

March 2021

Vo-Toys Site – Harrison, New Jersey  
CERCLA Docket No. 02-2019-2028

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# Project Operations Plan for Building C Removal Action Amendment

Buildings A and B Demolition

Prepared for General Electric Company

March 2021

Vo-Toys Site – Harrison, New Jersey  
CERCLA Docket No. 02-2019-2028

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## Buildings A and B Demolition

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## ABBREVIATIONS

|                          |   |
|--------------------------|---|
| ACM                      | asbestos-containing material  |
| AOC                      | Administrative Settlement Agreement and Order on Consent for Removal Action |
| Brandenburg              | Brandenburg Industrial Services Company                                     |
| BRG                      | BRG Harrison Lofts Urban Renewal, LLC                                       |
| Building C POP Amendment | <i>Project Operations Plan for Building C Removal Action Amendment</i>      |
| CAMP                     | Community Air Monitoring Plan   |
| CFR                      | Code of Federal Regulations   |
| DDMP                     | Demolition Debris Management Plan   |
| GE                       | General Electric Company  |
| HASP                     | Health and Safety Plan  |
| HDPE                     | high-density polyethylene   |
| HEPA                     | high-efficiency particulate air   |
| MVA                      | mercury vapor analyzer  |
| NESHAP                   | National Emission Standards for Hazardous Air Pollutants                    |
| NJAC                     | New Jersey Administrative Code  |
| NJDEP                    | New Jersey Department of Environmental Protection                           |
| NJDOL                    | New Jersey Department of Labor  |
| OEM                      | Office of Emergency Management  |
| OSHA                     | Occupational Safety and Health Administration                               |
| PSE&G                    | Public Service Electric and Gas Company                                     |
| RA                       | Removal Action  |
| Buildings A and B RAD    | <i>Buildings A and B Removal Action Design</i>                              |
| SCP                      | Site Construction Plan  |
| Site                     | 400 South Fifth Street, Harrison, New Jersey                                |
| TCLP                     | Toxicity Characteristic Leaching Procedure                                  |
| TSCA                     | Toxic Substances Control Act  |
| USEPA                    | U.S. Environmental Protection Agency  |

# 1 Introduction

## 1.1 Purpose

This document presents the *Project Operations Plan for Building C Removal Action Amendment* (Building C POP Amendment) at the former Vo-Toys site located at 400 South Fifth Street in Harrison, New Jersey (Site). This Building C POP Amendment focuses on the demolition of Buildings A and B and the slab removal for Building C. This Building C POP Amendment has been prepared by Anchor QEA, LLC, on behalf of General Electric Company (GE).

The Building C POP Amendment has been prepared in accordance with the following documents:

- The Amendment to the Administrative Settlement Agreement and Order on Consent for Removal Action (AOC) issued to GE by the U.S. Environmental Protection Agency (USEPA) on December 21, 2020 (CERCLA 02-2019-2028)
- *Buildings A and B Removal Action Design* (Buildings A and B RAD; Anchor QEA 2020a)

This Building C POP Amendment has been developed to provide specific information regarding the means and methods to perform the Buildings A and B demolition and to provide additional details necessary to clarify and/or enhance the activities described in the Buildings A and B RAD (Anchor QEA 2020a). The Buildings A and B demolition procedures described in this document have been developed in consultation with GE's Removal Action (RA) Contractor, Brandenburg Industrial Services Company (Brandenburg), and GE's Waste Coordinator, Arcadis.

## 1.2 Project Operations Plan Organization

This section provides an overview of the various plans that compose the Building C POP Amendment and identifies where specific plans may be located within this Amendment. This Building C POP Amendment does not repeat the narrative description of the anticipated demolition presented in the Buildings A and B RAD. In addition, this Amendment does not include plans or information previously provided in the *Building C Project Operations Plan* (prepared by Anchor QEA and approved by USEPA on August 20, 2020) that are unchanged by this Amendment.

This Building C POP Amendment has been organized as described in Tables 1-1 and 1-2.

**Table 1-1**  
**Building C POP Amendment Organization**

| Section  | Description  |
|--|--|
| Section 1 – Introduction                                       | Presents general project information, report organization, and relevant background information.  |
| Section 2 – Supplemental Mercury Vapor Suppression Pilot Study | Presents a summary of supplemental evaluations for optimizing the application process and reducing the volume of suppressant to be applied.          |
| Section 3 – Notifications, Permits, and Municipal Approvals    | Presents a summary of notifications and permits (or substantive permit requirements) required for implementation of the Buildings A and B demolition |
| Section 4 – Buildings A and B Demolition Overview              | Provides an overview of the planned Buildings A and B demolition.  |
| Section 5 – References   | Presents references for sources cited in this Building C POP Amendment.  |
| Appendices   | See Table 1-2.   |

Several appendices have been included to provide additional implementation-related details for the Buildings A and B demolition. These appendices were developed by the Buildings A and B demolition project team members who are completing the specific Buildings A and B demolition task. Collectively, these appendices, along with the information presented in Sections 1 through 3, serve as the POP for the Buildings A and B demolition. Table 1-2 presents the supporting appendices prepared by Anchor QEA, Brandenburg, and Arcadis.

**Table 1-2**  
**Supporting Appendices**

| Appendix                        | Author      | Description   |
|---------------------------------|-------------|---|
| A. Site Construction Plan (SCP) | Brandenburg | Presents Brandenburg’s overall approach to the Buildings A and B demolition including mobilization, establishment of work areas, and procedures for dismantling and demolishing Buildings A and B. The SCP includes Site layout figures and an updated project schedule, along with Brandenburg’s Decontamination Plan and Asbestos Abatement Plan provided as standalone appendices. |
| B. Asbestos Abatement Plan      | Brandenburg | Presents the asbestos abatement design developed by Brandenburg’s project designer.   |
| C. Water Management Plan        | Brandenburg | Provides a description of Brandenburg’s means and methods for management of contact water (including precipitation and surface water run-on) generated during the Buildings A and B demolition.   |

