2	003, 004	RTR-002	Black Roofing Cement/Tar	Roof Seams, Edges, and Penetrations	Good	NOB	MISC	1250		
Roof 3	005, 006	RTR-002	Black Roofing Cement/Tar	Roof Seams, Edges, and Penetrations	Good	NOB	MISC	1250		
Roof 4	007	RTR-002	Black Roofing Cement/Tar	Roof Seams, Edges, and Penetrations	Good	NOB	MISC	1250		
Roof 5	008	RTR-002	Black Roofing Cement/Tar	Roof Seams, Edges, and Penetrations	Good	NOB	MISC	1250		
Roof 6	009	RTR-002	Black Roofing Cement/Tar	Roof Seams, Edges, and Penetrations	Good	NOB	MISC	1250		
Roof 7	010	RTR-002	Black Roofing Cement/Tar	Roof Seams, Edges, and Penetrations	Good	NOB	MISC	1250		
Roof 8	011	RTR-002	Black Roofing Cement/Tar	Roof Seams, Edges, and Penetrations	Good	NOB	MISC	1250		
North Window 1	012-015	WIC-014, 015	Gray Window Caulk	Window	Good	NOB	MISC		175	
North Window 2	016-019	None	No Asbestos Detected in Materials Tested					0	0	0
North Window 3	020-023	WIC-022, 023	Gray Window Caulk	Window 3	Good	NOB	MISC		36	
West Window 4	024-027	WIC-026, 027	Gray Window Caulk	Window	Good	NOB	MISC		36	
West Window 5	028-031	WIC-030, 031	Gray Window Caulk	Window	Good	NOB	MISC		36	
West Window 13	032, 033	WIC-032, 033	Tan Window Caulk	Lower Window Edge	Good	Non-Friable	MISC		36	
East Window 19	034, 035	None	No Asbestos Detected in Materials Tested					0	0	0
East Window 20	036, 037	WIC-037	Tan Window Caulk	Window	Good	Non-Friable	MISC		62	
East Window 22	038, 039	None	No Asbestos Detected in Materials Tested					0	0	0
East Window 22	040, 041	None	No Asbestos Detected in Materials Tested					0	0	0
South Window	042, 043	None	No Asbestos Detected in Materials Tested					0	0	0
West Wall	044, 045	RTR-044, 045	Black Roofing Cement/Tar	20' Off Ground on Wall	Good	NOB	MISC		575	
Monitor 2	046, 047	None	No Asbestos Detected in Materials Tested					0	0	0
Crane	048-054	PAP-048, 049, 050	Gray Paper	Electrical Panel Insulation	Good	Friable	MISC	18		
		TRN-053, 054	Gray Transite	Panel in Electrical Box	Good	Non-Friable	MISC	6		

ASBESTOS CONTAINING MATERIALS
SPACE BY SPACE SUMMARY
1 River Street
Hastings-On-Hudson, New York

Room	Sample #'s taken in Room	Positive Sample ID #	Positive Material Description	Location of Material	Condition	Friable** Non-Friable NOB	Type of Material	SQ FT	Lin. FT	Units
2nd Floor	055-058, 065	None	No Asbestos Detected in Materials Tested					0	0	0
South Main Entrance	059-064	None	No Asbestos Detected in Materials Tested					0	0	0
North East Corner Main Floor	066, 067	None	No Asbestos Detected in Materials Tested					0	0	0
								10024	956	0

Assume- Indicates materials assumed positive for asbestos containing materials by inspector.

U - Inspector unable to determine quantity

*** Reflects quantifiable locations only; additional materials maybe present, but not quantifiable per table.**

***** Materials are categorized as friable or non-friable based on their intact condition. For designer abatement purposes materials labeled as non-friable may become friable, based on methods of handling.***

All layers of multi-layered systems are analyzed, quantified and reported separately, as specified by NYSDOL and NYSDOH. In some cases, multi-layered systems may be combined for design and abatement purposes, with effective quantities adjusted accordingly.

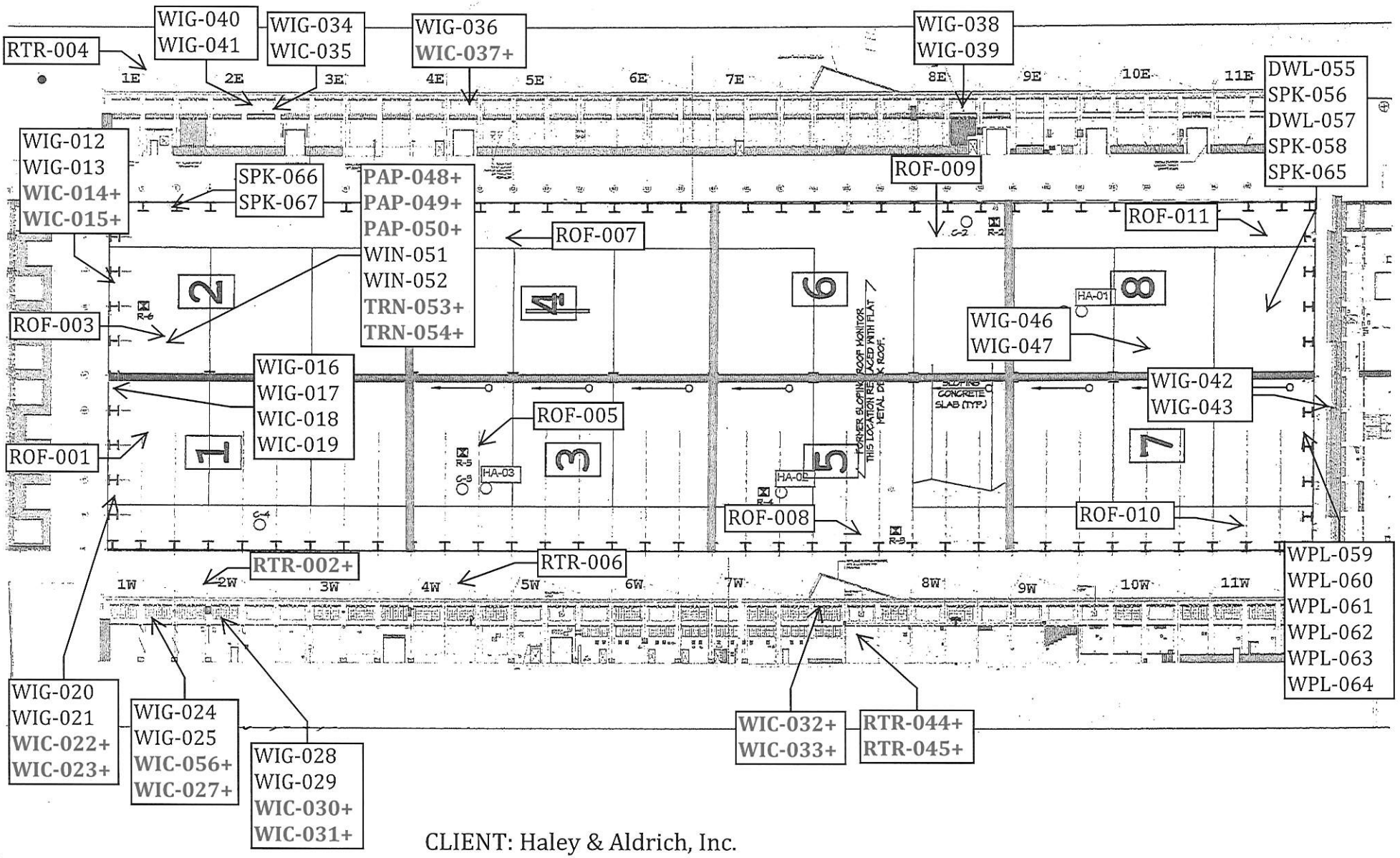
Paradigm certifies that this report regarding 1 River Street, Hastings-On-Hudson, New York based on the observations of the inspector and believes it to be an accurate representation of the conditions as they existed on December 7 - 15, 2015.