| Appendix   | Author      | Description  |
|--|-------------|--|
| D. Contractor's Health and Safety Plan (HASP)                      | Brandenburg | Presents the Contractor's plan for health and safety to be followed by all Brandenburg employees working at the Site, as well as Brandenburg's customers or subcontractors entering Brandenburg's designated work areas. The Contractor's HASP also includes the Emergency Response Plan, which was prepared in consultation with the Town of Harrison Office of Emergency Management (OEM). |
| E. Engineer's HASP   | Anchor QEA  | Presents an updated HASP for personnel performing construction quality assurance during the Buildings A and B demolition.  |
| F. Waste Transportation and Disposal Plan                          | Arcadis     | Outlines the procedures for the transportation, treatment (as necessary), and disposal of all hazardous substances, pollutants and contaminants, hazardous waste, and solid waste generated during the Buildings A and B demolition in compliance with USEPA's CERCLA Off-Site Rule.   |
| G. Supplemental October 2020 Mercury Vapor Suppressant Pilot Study | Anchor QEA  | Presents data generated during the supplemental mercury vapor suppressant pilot study.   |
| H. Soil Management Plan  | Anchor QEA  | Presents the procedures for the handling and reuse/disposal of excavated subslab soil related to utility piping removal or visual mercury impacts.   |
| I. Scrap Management Plan   | Anchor QEA  | Presents the procedures for screening recyclable metals prior to removal from site and transportation to an USEPA-approved recycling facility.   |

As discussed earlier, certain appendices to the Building C Project Operations Plan (Anchor QEA 2020b) have not been modified as a result of the addition of the Buildings A and B demolition and are not repeated in this Amendment. These appendices are Appendix G – Air Monitoring Equipment Manuals and Appendix H – Baseline Air Monitoring Results.

### 1.3 Building C POP Amendment Objectives

The following are the overall objectives of this Building C POP Amendment:

1. Identify required permits and notifications.
2. Provide a description of the demolition activities (and associated environmental control procedures) to be implemented at the Site in accordance with the AOC and AOC Amendment.
3. Meet the requirements of the AOC and AOC Amendment.

### 1.4 Background Information

This subsection presents a summary of the background information related to Buildings A and B. Refer to the Buildings A and B RAD for additional background information.

### 1.4.1 Site Setting

The Site is approximately 2.1 acres in size and consists of three buildings on the main parcel (Block 156, Lot 1; designated Buildings A, B, and C) and a parking lot parcel (Block 131, Lot 17). Both parcels are shown in Figure 1-1.

**Figure 1-1**  
**Site Plan**



Source: Google Earth

The footprint occupied by the structures on the Site (Buildings A, B, and C) is approximately 67,000 square feet, and the structures are predominately constructed of concrete, masonry, wood, and steel. The footprint occupied by Buildings A and B is approximately 57,500 square feet; the total floor area of Buildings A and B is approximately 173,000 square feet.

### 1.4.2 Existing Building Conditions

The Buildings A and B RAD presents construction information as well as a summary of the nature and extent of mercury impacts to building materials as a result of historical manufacturing operations.

This information is summarized in the following sections. Refer to the Buildings A and B RAD for additional information. In addition, an overview of Building C construction is presented below.

#### **1.4.2.1 Building A Construction and Existing Conditions**

Building A is a reinforced concrete structure built in two phases—1913 and 1914. Exterior walls are primarily brick masonry between the exterior brick-faced concrete wall columns. The ground floor is a concrete slab-on-grade (no basement, excluding the steam system vaults). The upper floors and roof are concrete decks supported by reinforced concrete beams and girders. Average column spacing is 20 feet by 20 feet. Column width ranges from 24 inches at the first floor to 16 inches at the third floor. The foundations are poured-in-place, reinforced concrete at the building perimeter. The columns bear on 9-foot square footings.

Three reinforced concrete stairwells are located on the south side of the building (one each on the west, central, and east ends). The stairwells extend from the first floor to the roof.

The first floor consists of two separate and distinct layers of concrete with a thickness ranging between 7 and 9 inches (total of all layers). Note that portions of the ground floor were removed by others to support property redevelopment activities. In addition, limited areas of tongue-and-groove hardwood flooring are present over the concrete slab.

The second and third floors consist of a reinforced concrete base layer and a surface layer of either concrete or tongue-and-groove hardwood flooring. In portions of the second and third floors, a middle layer was observed between the base concrete and top surface layer. Where present, the middle layer consists of a mixture of concrete, cinders, and/or wood sleeper boards. In addition, the flooring system in the west end of the second floor includes a top layer of tile (over the wood floor). The second- and third-floor thicknesses range from 13 to 14 inches (total of all layers). The thickness of the individual layers varies throughout the second floor.

The roof consists of a reinforced concrete deck supported by reinforced concrete beams and girders and is overlain by built-up asphalt roofing. An approximately 4-foot-high parapet wall with a stone coping atop surrounds the perimeter of the roof. The roof contains two one-story elevator equipment rooms and roof exits to the three stairwells. Additional exhaust, ventilation, and HVAC structures of varying sizes are also located on the roof.

Subgrade structures and areas (located below the slab) are present. Two basements accessed by exterior doors and stairways are present. These basements contain infrastructure related to the prior heat distribution system.



A single-story concrete block boiler room located on the southern exterior wall of Building A was observed to contain out-of-service boiler equipment. Two loading dock canopies consisting of steel trusses and metal roofing are present.

#### **1.4.2.2 Building B Construction and Existing Conditions**

Building B, reportedly constructed in 1907, is a reinforced concrete structure. The exterior wall construction consists of reinforced concrete that has been painted. Average column spacing is approximately 20 feet by 20 feet. Column widths range between 20 inches and 15-1/4 inches. The floors and roof are concrete decks supported by beams and girders. Foundations are poured-in-place reinforced concrete at the building perimeter. Columns bear on 8-foot square footings.

The flooring system associated with the (first) ground floor was originally constructed as a layered system consisting of a tar concrete slab, followed by a cinder fill layer with embedded wood sleepers and a hardwood surface. This flooring system appears to be present in approximately 50% of the first floor of Building B (minus the floor sections that were removed to support remediation activities by others in 2016). The remaining portion of the first floor has had the wood and cinder elements removed and replaced with concrete, such that there are two distinct layers of concrete, or in some cases a layer of concrete poured over the wood surface. Multiple abandoned pipes and electrical conduits were noted below the existing wooden floor area. The floor slab was observed to be greater than 12 inches thick in one location in the western portion of the building.

The second and third floors appear to have been constructed with a base concrete layer and a top surface layer of either hardwood flooring or concrete. Where the top surface is concrete, a middle layer between the base concrete and top surface layer was observed in certain areas, consisting of a mixture of concrete, cinders, and/or wood sleeper boards. The type and thickness of the middle and top layers varies laterally across floor areas associated with the second and third floors. Typical floor thickness for all three floors ranges between 8 and 10 inches (total of all layers).

The first floor of Building B is partially covered with a high-density polyethylene (HDPE) vapor barrier, installed in June 2016 to control potential vapor generation from the floor surfaces as well as exposed cinder fill subfloor materials.

The Building B roof consists of a reinforced concrete deck supported by reinforced concrete beams and girders and is overlain by built-up asphalt roofing. An approximately 4-foot-high parapet wall surrounds the perimeter of the roof. The roof contains one one-story elevator equipment room and roof exit for one stairwell. Another one-story room is located on the roof east of the elevator room. This room formerly housed a second elevator and currently contains miscellaneous debris.

Three bridges connect the upper floors of Building A to the upper floors of Building B.

Three reinforced concrete stairwells are located in the building (one in the northwest corner, one in the northeast corner, and one on the south [central] side of the building). The stairwells extend from the first floor to the third floor. The stairs on the south side also extend to the roof and the top of the elevator.

#### **1.4.2.3 Building C Construction and Existing Conditions**

Building C was a three-story brick masonry structure constructed in 1902. The superstructure is being removed as part of a separate contract. The first-floor exterior walls that will remain following demolition serve as foundation walls and are multi-wythe brick construction. The first floor consists of an unreinforced concrete slab constructed with one layer of poured concrete over a cindercrete material, located 0.5 to 4.5 feet below the surrounding (exterior) Site grade. The Building C RAD (Anchor QEA 2020a) includes additional information on the construction and existing conditions of Building C.

#### **1.4.2.4 Existing Site Utilities**

This section presents an overview of the existing Site utilities. The Brandenburg's SCP provides additional information regarding their plans for utility locating and disconnection.

Site utilities include electric, natural gas, steam heating, potable water, telephone/cable, sanitary sewer, roof drains/stormwater drainage, and fire protection.

##### *Electric*

The electric service remains active in Buildings A and B. The electric service enters Building A on the north side and Building B on the southwest corner. Meters and related electrical equipment are present in the buildings.

Overhead electric and utility lines run along the edge of the sidewalk along Sussex Street north of Building A. Portions of the overhead electric and utility lines are located less than 10 feet from Building A.

##### *Natural Gas*

A natural gas line is present in the boiler room located on the south side of Building A. The natural gas line is air gapped and the gas meter is no longer present. Other inactive/historical natural gas lines may be present within the building footprints, but confirmed locations are unknown. Additional inactive/historic gas lines encountered (if any) during the demolition work will be documented and cut/capped.

##### *Steam Heating*

The buildings were previously heated using wall-mounted radiators supplied by steam pipes connected to a boiler system located on the south side of Building A (and historically from an off-

Site powerhouse). Most of the heating system (including piping and radiators) was previously removed by others. Some steam system equipment is in the two equipment vault areas of Building A.

### *Potable Water*

A Town of Harrison potable water line enters Building A on the east side and the service is active. Another water line enters the west side of Building A, but its status is unknown. Based on the utility drawings developed as part of the Site Remedial Investigation (completed by Amec in 2016), a water line is shown as conveying water from the south side of Building A (basement vault) to the north side of Building B (former bathroom area). Based on the location of fire system water pump/piping an additional water line(s) is presumed to enter Building B from the south (Bergen Street). It is not known if the water lines in Building B are still active, however the water and fire supply piping within Building B was previously removed by others.

### *Telephone/Cable*

Telephone and coaxial lines enter Building A on the north side and Building B on the south side and southwest corner.

### *Sanitary Sewer*

Some sanitary sewer piping remains, and it is presumed that the piping is connected to the Town of Harrison sanitary sewer system.

### *Roof Drains/Stormwater Drainage*

Roof drains are located in each building and convey rainwater through vertical piping to the Town of Harrison combined sanitary sewer/stormwater sewer system. Some roof drains were observed to be damaged or blocked and may be associated with rainwater leaks on the interior of the building.

### *Fire Protection*

Standpipe systems are located in Buildings A and B. The standpipe systems were partially installed as part of redevelopment activities by BRG Harrison Lofts Urban Renewal, LLC (BRG) and will not be relied upon for use during the demolition.

## 2 Supplemental Mercury Vapor Suppression Pilot Study

Mercury vapor suppression pilot studies were initially performed in May and August 2020, as described in the Buildings A and B RAD. The overall objective was to evaluate the effectiveness of different suppressant products for use in lowering mercury vapors during removal of cinder and other mercury-impacted building materials. Based on the results of the May and August 2020 pilot study activities, the Buildings A and B RAD included a requirement for the Contractor to apply the calcium polysulfide on areas of cinder layers with the potential to generate mercury vapors at concentrations above the air monitoring criteria, followed by application of heptahydrate ferrous sulfate solution prior to cinder removal in areas designated as “high mercury vapor areas” for worker health and safety and to minimize the potential for mercury vapor generation at concentrations greater than the action levels defined in the Community Air Monitoring Plan (CAMP).

The results of the May and August 2020 pilot study indicated that the following dilutions and application rates were required to suppress mercury vapor generation during removal of cinders from areas designated as “high mercury vapor areas:”

- Calcium polysulfide solution: 29% calcium polysulfide solution
  - Application Rate: 20 gallons per 100 square feet of high mercury vapor area
- Heptahydrate ferrous sulfate solution: 1 pound heptahydrate ferrous sulfate mixed in 1 gallon of water
  - Application Rate: 20 gallons per 100 square feet

Anchor QEA performed supplemental pilot studies on October 15, 2020, with the objective of optimizing the application process and reducing the volume of suppressant to be applied.

### 2.1 October 2020 Supplemental Mercury Vapor Suppressant Pilot Study

#### 2.1.1 *Pilot Study Materials and Equipment*

During the May and August 2020 pilot studies, application of the calcium polysulfide followed by a secondary application of heptahydrate ferrous sulfate solution was the most effective vapor suppressant while yielding a decreased leachability of mercury within the cinders. This combination of solutions was used in the supplemental October 2020 study.