MICHAEL ROSCAN FOR

Joshua Scheuermann
Envoy Environmental Consultants, Inc.
Inspector #AH 10-00221

Paradigm appreciates this opportunity to provide you with our professional services. If you have any questions, please feel free to contact me at (585) 647-2530.

Mary Dohr
Asbestos Operations Manager
Paradigm Environmental Services, Inc.
mdohr@paradigmenv.com



CLIENT: Haley & Aldrich, Inc.
LOCATION: 1 River Street, Hastings-On-Hudson, New York
DATE: December 7 - 15, 2015
JOB NUMBER: 15-1207

← N

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc. **Job No:** 16477-15
Location: 1 River Street **Page:** 1 of 2

Sample Date: 12/7/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
ROF-001	118264	Roof #1 Field	Black Roofing	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	Fiberglass 5%	95%
RTR-002	118265	Roof #1 Seam	Black Roofing Cement/Tar	Chrysotile 5.3%	5.3%	√	Not Required	N/A	None Detected	94.7%
ROF-003	118266	Roof #2 Field	Black Roofing	Inconclusive Trace Chrysotile Detected	<1.0%	√	None Detected	<1.0%	None Detected	100%
RTR-004	118267	Roof z#2 Seam	Black Roofing Cement/Tar	Inconclusive Trace Chrysotile Detected	<1.0%	√	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
ROF-005	118268	Roof #3 Field	Black Roofing	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	Fiberglass 4%	96%
RTR-006	118269	Roof #3 Seam	Black Roofing Cement/Tar	Inconclusive Trace Chrysotile Detected	<1.0%	√	None Detected	<1.0%	None Detected	100%
ROF-007	118270	Roof #4 Field	Black Roofing	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	Fiberglass 3%	97%
ROF-008	118271	Roof #5 Field	Black Roofing	<1.0% Residue Remaining. PLM and TEM Not Required.	N/A	√	N/A	N/A	N/A	N/A
ROF-009	118272	Roof #6 Field	Black Roofing	Inconclusive Trace Chrysotile Detected	<1.0%	√	None Detected	<1.0%	Fiberglass 5%	95%
ROF-010	118273	Roof #7 Field	Black Roofing	Inconclusive Trace Chrysotile Detected	<1.0%	√	None Detected	<1.0%	None Detected	100%

NVLAP Lab Code 200530-0 for PLM Analysis

ELAP ID No.: 10958

KEY TO NOB COLUMN SYMBOLS

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

√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).

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

 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).

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

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/22/2015 **TEM Date Analyzed:** 12/22/2015

Microscope: Olympus BH-2 #232953 **TEM Analyst:** M. Lochner

Analyst: *T. Bush*

Laboratory Results Approved By: _____
Asbestos Operations Manager or Designee Mary Dolr

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

ENVOY
environmental consultants, inc.
57 Ambrose St, Rochester, NY 14608
585.454.1060 * Fax 585.454.1062

OFFICE USE ONLY

Job #: 16477-15
Page (S) of (C)
Date Logged In: 12/17/15
Logged In By: MH
1 of 10 COC

Client: Haley + Aldrich Inc.	Contact: Keith Aragona	
Phone Number: 734-887-8402	SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]	
Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI	Email Results To Inspector: Jscheuermann@envoyenv.com Call Client [ ]	Fax Number or email address:
Job Ticket #:	Date Sampled: 12/7/15	Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]
Project Location: 1 River St.	Project Address:	Project Number: 15-1207

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	Rof 001	118264	Roof #1 field		Blk		Rof	N
2	RTR 002	265	Roof # Seam		Blk		RTR	N
3	Rof 003	266	Roof #2 field		Blk		Rof	N
4	RTR 004	267	Roof #2 Seam		Blk		RTR	N
5	Rof 005	268	Roof #3 field		Blk		Rof	N
6	RTR 006	269	Roof #3 Seam		Blk		RTR	N
7	Rof 007	270	Roof #4 field		Blk		Rof	N
8	Rof 008	271	Roof #5 field		Blk		Rof	N
9	Rof 009	272	Roof #6 field		Blk		Rof	N
10	Rof 010	273	Roof #7 field		Blk		Rof	N