#### 2.1.2 *Selection of Cinders for Pilot Test*

The third-floor location that was selected for use during the initial pilot study was also used during the supplemental October 2020 pilot study activities.

Cinders were carefully loosened with shovels to minimize the release of mercury vapor. The removed cinders were homogenized, divided into approximately equal volumes, and placed into 1-gallon Ziplock plastic bags (approximately 32 ounces of material per bag).

### *2.1.3 Cinders Pre-Testing*

Cinders from two of the bags from the test area were measured with the Mercury Instrument Model VM-3000 mercury vapor monitor, placed in glass laboratory jars, and sent for toxicity characteristic leaching procedure (TCLP) mercury analysis at Alpha Analytical Laboratory located in Mansfield, Massachusetts. The two samples from each area would act as baseline/pre-suppressant samples for comparison to the other tests.

### *2.1.4 Vapor Suppressant and Reagent Application and Testing*

The remaining bags containing cinders were tested with the application of the calcium polysulfide followed by a secondary application of heptahydrate ferrous sulfate.

The suppressant and reagent application combinations listed in Table 2-1 were applied while agitating the bags of cinders (to mimic the shoveling of cinders by workers while suppressant is continually sprayed on the cinders).

**Table 2-1**  
**Supplemental Mercury Vapor Suppressant Pilot Study**

| <b>Study Number</b> | <b>Calcium Polysulfide Application Rate (gallon/100 square feet)</b> | <b>Heptahydrate Ferrous Sulfate Application Rate (gallon/100 square feet)</b> |
|---------------------|--|---|
| 1                   | 20   | 20  |
| 2                   | 20   | 10  |
| 3                   | 10   | 10  |
| 4                   | 20 (using 50% dilution)  | 10  |

After the various combinations were mixed with the cinders, samples were placed in jars and sent for TCLP mercury analysis at Alpha Analytical Laboratory located in Mansfield, Massachusetts.

### *2.1.5 Mercury Vapor Suppressant Pilot Study Results*

The TCLP mercury results for the samples collected from Studies 1 through 3 were an order of magnitude below the threshold needed to exhibit the toxicity characteristic of a hazardous waste due to mercury (0.2 milligram per liter). The analytical results from Study 4 indicated an increase in TCLP mercury concentrations.

A summary of the TCLP metal results from the pilot study is presented in Appendix G.

## 2.2 Supplemental Pilot Study Conclusions

Based on the results of the initial and supplemental pilot study activities, the Contractor will apply the calcium polysulfide on areas of cinder layers with the potential to generate mercury vapors at concentrations above the air monitoring criteria, followed by application of heptahydrate ferrous sulfate solution prior to cinder removal in areas designated as "high mercury vapor areas" to minimize the potential for mercury vapor generation at concentrations greater than the action levels defined in the CAMP.

Based on the supplemental October 2020 pilot study test results, the following dilutions and application rates will be required prior to removal of cinders from areas designated as "high mercury vapor areas:"

- Calcium polysulfide solution: 29% calcium polysulfide solution
  - Application Rate: 10 gallons per 100 square feet of high mercury vapor area
- Heptahydrate ferrous sulfate solution: 1 pound heptahydrate ferrous sulfate mixed in 1 gallon of water
  - Application Rate: 10 gallons per 100 square feet

The above application rates are designed to penetrate and fully coat the cinders without creating free liquids. Waste characterization sampling will be performed following containerization of the cinders with suppressant application. Based on the waste characterization sampling, modifications to the application rates may be directed by Anchor QEA during the Buildings A and B demolition activities.

### 3 Notifications, Permits, and Municipal Approvals

Table 3-1 presents a summary of the notifications, permits, permit equivalencies, or municipal approvals to be obtained by Brandenburg prior to performing the Buildings A and B demolition.

**Table 3-1**  
**Summary of Anticipated Notifications, Permits, and Municipal Approvals**

| Type  | Issuing Agency   | Description   | Status<br>March 10, 2021   |
|---|--|---|--|
| Asbestos Work Notification<br>(New Jersey Administrative Code [NJAC] 7:26-2.12/NJAC 8:60-7) | New Jersey Department of Labor (NJDOLE)                                  | Asbestos abatement  | Submitted for Building C.<br>Not submitted for Buildings A and B.  |
| Sidewalk Closure Approval   | Town of Harrison Construction and Engineering Department                 | Closure of the sidewalk adjacent to the Site on South 5th Street and Bergen Street  | Approved by Town of Harrison on March 12, 2020   |
|   |  | Closure of the sidewalk adjacent to the Site on Sussex Street and South 6th Street  | Not requested yet  |
| Office Trailer Permit   | Town of Harrison Construction and Engineering Department                 | Installation of three office trailers on-Site   | Approved by Town of Harrison on March 17, 2020.  |
|   |  | Relocation of three office trailers to parking lot  | Trailers relocated. Construction permit pending (tie downs).   |
| Electrical Connection   | Public Service Electric and Gas Company (PSE&G) and Town of Harrison OEM | Connection of temporary power for trailers through Building B   | Completed and inspected by the Town of Harrison on March 17, 2020.   |
|   |  | Connection of temporary power for trailers in parking lot   | Trailers relocated to parking lot. Electrical permits pending.   |
| Temporary Road Closure Approval   | Town of Harrison OEM   | During building demolition phase, a portion of South 5th Street, Bergen Street, South 6th Street, and Sussex Street will be closed to vehicular traffic | Closure of a portion of South 5th Street and Bergen Street was approved by Town of Harrison on March 12, 2020.<br>Not requested yet for other streets. |

| Type  | Issuing Agency  | Description  | Status<br>March 10, 2021   |
|---|---|--|--|
| Hot Work Permit                             | Town of Harrison OEM  | Use of flame-emitting devices on-Site <sup>1</sup>   | Permit obtained February 24, 2020; expired March 31, 2020. Permit to be renewed when hot work is needed. |
| Demolition Permit                           | Town of Harrison  | Demolition permit to be issued by the Building Department. Harrison DPW to provide approval of the water service disconnects. Anchor QEA's third party monitor will provide certification letter when abatement is complete. | Not submitted. <sup>2</sup>  |
| USEPA RCRA Episodic Generation Notification | New Jersey Department of Environmental Protection (NJDEP)/USEPA | Notification that the Site will exceed the threshold volume for generation of hazardous wastes under its normal generator quantity for a specific time period  | Revised notification approved January 11, 2021.  |
| Off-Site Waste Facility Approvals           | USEPA   | Regulatory and compliance approvals of transporters and facilities receiving waste from the Site   | Majority received in March 2020. Resubmittals are in progress.   |
| Soil Erosion and Sediment Control Plan      | Hudson Essex Passaic Soil Conservation District                 | A plan aimed at eliminating the flow of contaminated rainwater (due to soil erosion) into streams and rivers   | Not submitted  |

Notes:

1. In addition to the hot work permit issued by the Town of Harrison, Brandenburg's hot work plan and associated permit are subject to review and acceptance by the Engineer and USEPA.
2. Based on discussions with the Town of Harrison, the demolition permit will not be issued until the pre-demolition activities, including utility disconnections and asbestos abatement, have been completed.



## 4 Buildings A and B Demolition Overview

This section presents a summary of the work activities to be performed during implementation of the Buildings A and B demolition. Refer to the appendices for additional information. In general, an anticipated work activity summary follows the work tasks previously identified in the Buildings A and B RAD, with some modifications as noted for each task.

The Site Construction Plan (SCP) includes detailed descriptions of Brandenburg's anticipated means and methods to perform the Buildings A and B demolition. During implementation of this Building C POP Amendment, the project team (GE, Brandenburg, Anchor QEA, and Arcadis) will be evaluating the Buildings A and B demolition means and methods for compliance with the performance-based requirements in the Buildings A and B RAD and overall efficiency. As appropriate, and if requested by Brandenburg, the Respondent and Engineer will consider proposed modifications to Brandenburg's specific means and methods. Anchor QEA will review proposed modifications to Brandenburg's means and methods with USEPA, and will obtain USEPA's approval prior to implementation of the proposed changes.

### 4.1 Preparation and Review of Demolition Submittals (Buildings A and B RAD Work Task S1)

This Building C POP Amendment has been developed based on the Buildings A and B demolition submittals that have been provided by Brandenburg and Arcadis. Table 4-1 (attached) presents a submittal tracking table that lists the required submittal and status of the submittal review by the Engineer. Brandenburg's reviewed submittals are included as Appendices A, B, C, and D. As noted in the attached appendices, Brandenburg submittals that have been "reviewed and noted" include the Engineer's comments on their submittals.

### 4.2 Project Meetings (Buildings A and B RAD Work Task S2)

As described in the Buildings A and B RAD, the following meetings/inspections will be completed during the Buildings A and B demolition:

- The pre-RA inspection for the Buildings A and B will be completed following mobilization and prior to the start of pre-demolition (i.e., floor removal) or abatement activities. The pre-RA inspection will consist of a Site walkthrough by USEPA, GE, Anchor QEA, Arcadis, and Brandenburg. This inspection will be used to document that the procedures and equipment necessary to control releases of dust and mercury vapors are in place and operational, and that the Site is prepared to efficiently manage the various waste streams that will be generated during Buildings A and B demolition activities.
- Daily Site safety/coordination meetings will be conducted by Brandenburg and Anchor QEA.

- Weekly progress meetings will be attended by USEPA, Brandenburg, GE (as needed), and Anchor QEA.
- Pre-demolition inspection will be performed by USEPA, GE, and Anchor QEA to document that the necessary pre-demolition removals as detailed in the Buildings A and B RAD have been completed.
- Pre-final inspection will be performed by USEPA, GE, and Anchor QEA to document that the Buildings A and B demolition has been performed as detailed in the Buildings A and B RAD.

### **4.3 Mobilization (Buildings A and B RAD Work Task S3)**

#### **4.3.1.1 Mobilization – Brandenburg**

As detailed on the project schedule, mobilization and Site preparation activities are anticipated to begin in February 2020. Section 1.5 of Brandenburg's SCP (Appendix A of this Building C POP Amendment) presents additional detail regarding the equipment to be mobilized by Brandenburg from the Building C work area to the work areas for Buildings A and B.

Brandenburg's Site preparation activities generally include the following:

- Obtaining necessary permits or permit amendments
- Installing soil erosion control and stormwater management measures
- Protecting existing features to be maintained during the Buildings A and B demolition, including six monitoring wells located on-Site in the vicinity of the Buildings A and B work
- Constructing waste staging areas as described in the SCP (Appendix A of this Building C POP Amendment)
- Constructing decontamination areas
- Installing perimeter fencing as shown on the drawing entitled "Site Logistics" attached to the SCP (Appendix A of this Building C POP Amendment)

Following completion of the above-listed Site preparation activities, the Respondent, Engineer, Contractor, Waste Coordinator, and USEPA will conduct the pre-RA inspection to document that the Site is prepared to perform the necessary monitoring activities and to manage the various waste streams that will be generated during demolition activities.

#### **4.3.1.2 Mobilization – Anchor QEA**

In addition to Brandenburg's mobilization and Site preparation activities, Anchor QEA personnel will relocate air monitoring equipment to support CAMP implementation during the Buildings A and B demolition. The Mercury Instrument Model VM-3000 mercury vapor monitors with weather-resistant enclosures and tripods, DustTrak II 8530 Dust Monitors with enclosures and tripods, and meteorological monitoring station will be relocated. Potential locations for air monitoring stations during the Buildings A, B and C demolition are shown in Figures 4-1 to 4-4. Operations and

maintenance manuals for the mercury vapor and dust monitors, meteorological monitoring station, and other air monitoring equipment are included as Appendix G to the Building C POP.

#### **4.4 Utility Disconnection and Termination (Buildings A and B RAD Work Task S4)**

As detailed in Section 1.6 of the SCP (Appendix A of this Building C POP Amendment), Brandenburg has identified the existing utilities to be disconnected and terminated prior to the start of demolition activities. Brandenburg's disconnection methods include verification of previously disconnected utilities followed by visible marking and lockout/tagout procedures for energized utilities. Table 4-2 presents a summary of the Buildings A and B utilities to be addressed by Brandenburg prior to demolition. Refer to the SCP (Appendix A) for additional information regarding Brandenburg's anticipated means and methods for utility disconnection. If additional previously unknown utilities are encountered prior to and during the demolition of the buildings, the utilities will be either removed or cut and capped (as necessary) and documented.