Sampled By: Josh Scheuermann Date: 12/7/15

Transported to Paradigm By: [signature] Date: 12/7/15

Received By: [signature] Date: 12/17/15

CHECK ONE: SURVEY [X] BULKS ONLY [ ]

CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS [X]

or provide TEM contact name:

TOTAL NUMBER OF SAMPLES IN SURVEY: Estimated at [ ]

EM 12/23/15

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc. **Job No:** 16478-15
Location: 1 River Street

Sample Date: 12/7/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
ROF-011	118274	Roof #8 Field	Black Roofing	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	Fiberglass 8%	92%

NVLAP Lab Code 200530-0 for PLM Analysis *ELAP ID No.: 10958*

KEY TO NOB COLUMN SYMBOLS
No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).
√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
Ṽ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
# denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/22/2015 **TEM Date Analyzed:** 12/22/2015
Microscope: Olympus BH-2 #232953 **TEM Analyst:** M. Lochner
Analyst: *T. Bush*

Laboratory Results Approved By:
Asbestos Operations Manager or Designee Mary Dohr

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

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environmental consultants, inc.
57 Ambrose St, Rochester, NY 14608
585.454.1060 * Fax 585.454.1062

Client: Haley + Aldrich Inc.	Contact: Keith Aragona	Job #: 16478-15
Phone Number: 734-887-8402	SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]	Page 2 of 2
Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI	Email Results To Inspector: Jscheuermann@envoyenv.com Call Client [ ]	Fax Number or email address:
Job Ticket #:	Date Sampled: 12/7/15	Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]
Project Location: 1 River St.	Project Address:	Project Number: 15-1207

Date Logged In: 12/17/15
Logged In By: MAR
2810 COC

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	Roof 1	118274	Roof #8 field		Blk		Rof	N
2								
3								
4								
5								
6								
7								
8								
9								
10								

Sampled By: Josh Scheuermann Date: 12/7/15	CHECK ONE: SURVEY [X] BULKS ONLY [ ]
Transported to Paradigm By: Date: 12/7/15	CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS [X] or provide TEM contact name:
Received By: Date: 12/17/15	TOTAL NUMBER OF SAMPLES IN SURVEY: Estimated at [ ]

Co
nta

EM 12/23/15

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc.
Location: 1 River Street

Job No: 16479-15

Sample Date: 12/8/2015

Reissued: 1/13/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
WIG-012	118275	North Window #1	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIG-013	118276	North Window #1	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIC-014	118277	North Window #1	Gray Window Caulk	Chrysotile 1.5%	1.5%	√	Not Required	N/A	None Detected	98.5%
WIC-015	118278	North Window #1	Gray Window Caulk	Chrysotile 1.0%	1.0%	√	Not Required	N/A	None Detected	99%
WIG-016	118279	North Window #2	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIG-017	118280	North Window #2	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIC-018	118281	North Window #2	Gray Window Caulk	Inconclusive Trace Chrysotile Detected	<1.0%	#	None Detected	<1.0%	None Detected	100%
WIC-019	118282	North Window #2	Gray Window Caulk	Inconclusive No Asbestos Detected	0%	#	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
WIG-020	118283	North Window #3	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
WIG-021	118284	North Window #3	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	Trace Chrysotile <1.0%	<1.0%	None Detected	100%

NVLAP Lab Code 200530-0 for PLM Analysis

ELAP ID No.: 10958

KEY TO NOB COLUMN SYMBOLS
No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).
√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
V̈ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
# denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/22/2015
TEM Date Analyzed: 12/22/2015
Microscope: Olympus BH-2 #232953
TEM Analyst: M. Lochner
Analyst: *T. Bush*

Laboratory Results Approved By:
Asbestos Operations Manager or Designee Mary Dohr

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

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environmental consultants, inc.
57 Ambrose St, Rochester, NY 14608
585.454.1060 * Fax 585.454.1062

Client: Haley + Aldrich Inc.
Contact: Keith Aragona
Phone Number: 734-887-8402
SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]
Fax Number or email address:
Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI
Email Results To Inspector: Call Client [ ] JScheuermann@envoyenv.com
Job Ticket #: 92601
Date Sampled: 12/8/15
Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]
Project Location: River St.
Project Address:
Project Number: 15-1207

Job #: 116479-15
Page 1 of 2
Date Logged In: 12/17/15
Logged In By: MR
3 of 10 COC

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	WIG012	118275	North Window #1		TAN		WIG	N
2	WIG 013	276	" "		"		"	"
3	WIC 014	277	" "		G-Y		WIC	N
4	WIC 015	278	" "		"		"	"
5	WIG 016	279	North Window #2		TAN		WIG	N
6	WIG 017	280	" "		"		"	"
7	WIC 018	281	" "		G-Y		WIC	N
8	WIC 019	282	" "		"		"	"
9	WIG 020	283	North Window #3		TAN		WIG	N
10	WIG 021	284	" "		"		"	"

Sampled By: Josh Scheuermann Date: 12/8/15
Transported to Paradigm By: Date: 12/8/15
Received By: Date: 12/17/15

CHECK ONE: SURVEY [X] BULKS ONLY [ ]
CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS [ ]
or provide TEM contact name:
TOTAL NUMBER OF SAMPLES IN SURVEY: Estimated at [ ]

cm 12/23/15

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ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc. **Job No:** 16480-15
Location: 1 River Street

Sample Date: 12/8/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
WIC-022	118285	North Window #3	Gray Window Caulk	Chrysotile 6.5%	6.5%	√	Not Required	N/A	None Detected	93.5%
WIC-023	118286	North Window #3	Gray Window Caulk	Chrysotile 5.6%	5.6%	√	Not Required	N/A	None Detected	94.4%
WIG-024	118287	West Window #4	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
WIG-025	118288	West Window #4	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
WIC-026	118289	West Window #4	Gray Window Caulk	Chrysotile 2.1%	2.1%	√	Not Required	N/A	None Detected	97.9%
WIC-027	118290	West Window #4	Gray Window Caulk	Chrysotile 1.9%	1.9%	√	Not Required	N/A	None Detected	98.1%