**Table 4-2**  
**Utility Disconnection and Termination**

| <b>Utility</b>                             | <b>Owner</b>  |
|--|---|
| Electrical                                 | PSE&G   |
| Gas  | PSE&G   |
| Potable Water <sup>1</sup>                 | Town of Harrison<br>Construction and Engineering Department and Public Works Department |
| Fire Service                               | Town of Harrison<br>Construction and Engineering Department and Public Works Department |
| Telephone/Cable                            | Verizon/AT&T/Comcast  |
| Stormwater and Sanitary Sewer <sup>2</sup> | Town of Harrison<br>Construction and Engineering Department and Public Works Department |

Notes:

1. Based on discussions with Town of Harrison, Brandenburg will need to cut/cap/sleeve at the water main to complete the disconnection.
2. Brandenburg will perform select repairs or use existing roof drains prior to superstructure removal activities in order to limit the volume of non-contact water for disposal during the interior removal activities. Following interior removal activities, Brandenburg will cut and cap the pipe at the first-floor slab elevation to seal the roof drains prior to superstructure demolition.

#### **4.5 Water Management (Buildings A and B RAD Work Task S5)**

Brandenburg will pump collected contact water using manually operated sump pumps and convey the water to polyethylene totes. Brandenburg's means and methods for the capture, recovery, collection, containerization, and off-Site disposal of contact water generated during the Buildings A

and B demolition are presented in the Water Management Plan, included as Appendix C to this Building C POP Amendment.

#### **4.6 Regulated and Miscellaneous Items Removal (Buildings A and B RAD Work Tasks A2 and B2)**

Following completion of the utility disconnect activities and interior asbestos removal, Brandenburg will remove universal wastes and regulated items, remaining electrical equipment, miscellaneous items, equipment, and debris as described in Brandenburg's SCP (Appendix A of this Building C POP Amendment). Select equipment without environmental impacts will remain and be removed during the utility tunnel removal and building demolition.

Also included under this activity is the removal of wall-mounted transformer/capacitor/breaker equipment and the exhaust fan and motor located in the equipment room on the roof of Building A and containerization for disposal as PCB bulk waste. Brandenburg will also remove visible residues, grime, dust, and debris from painted metal supports within the equipment room. The grime and cleaning materials will be containerized for disposal as a Toxic Substances Control Act (TSCA) remediation waste in accordance with the Demolition Debris Management Plan (DDMP) (Appendix B of the Buildings A and B RAD).

#### **4.7 Loose Lead-Based Paint Removal (Buildings A and B RAD Work Tasks A5 and B4)**

Under this work task, Brandenburg will remove the loose lead paint from the interior brick walls, concrete and wood floors, and ceilings utilizing hand tools and wet work methods (i.e., misting). They will sweep the loose paint from the face of the surfaces. Piles of lead paint chips will be collected from the floor using high-efficiency particulate air (HEPA) vacuums.

#### **4.8 Asbestos Abatement (Buildings A and B RAD Work Tasks A1 and B1)**

Following mobilization and establishment of work areas, waste staging areas, and decontamination areas, and completion of the electrical and gas utility disconnections, Brandenburg will initiate Building B asbestos abatement activities as described in the Asbestos Abatement Plan (included in Appendix B to this Building C POP Amendment). Building A abatement activities will start at a later time.

Brandenburg will remove the non-friable asbestos-containing roof material and flashing immediately prior to demolition.

During the asbestos abatement phase, independent third-party project monitoring will be performed by Anchor QEA's asbestos monitoring subcontractor, ATC Environmental. The third-party project monitoring will consist of on-Site observation and recordkeeping of the abatement activities, and

performing project air monitoring for asbestos in accordance with 40 Code of Federal Regulations (CFR) Subpart M—National Emission Standard for Hazardous Air Pollutants (NESHAP) for Asbestos §61.145 Standard for Demolition and Renovation, and the Occupational Safety and Health Administration (OSHA) Asbestos Standard for the Construction Industry, 29 CFR Part 1926.1101. The third-party air monitoring will also include collecting air samples during asbestos abatement to document efficacy of removal. In addition, Anchor QEA will perform dust and mercury vapor air monitoring as required by the CAMP.

If during execution of the pre-demolition activities (including the asbestos abatement), previously unknown suspected asbestos-containing material (ACM) is encountered, ATC Environmental or Anchor QEA will collect a sample for confirmation of asbestos content, and the suspect material will be removed by Brandenburg, as appropriate.

#### **4.9 Subsurface Structure Residual Removal (Buildings A and B RAD Work Tasks A3 and B3)**

Under this work task, Brandenburg will perform the following activities:

- Identify all interior structures (sumps, pits, catch basins, floor drains, and rain traps) that are located within Buildings A and B.
- Remove accumulated sediment, other debris, and liquids from the structures and associated inlets/outlets. Anchor QEA will monitor the materials removed from the structures with a mercury vapor analyzer (MVA) during the task.
- Remove ACMs not removed under Work Tasks A1 and B1.
- Prior to removing items and materials within the utility tunnel in Building A, the top portion of the tunnel will be removed. Once the top portion of the tunnel is removed, Brandenburg will provide access to Anchor QEA for the collection of waste characterization and/or suspect asbestos samples from piping and debris.
- Remove equipment.
- If any piping exists within the interior structures, remove piping back to the sidewall or floor and clean pipes to at least 1 linear foot with a mercury recovery vacuum or via wet methods including a soft bristle brush to agitate any debris left in the pipe. Before and after the pipe is cleaned, Anchor QEA will monitor the pipes with an MVA and document the readings. Following monitoring, install a mechanical plug and non-shrink grout in the pipe.
- Cut and cap vertical roof drain piping that penetrates the first-floor slab immediately prior to demolition of the superstructure.

#### **4.10 Select Pre-Containment Flooring Removal (Buildings A and B RAD Work Tasks A4 and B5)**

Under this work task, Brandenburg will remove select areas of flooring on the first (ground) floor level of Buildings A and B. As detailed in Section 1.11 of the SCP, Brandenburg will remove wood floor layers (including any cinders and tar paper layers) down to the base concrete floor in select areas of the first floor of Building A as shown on Contract Drawings 9 and 10 of the Buildings A and B RAD. As detailed in Section 1.23 of the SCP, Brandenburg will remove concrete, wood floor, equipment bases, cinder, wood sleepers, cindercrete, and tar paper layers down to, but not including, the underlying subgrade soil material from select areas of the first floor in Building B as shown on Revised Contract Drawing 21 included in this POP Amendment.

#### **4.11 Foundation Paint/Coating Removal (Buildings A and B RAD Work Task A6)**

Brandenburg will remove the paint/coating from the vertical interior portion of the concrete foundation wall along the northern, eastern, and western sides of Building A. Brandenburg will utilize a MMLJ Group Model DB225 Dustless Blasting system and laborers equipped with hand tools to remove the paint/coating.

#### **4.12 Floor/Concrete Floor Cleaning and Containment (Buildings A and B RAD Work Tasks A7 and B6)**

Under this work task, Brandenburg will collect all accumulated debris and dust from the top of the first-floor concrete slab in Building A and from concrete floors in side rooms and stairwells on the first floor in Building B using a combination of scrapers, shovels, or chisels to remove floor grime. A HEPA and mercury recovery vacuums will be used to collect dust, debris, and potential bulk mercury. The waste materials will be loaded into storage drums and placed in the waste accumulation area to await off-Site disposal.

Following the completion of floor cleaning activities, Brandenburg will install a temporary containment on the first-floor slab in Building A as detailed in Section 1.14 of the SCP (Appendix A of the Building C POP Amendment). In Building B, the temporary containment will be installed over the first-floor area as detailed in Section 1.24 of the SCP.

The containment liner will consist of 15-mil low-permeability polyethylene underlain by non-woven geotextile fabric and will be constructed to drain to sumps for the collection of liquids (if any) generated during pre-demolition work activities.

#### **4.13 Select Flooring Removal: Second and Third Floors (Buildings A and B RAD Work Tasks A8 and B7)**

Brandenburg will remove select areas of flooring (including wood flooring, top layer concrete, tar paper, wood sleepers, and cinders) down to, but not including, the underlying base concrete layer on the second and third floors of Buildings A and B as described in Sections 1.15 and 1.25 of the SCP and Sections 7.8 and 8.7 of the Buildings A and B RAD, respectively. Brandenburg will remove floor layers on the third floor as shown on Revised Contract Drawing 23 included in this POP Amendment. Flooring will be removed layer by layer, vacuuming the exposed layer with a HEPA vacuum or mercury recovery vacuum (if mercury is present) prior to starting removal.

In Building B, Brandenburg will apply mercury vapor suppressant solutions (calcium polysulfide solution and heptahydrate ferrous sulfate solution) to the cinder layer in high mercury vapor areas (i.e., cinder areas designated for characterization sampling following removal on the drawings) prior to removal. The mercury vapor suppressant material will consist of a two-step application process. Following removal of the top floor surface (e.g., concrete, wood) a calcium polysulfide and water solution will be applied to the cinders at a rate of 10 gallons per 100 square feet. Cinders will be raked during application to promote penetration in the cinder layer. Next a heptahydrate ferrous sulfate solution will be applied at a rate of 10 gallons per 100 square feet. The cinders will also be raked during the application process. Cinder material will be segregated from other flooring materials for disposal.

The Contractor may use the mercury vapor suppressant followed by application of heptahydrate ferrous sulfate during other tasks to address elevated mercury vapor concentrations in cinders. Cinder areas treated with the vapor suppressant and heptahydrate ferrous sulfate will be subject to additional post-removal waste characterization sampling and analysis to document that the suppressant system did not change the waste characteristics.

The Contractor may also use the mercury vapor suppressant on other non-cinder building materials. For applications on non-cinder building materials, the heptahydrate ferrous sulfate application is not required.

Anchor QEA will provide Brandenburg with a summary of how the suppressant materials were used during the pilot studies to support Brandenburg's use of the suppressants. In addition, during the application of the suppressant, Anchor QEA will monitor the rate and volume of suppressants applied to confirm the minimum application rates are utilized as required in the RAD.

#### **4.14 Select Base Concrete Removal: Third Floor (Buildings A and B RAD Work Task B8)**

Under this work task, Brandenburg will remove select portions of the base concrete floor on the third floor of Building B. Six-mil polyethylene sheeting will be placed on the second floor directly below the removal areas. A skid steer equipped with a hydraulic hammer will be used to remove the base concrete. Following base concrete removal, fall protection will be placed around the openings in the floor slab.

#### **4.15 Pre-Demolition Cleaning (Buildings A and B RAD Work Tasks A9 and B9)**

Following the completion of pre-demolition activities, Brandenburg will perform a final cleaning of interior horizontal surfaces in each building. Pre-demolition cleaning will consist of manual cleaning or an interior building washdown of horizontal surfaces to remove accumulated dust. Following cleaning, Brandenburg will remove accumulated dust, liquids, residuals, debris, and contact water from the containment liner. Once liner cleaning is completed, USEPA and Anchor QEA will complete a visual inspection to document removals and that the liner is intact.

#### **4.16 Building Demolition (Buildings A and B RAD Work Tasks A10 and B10)**

Following the post-cleaning liner inspection and if no deficiencies are noted, Brandenburg will install a 3- to 6-inch layer of sand, gravel, or similar material over the top of the containment liner to serve as a protective layer and to limit the potential for liner damage during the demolition activities. In coordination with PSE&G, Brandenburg will place shielding over the electrical lines located on Sussex Street for worker protection during demolition. Prior to Building A demolition, aerial lifts will be used along the north wall of Building A to facilitate manual façade/parapet wall removal. Once Brandenburg has completed the pre-demolition Site preparation activities for each building, the project team (USEPA, GE, Anchor QEA, and Brandenburg) will complete the pre-demolition Site inspection (described in Section 4.2 of this Amendment and in the Buildings A and B RAD). Following completion of the pre-demolition Site inspection and if no deficiencies are noted, Brandenburg will initiate demolition as described in Sections 1.16 and 1.28 of the SCP.

Building B will be demolished and then Building A. Building B demolition will progress from west to east, and Building A demolition from east to west, as shown on the Demolition Plans attached to the SCP. During demolition, the generated debris will be sized and maintained in designated staging areas until loaded into trucks for off-Site disposal. Recyclable metals will be sized and transported to an approved off-site recycler. Prior to removal from the site, recyclable metals will be screened in accordance with the Scrap Management Plan included in Appendix I to this Building C POP



Amendment. Brandenburg will provide Anchor QEA and USEPA an amendment to the waste loading plan prior to Building A pre-demolition inspection that illustrates the waste loadout process/traffic plan during the Building A superstructure demolition.