NVLAP Lab Code 200530-0 for PLM Analysis **ELAP ID No.: 10958**

KEY TO NOB COLUMN SYMBOLS
No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).
√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
V̂ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
**** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.**

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/22/2015 **TEM Date Analyzed:** 12/23/2015
Microscope: Olympus BH-2 #232953 **TEM Analyst:** M. Lochner
Analyst: *T. Bush*

Laboratory Results Approved By: _____
Asbestos Operations Manager or Designee Mary Dohr

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

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environmental consultants, inc.
57 Ambrose St, Rochester, NY 14608
585.454.1060 * Fax 585.454.1062

Client: Haley + Aldrich Inc.	Contact: Keith Aragona	Job #: 16480-15
Phone Number: 734-887-8402	SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]	Page 2 of 2
Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI	Fax Number or email address:	Date Logged In: 12/17/15
Email Results To Inspector: Jscheuermann@envoyenv.com Call Client [ ]	Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]	Logged In By: MH
Job Ticket #: 92601		
Project Location: River St.	Project Address:	Project Number: 15-1207

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	WIL022	118285	North Window #3		Gry		WIL	NF
2	WIL023	286	" West JS "		"		"	"
3	WIG024	287	~~North~~ Window #4		TAN		WIG	NF
4	WIG025	288	" "		"		"	"
5	WIL026	289	West Window #4		Gry		WIL	NF
6	WIL027	290	" "		"		"	"
7								
8								
9								
10								

Sampled By: Josh Scheuermann	Date: 12/8/15	CHECK ONE: SURVEY [X]	BULKS ONLY [ ]
Transported to Paradigm By:	Date: 12/8/15	CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS or provide TEM contact name:	[ ]
Received By:	Date: 12/17/15	TOTAL NUMBER OF SAMPLES IN SURVEY:	Estimated at [ ]

Co
nfa

EM 12/23/15

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ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc.
Location: 1 River Street

Job No: 16481-15

Sample Date: 12/9/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
WIG-028	118291	West Window #5	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIG-029	118292	West Window #5	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIC-030	118293	West Window #5	Gray Fibrous Window Caulk	Chrysotile 14%	14%	√	Not Required	N/A	None Detected	86%
WIC-031	118294	West Window #5	Gray Window Caulk	Chrysotile 9.8%	9.8%	√	Not Required	N/A	None Detected	90.2%
WIC-032	118295	West Window #13	Tan Window Caulk	Chrysotile 2.1%	2.1%	#	Not Required	N/A	None Detected	97.9%
WIC-033	118296	West Window #13	Tan Window Caulk	Chrysotile 4.0%	4.0%	#	Not Required	N/A	None Detected	96%

NVLAP Lab Code 200530-0 for PLM Analysis

ELAP ID No.: 10958

KEY TO NOB COLUMN SYMBOLS

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

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

 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).

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

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/22/2015
TEM Date Analyzed: 12/23/2015
Microscope: Olympus BH-2 #235757
TEM Analyst: M. Lochner
Analyst: *B. Weinman*

Laboratory Results Approved By:
Asbestos Operations Manager or Designee Mary Dohr

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

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Job #: 16481-15

Page 2 of 2

Date Logged In: 12/17/15

Logged In By: MH

5/10 COC

ENVOY

environmental consultants, inc.

57 Ambrose St, Rochester, NY 14608

585.454.1060 * Fax 585.454.1062

Client: Haley + Aldrich Inc

Contact: Keith Aragona

Phone Number: 734-887-8402

SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]

Fax Number or email address:

Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI

Email Results To Inspector: Jscheuermann@envoyenv.com Call Client [ ]

Date Sampled: 12/9/15

Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]

Job Ticket #: 92607

Project Location: River St.

Project Address:

Project Number: 15-1207

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	WIL 026	118291	West Window #5		TAN		WEG	N
2	WIL 029	292	"		"		"	"
3	WIL 030	293	"		~~TAN~~ G-Y		WDL	N
4	WIL 031	294	"		G-Y		"	"
5	WIL 032	295	West Window 13		TAN		WEL	N
6	WIL 033	296	"		"		"	"
7								
8								
9								
10								

Sampled By: Josh Scheuermann Date: 12/9/15

Transported to Paradigm By: Date: 12/9/15

Received By: Date: 12/17/15

CHECK ONE: SURVEY [X] BULKS ONLY [ ]

CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS [ ]

or provide TEM contact name:

TOTAL NUMBER OF SAMPLES IN SURVEY: Estimated at [ ]

Co nta

EM 12/23/15

PARADIGM
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179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc.
Location: 1 River Street

Job No: 16482-15

Sample Date: 12/10/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
WIG-034	118297	East Window #19	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIC-035	119298	East Window #19	Tan Window Caulk	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIG-036	119299	East Window #20	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIC-037	119300	East Window #20	Tan Window Caulk	Chrysotile 7.9%	7.9%	#	Not Required	N/A	None Detected	92.1%
WIG-038	119301	East Window #22	Blue Window Glaze	Inconclusive Trace Chrysotile Detected	<1.0%	#	Trace Chrysotile <1.0%	<1.0%	None Detected	100%
WIG-039	119302	East Window #22	Blue Window Glaze	Inconclusive Trace Chrysotile Detected	<1.0%	#	Trace Chrysotile <1.0%	<1.0%	None Detected	100%

NVLAP Lab Code 200530-0 for PLM Analysis

ELAP ID No.: 10958

KEY TO NOB COLUMN SYMBOLS

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

√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).

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

 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).

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PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/22/2015 **TEM Date Analyzed:** 12/23/2015

Microscope: Olympus BH-2 #235757 **TEM Analyst:** M. Lochner

Analyst: *B. Weinman*

Laboratory Results Approved By:
Asbestos Operations Manager or Designee Mary Dohr

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

OFFICE USE ONLY

ENVOY
environmental consultants, Inc.
57 Ambrose St, Rochester, NY 14608
585.454.1060 * Fax 585.454.1062

Client: Haley + Aldrich Inc.
Contact: Keith Aragona
Phone Number: 734-887-8402
SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]
Fax Number or email address:
Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI
Email Results To Inspector: Jscheuermann@envoyenv.com Call Client [ ]
Job Ticket #: 92603
Date Sampled: 12/10/15
Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]
Project Location: 1 River St.
Project Address:
Project Number: 15-1207

Job #: 16482-15
Page 2 of 2
Date Logged In: 12/17/15
Logged In By: LHC
16 of 10 COC

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	WIG 034	118297	East Window #19		TAN		WIG	N
2	WIL 035	298	East Window #19		TAN		WIL	N
3	WIG 036	299	East Window #20		TAN		WIG	N
4	WIL 037	300	" "		"		WIL	N
5	WIG 038	301	East Window #22		Blue		WIG	N
6	WIG 039	302	" "		"		"	"
7								
8								
9								
10								

Sampled By: Josh Scheuermann Date: 12/10/15
Transported to Paradigm By: Date: 12/10/15
Received By: Date: 12/17/15

CHECK ONE: SURVEY [X] BULKS ONLY [ ]
CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS [X]
or provide TEM contact name:
TOTAL NUMBER OF SAMPLES IN SURVEY: Estimated at [ ]

EM 12/23/15

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc.
Location: 1 River Street

Job No: 16483-15

Sample Date: 12/11/2015

Reissued: 1/13/2016

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
WIG-040	118303	East Window #24	Gray Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIG-041	118304	East Window #24	Gray Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIG-042	118305	South Window	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIG-043	118306	South Window	Tan Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
RTR-044	118307	West Wall 20' Off Ground	Black Fibrous Roofing Cement/Tar	Chrysotile 3.0%	3.0%	√	Not Required	N/A	Fiberglass 10%	87%
RTR-045	118308	West Wall 20' Off Ground	Black Fibrous Roofing Cement/Tar	Chrysotile 3.1%	3.1%	√	Not Required	N/A	Fiberglass 10%	96.9%
WIG-046	118309	Monitor #2	Gray Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%
WIG-047	118310	Monitor #2	Gray Window Glaze	Inconclusive No Asbestos Detected	0%	#	None Detected	<1.0%	None Detected	100%

NVLAP Lab Code 200530-0 for PLM Analysis

ELAP ID No.: 10958

KEY TO NOB COLUMN SYMBOLS
No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).
√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
V̈ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
# denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/22/2015
TEM Date Analyzed: 12/23/2015
Microscope: Olympus BH-2 #232953
TEM Analyst: M. Lochner
Analyst: *T. Bush*

Laboratory Results Approved By:
Asbestos Operations Manager or Designee Mary Dohr

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

OFFICE USE ONLY

ENVOY
environmental consultants, inc.
57 Ambrose St, Rochester, NY 14608
585.454.1060 * Fax 585.454.1062

Client: Haley + Aldrich Inc.	Contact: Keith Aragona	Job #: 16483-15
Phone Number: 734-887-8402	SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]	Page 8 of 9
Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI	Email Results To Inspector: Jschneermann@envoyenv.com Call Client [ ]	Fax Number or email address:
Job Ticket #: 94510	Date Sampled: 12/11/15	Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]
Project Location: 1 River St.	Project Address:	Project Number: 15-1207

Date Logged In: 12/17/15
Logged In By: MH
7 of 10 COC

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	WIG040	118303	East Window #24		GRY		WIG	N
2	WIG041	304	" "		"		"	"
3	WIG042	305	South Window		TAN		WIG	N
4	WIG043	306	" "		"		"	"
5	RTR044	307	West Wall 20' off ground		BLK		RTR	N
6	RTR045	308	" "		"		"	"
7	WIG046	309	Monitor #2		GRY		WIG	N
8	WIG047	310	" "		"		"	"
9								
10								

Sampled By: Josh Schneermann	Date: 12/11/15	CHECK ONE: SURVEY [X]	BULKS ONLY [ ]
Transported to Paradigm By:	Date: 12/11/15	CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS or provide TEM contact name:	[X]
Received By:	Date: 12/12/15	TOTAL NUMBER OF SAMPLES IN SURVEY:	Estimated at [ ]

EM 12/23/15

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc. **Job No:** 16484-15
Location: 1 River Street **Page:** 1 of 2

Sample Date: 12/14/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
PAP-048	118311	Crane Panel Box Insulation	Gray Fibrous Paper	Chrysotile 80%	80%		Not Required	N/A	None Detected	20%
PAP-049	118312	Crane Panel Box Insulation	Gray Fibrous Paper	Chrysotile 80%	80%		Not Required	N/A	None Detected	20%
PAP-050	118313	Crane Panel Box Insulation	Gray Fibrous Paper	Chrysotile 67%	67%		Not Required	N/A	None Detected	33%
WIN-051	118314	Crane Electrical Box Wire	White Fibrous Wire Insulation	None Detected	0%		Not Required	N/A	Cellulose 100%	0%
WIN-052	118315	Crane Electrical Box Wire	White Fibrous Wire Insulation	None Detected	0%		Not Required	N/A	Fiberglass 100%	0%
TRN-053	118316	Crane Electrical Box Wire	Gray Fibrous Transite	Chrysotile 23%	23%		Not Required	N/A	None Detected	77%
TRN-054	118317	Crane Electrical Box Wire	Gray Fibrous Transite	Chrysotile 27%	27%		Not Required	N/A	None Detected	73%

NVLAP Lab Code 200530-0 for PLM Analysis **ELAP ID No.: 10958**

KEY TO NOB COLUMN SYMBOLS
No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).
√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
V̌ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
# denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples."Jor EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/21/2015 **TEM Date Analyzed:** N/A
Microscope: Olympus BH-2 #232953 **TEM Analyst:** N/A
Analyst: *T. Bush*

Laboratory Results Approved By:
Asbestos Operations Manager or Designee Mary Dohr

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

OFFICE USE ONLY

ENVOY
environmental consultants, inc.
57 Ambrose St, Rochester, NY 14608
585.454.1060 * Fax 585.454.1062

Client: Haley + Aldrich Inc	Contact: Keith Aragona	Job #: 16484-15
Phone Number: 734-887-8402	SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]	Page ____ of ____
Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI	Email Results To Inspector: JSchneermann@envoyenv.com Call Client [ ]	Fax Number or email address:
Job Ticket #: 94499	Date Sampled: 12/14/15	Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]
Project Location: 1 River St.	Project Address:	Project Number: 15-1207

Date Logged In: 12/17/15
Logged In By: MAH
8 of 10 COC

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	PAP 048	1183 11	Crane Panel Box insulation		GRY		PAP	F
2	PAP 049	312	" "		"		"	"
3	PAP 050	313	" "		"		"	"
4	WIN 051	314	Crane electrical Box wire		WHT		wire insulation	F
5	WIN 052	315	" "		"		"	"
6	TRN 053	316	Crane electrical Box		GRY		TRN	N
7	TRN 054	317	" "		"		"	"
8								
9								
10								

Sampled By: Josh Schneermann Date: 12/14/15
Transported to Paradigm By: [signature] Date: 12/14/15
Received By: [signature] Date: 12/17/15

CHECK ONE: SURVEY [X] BULKS ONLY [ ]
CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS or provide TEM contact name: [X]
TOTAL NUMBER OF SAMPLES IN SURVEY: Estimated at [ ]

Co
nta

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PARADIGM ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc. **Job No:** 16485-15
Location: 1 River Street **Page:** 1 of 2

Sample Date: 12/15/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
DWL-055	118318	2nd Floor Wall	Gray Drywall	None Detected	0%		Not Required	N/A	Cellulose 4%	96%
SPK-056	118319	2nd Floor Wall	White Spackle	None Detected	0%		Not Required	N/A	None Detected	100%
DWL-057	118320	2nd Floor Wall	Gray Drywall	None Detected	0%		Not Required	N/A	Cellulose 4%	96%
SPK-058	118321	2nd Floor Wall	White Spackle	None Detected	0%		Not Required	N/A	None Detected	100%
WPL-059	118322	South Main Entrance Wall	White Wall Plaster	None Detected	0%		Not Required	N/A	None Detected	100%
WPL-060	118323	South Main Entrance Wall	Gray Wall Plaster	None Detected	0%		Not Required	N/A	None Detected	100%
WPL-061	118324	South Main Entrance Wall	White Wall Plaster	Trace Chrysotile <1.0%	<1.0%		Not Required	N/A	None Detected	100%
WPL-062	118325	South Main Entrance Wall	Gray Wall Plaster	None Detected	0%		Not Required	N/A	None Detected	100%
WPL-063	118326	South Main Entrance Wall	White Wall Plaster	Trace Chrysotile <1.0%	<1.0%		Not Required	N/A	None Detected	100%
WPL-064	118327	South Main Entrance Wall	Gray Wall Plaster	None Detected	0%		Not Required	N/A	None Detected	100%

NVLAP Lab Code 200530-0 for PLM Analysis **ELAP ID No.: 10958**

KEY TO NOB COLUMN SYMBOLS
No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).
√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
Ṽ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
# denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/21/2015 **TEM Date Analyzed:** N/A
Microscope: Olympus BH-2 #232953 **TEM Analyst:** N/A
Analyst: *T. Bush*

Laboratory Results Approved By: for Mary Dohr
Asbestos Operations Manager or Designee

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

OFFICE USE ONLY

ENVOY
environmental consultants, inc.
57 Ambrose St, Rochester, NY 14608
585.454.1060 * Fax 585.454.1062

Client: Haley + Aldrich Inc.
Contact: Keith Aragona
Phone Number: 734-887-8402
SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]
Fax Number or email address:
Email Results To Inspector: Call Client [ ]
JSchneiderman@envoyenv.com
Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI
Job Ticket #: 92604
Date Sampled: 12/15/15
Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]
Project Location: River St.
Project Address:
Project Number: 15-1207

Job #: 16485-15
Page ____ of ____
Date Logged In: 12/17/15
Logged In By: MH
9 of 10 COC

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	DWL055	118318	2nd Floor Wall		G-Y		DWL	N
2	SPK056	319	" "		WHT		SPK	N
3	DWL057	320	" "		G-Y		DWL	N
4	SPK058	321	" "		WHT		SPK	N
5	WPL059	322	South Main Entrance Wall		WHT		WPL	N
6	WPL060	323	" " "		G-Y		WPL	N
7	WPL061	324	" " "		WHT		WPL	N
8	WPL062	325	" " "		G-Y		WPL	N
9	WPL063	326	" " "		WHT		WPL	N
10	WPL064	327	" " "		G-Y		WPL	N

Sampled By: Josh Schneiderman Date: 12/15/15
Transported to Paradigm By: [signature] Date: 12/15/15
Received By: [signature] Date: 12/17/15

CHECK ONE: SURVEY [X] BULKS ONLY [ ]
CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS [ ]
or provide TEM contact name:
TOTAL NUMBER OF SAMPLES IN SURVEY: Estimated at [ ]

Co
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PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue, Rochester, NY 14608 Office: (585) 647-2530 Fax: (585) 647-3311

PLM & TEM BULK ASBESTOS ANALYSIS REPORT
via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Haley & Aldrich, Inc.
Location: 1 River Street

Job No: 16486-15

Sample Date: 12/15/2015

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	Non-Fibrous Matrix Material %
SPK-065	118328	2nd Floor Wall	White Spackle	None Detected	0%		Not Required	N/A	None Detected	100%
SPK-066	118329	Main Floor NE Corner Wall	White Spackle	None Detected	0%		Not Required	N/A	None Detected	100%
SPK-067	118330	Main Floor NE Corner Wall	White Spackle	None Detected	0%		Not Required	N/A	None Detected	100%

NVLAP Lab Code 200530-0 for PLM Analysis

ELAP ID No.: 10958

KEY TO NOB COLUMN SYMBOLS
No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).
√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
V̂ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.
 # denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM).
**** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.**

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 12/21/2015
Microscope: Olympus BH-2 #232953
Analyst: *T. Bush*

TEM Date Analyzed: N/A
TEM Analyst: N/A

Laboratory Results Approved By:
Asbestos Operations Manager or Designee
Mary Dohr

CHAIN OF CUSTODY FOR PLM ASBESTOS ANALYSIS

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environmental consultants, inc.
57 Ambrose St, Rochester, NY 14608
585.454.1060 * Fax 585.454.1062

Client: Haley + Aldrich Inc.	Contact: Keith Aragona	Job #: 16486-15
Phone Number: 734-887-8402	SEND ANALYTICAL DATA TO CLIENT: YES [ ] No [X]	Page ____ of ____
Client Mailing Address: 455 E. Eisenhower Pkwy Suite 210, Ann Arbor, MI	Email Results To Inspector: Jscheuermann@envoyenv.com Call Client [ ]	Fax Number or email address:
Job Ticket #: 92604	Date Sampled: 12/15/15	Turn Around Time: 1 [ ] 2 [ ] 3 [ ] 5 [X] Immed [ ]
Project Location: River St.	Project Address:	Project Number: 15-1207

Date Logged In: 12/17/15
Logged In By: MH
1 of 1 COC

General Location:

	Client ID	Lab ID	Sampling Location	Do not Analyze	Color	Size	Material	Friability
1	SPK 065	116328	2nd floor wall		WHT		SPK	N
2	~~MAS~~ 066	329	Main floor NE Corner wall		WHT		~~MAS~~	N
3	~~MAS~~ 067	330	"		"		~~MAS~~	"
4								
5								
6								
7								
8								
9								
10								

SPK
SPK

Sampled By: Josh Scheuermann	Date: 12/ /15	CHECK ONE: SURVEY [X] BULKS ONLY [ ]
Transported to Paradigm By:	Date: 12/ /15	CHECK TO AUTOMATICALLY PERFORM TEM ON NOBS [ ] or provide TEM contact name:
Received By:	Date: 12/17/15	TOTAL NUMBER OF SAMPLES IN SURVEY: Estimated at [ ]

Co
nta

* changed per Josh @ 11 am 12.21.15 RN

EM 12/23/15

Certifications

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

ASBESTOS HANDLING LICENSE

Envoy Environmental Consultants Inc.
57 Ambrose Street
Rochester, NY 14608

FILE NUMBER: 02-0527
LICENSE NUMBER: 28454
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 06/11/2015
EXPIRATION DATE: 06/30/2016

Duly Authorized Representative – Paul Mahoney

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

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

Eileen M. Franko, Director
For the Commissioner of Labor

SH 432 (8/12)

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

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

NY Lab Id No: 10958

MR. BRUCE HOOGESTEGER
PARADIGM ENVIRONMENTAL SERVICES INC
179 LAKE AVENUE
ROCHESTER, NY 14608

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

Miscellaneous	
Asbestos in Friable Material	Item 198.1 of Manual
	EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual
Lead in Dust Wipes	EPA 6010C
Lead in Paint	EPA 6010C
Sample Preparation Methods	
	EPA 3050B

Serial No.: 52201

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Paradigm Environmental Services, Inc.
179 Lake Avenue
Rochester, NY 14608
Ms. Rebecca Roztocil
Phone: 585-647-2530 Fax: 585-647-3311
E-Mail: RRoztocil@paradigmenv.com
URL: http://www.paradigmenv.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 200530-0**

NVLAP Code	*Designation / Description*
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

2015-07-01 through 2016-06-30
Effective dates

For the National Institute of Standards and Technology

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200530-0

Paradigm Environmental Services, Inc.

Rochester, NY

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

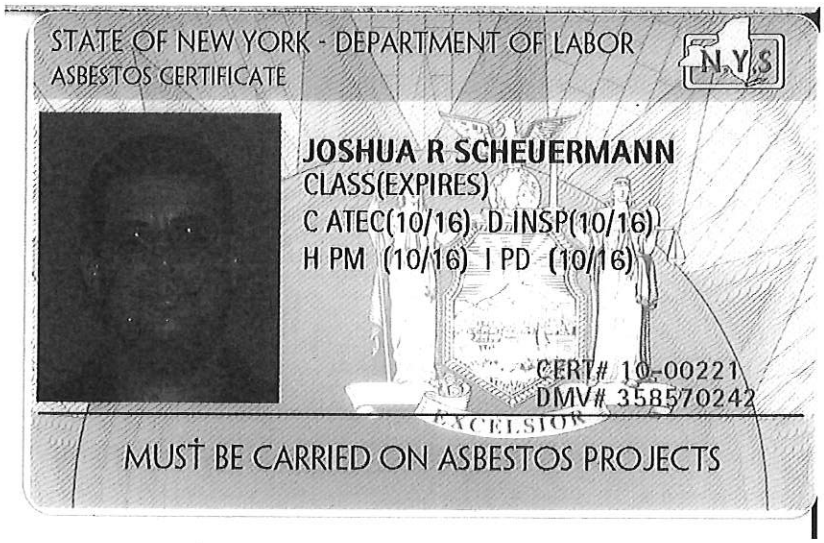
2015-07-01 through 2016-06-30

Effective dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)


STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE
N.Y.S.
JOSHUA R SCHEUERMANN
CLASS(EXPIRES)
C ATEC(10/16) D INSP(10/16)
H PM (10/16) I PD (10/16)
CERT# 10-00221
DMV# 358570242
EXCELSIOR
MUST BE CARRIED ON ASBESTOS PROJECTS

Appendix I

Laboratory Data (on CD)

Appendix J

Waste Inventory

Photo #	Approx. Quantity	Description
1		Steam Valves (multiple) possible gaskets containing ACM
2		Steam Valves (multiple) possible gaskets containing ACM
3 thru 10	3	Shaw Electric Cranes, 7,000 lb Capacity
3	1	Bucket with unknown contents
4	3	Debris on Top of Crane and Hoist motors and Gears (gear oil)
5	9	Electrical Panels with ACM heat shields and transite (3 per crane-9 total)
6	3	Unknown electrical components (Probable ACM)
7	3	Crane Brake-possible ACM-(1 per crane-3 total)
8	3	Unknown electrical components (1 set per crane)
9	3	Crane Motor-Gear and Crankcase oil potential (1 per crane-3 total)
10	25	Ballasts (likely PCBs)
11	3	Containers with Unknown Contents)
12	4	Compressed Gas Cylinders (contents and quantities unknown)
13	8 / 2	Fire Extinguisher / Car Battery
14	10 /1	Fire Extinguishers / empty gas can
15	1	Thermostat
16	9	Florescent Light Fixtures (approx. 5 at 4 ft. and 4 at 8 ft.)
17	4	Light Fixtures
18	6	Hg vapor light bulbs
19	40	Light Fixtures (currently in use)
20	3	Tires
21	5	275 gal Totes (former contents contained PCBs greater than 50 PPM)
22	8 (4 w/batt.)	Traffic barricades flashing lights
23	12/1	Solar lighting units and dual diaphragm pump-used to pump DNAPL
24	1	Flammable Liquids Cabinet (3 shelf)
25	1	Flammable Liquids Cabinet (2 shelf)
26	13	Core Boxes and Driller Jar Samples (full)
27	3	Misc. chemical containers
28	1 / 1	Loose light bulb / rechargeable batteries
29	1 / 1	Microwave / car battery
30	5	Loose 8 ft. Florescent Bulbs (5 total)
31	2 gallons	Formaldehyde -Approximately 2 gals

Photos #1 and #2: Steam Valves

Photo #'s 3-10: Shaw Electric Cranes, 7,000 lb Capacity (3 total)

Photo #3: Bucket with Unknown Contents

Photo #4: Hoist Motor and Gears with Debris

Photo #5: Electrical Panels Containing Asbestos Heat Shield and Transite

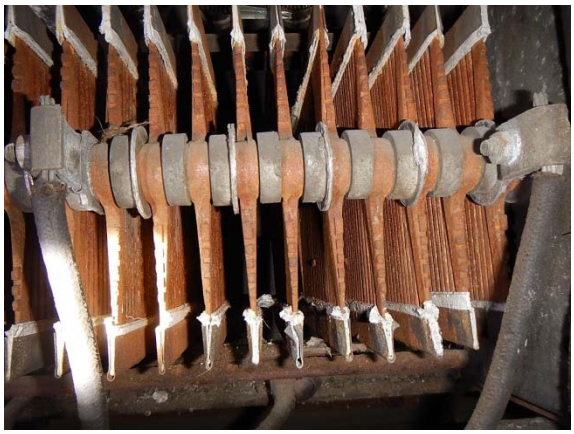


Photo #6: Unknown Electrical Components (Probable ACM)

Photo #7: Crane Brake (Possible ACM)

Photo #8: Unknown Electrical Components (Possible ACM)

Photo #9: Crane Drive Motor

Photo #10: Sola Ballasts (Typical)

Photo #11: Containers with Unknown Contents

Photo #12: Compressed gas cylinders

Photo #13: Fire Extinguishers, Florescent Light Bulbs, and Car Battery

Photo #14: Fire Extinguishers

Photo #15: Thermostat

Photo #16: Florescent Light Fixtures

Photo #17: Light Fixtures

Photo #18: Light Bulbs

Photo #19: Light Fixtures (currently in use)

Photo #20: Tires

Photo #21: Water Totes (5)

Photo #22: Traffic Barricades Flashing Lights with Batteries

Photo #23: Solar Light Units and Dual Diaphragm Pump

Photo #24: Flammable Liquids Cabinets

Photo #25: Flammable Liquids Cabinets

Photo #26: Core Boxes and Jar Samples

Photo #27: Misc. Chemical Containers

Photo #28: Loose Light Bulb and Batteries

Photo #29: Microwave and Car Battery

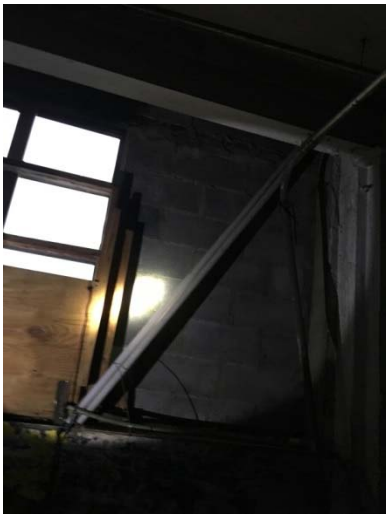


Photo #30: Loose 8 ft Florescent Bulbs

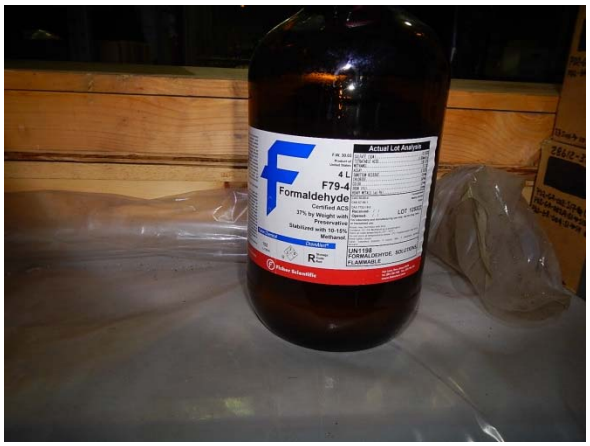


Photo #31: Formaldehyde