Brandenburg will provide dust suppression using water misting equipment and spraying. Brandenburg's application of water for dust control will be controlled such that the accumulation of water on the ground surface is minimal. At no time will dust suppression systems be unsupervised during operations. If necessary, contact water will be collected and handled as described in the Water Management Plan (Appendix C of this Amendment)

#### **4.17 Slab and Subslab Piping Removal (Buildings A and B RAD Work Tasks A11, B11 and SS1)**

Under this work task, Brandenburg will remove all remaining first-floor slabs in Buildings A, B, and C that were not previously removed as described in SCP Sections 1.18, 1.29, and 1.30, respectively. The task includes the removal of piping within the slab and subslab piping to a depth of 18 inches below the bottom of slab elevation and horizontally to the limits of the building footprint. If piping extends below 18 inches, Brandenburg will cut/cap the remaining piping and leave in place and provide X, Y, and Z coordinates/measurements from fixed permanent locations or surveyed for inclusion in the as-built survey. However, sanitary sewer piping will be removed completely, even if deeper than 18 inches.

Subslab piping will be screened for mercury vapor by Anchor QEA prior to and following removal. If there are visual indications of mercury within the piping, flowable mercury will be collected and containerized and the piping managed separately as a hazardous debris. If there are accumulations of debris or corrosion within the piping, Anchor QEA will collect a sample for waste characterization. In addition, suspected ACM piping or insulation will be sampled and tested to confirm the presence/absence of ACM.

The removal activities will also include collection and removal of all masonry, metal, or other building-related materials that are visible on top of the subslab soil following slab removal. Cobbles and stones from the soil that are greater than 4 inches in any one dimension will be removed.

The utility tunnel and sump/pit walls will be removed to the bottom elevation of the first-floor slab. Remaining subsurface floors (tunnel, elevator pits, sumps, pits, subgrade vaults, etc.) will be fractured in place. Remaining subsurface features proposed to be left in place will be included in the post-demolition foundation assessment (described in the following section) unless already previously characterized.

During removal of the building slabs, mercury vapor and particulate monitoring will be performed in accordance with the CAMP requirements (detailed in Appendix C of the RAD) at the work area

perimeter to document that the slab removal activities are not resulting in generation of mercury vapors or particulates above site action levels. In addition, at the end of each workday, Anchor QEA will screen the exposed soils (at the breathing zone) using a mercury vapor analyzer to document that the exposed soils are not generating mercury vapors at concentrations above the site perimeter action levels. If exposed soils are generating mercury vapors at concentrations above the action levels presented in the CAMP, the soils will be covered with polyethylene sheeting or Brandenburg may apply vapor suppressants in consultation with Anchor QEA and USEPA prior to application. Exposed soils generating mercury vapors will be further assessed and/or removed as described in the Soil Management Plan included as Appendix H.

If Brandenburg elects to use the Building C slab as a laydown area during the demolition and Buildings A or B, then a plan will be developed (for USEPA approval) to evaluate the slab and/or implement engineering controls to mitigate the risk of tracking mercury-impacted dust from the surface of the slab.

#### **4.18 Foundation Assessment**

As described in the Buildings A and B RAD, following completion of demolition, the Engineer will conduct post-demolition concrete foundation sampling activities to confirm that select foundation materials (i.e., footers and foundation walls) are inert materials and may be left in place.

The post-demolition concrete foundation sampling will consist of 1-inch depth from foundation walls and footers scheduled to remain in place. The proposed locations of foundation samples are detailed in the Buildings A and B RAD Contract Drawings. The post-demolition foundation samples will be collected and submitted for laboratory analysis in accordance with the methods and procedures detailed in the Sampling and Analysis Plan presented in Appendix F of the Buildings A and B RAD. The concrete core samples will be submitted for laboratory analysis for total metals, polycyclic aromatic hydrocarbons, and PCBs in accordance with the NJDEP Solid and Hazardous Waste Management Program guidance document titled *Guidance for Characterization of Concrete and Clean Material Certification for Recycling* (NJDEP 2010).

The Engineer will review the analytical results of the post-demolition concrete sampling activities along with 2019 and 2020 data to determine whether total mercury or other constituents are detected at concentrations greater than those in the *Guidance for Characterization of Concrete and Clean Material Certification for Recycling* (NJDEP 2010). Data will be reviewed with the USEPA and the Licensed Site Remediation Professional for the Site to determine whether foundation materials can remain in place (or if additional foundation is required). If select foundation materials require removal based on the analytical data, Brandenburg will remove the foundation materials prior to demobilization.

## 4.19 Post-Demolition Soil Sampling

As described in the RAD, following the completion of demolition of Buildings A and B, the Engineer will conduct post-demolition sampling to confirm that the Buildings A and B demolition did not adversely impact underlying soils. Proposed post-demolition sampling locations along with a proposed soil management plan/decision matrix (Appendix H) will be presented to USEPA for review and acceptance prior to implementation. The post-demolition confirmation samples will be collected and submitted for laboratory analysis for total mercury in accordance with the methods and procedures detailed in the Sampling and Analysis Plan presented in Appendix F of the Buildings A and B RAD. In accordance with the Buildings A and B RAD, the following post-demolition sampling activities are anticipated:

- **Waste Staging Area Soil Sampling:** Post-demolition verification soil samples may be collected from surface soil in areas where the demolition wastes were staged, if there is the potential that Buildings A and B demolition activities impacted surface soil conditions. The determination to perform waste staging area soil sampling will be conducted in consultation with the USEPA. Soil sampling may also be collected from exterior areas where tracking or other work activities may have impacted subsurface soil.
- **Subslab Soil Sampling:** Following demolition activities and prior to removal of the first-floor slabs, the Engineer may collect post-demolition verification shallow soil samples (0 to 6 inches below the slab) if there is the potential that demolition activities impacted surface soil conditions beneath the slab (i.e., containment liner damaged, visible mercury migrated vertically during demolition activities, visible mercury observed during slab or subslab piping removal). The Engineer will review the plan for subslab soil sampling (if any) with the USEPA prior to sample collection.

## 4.20 Site Restoration (Buildings A and B RAD Work Task R1)

Under this work task, Brandenburg will conduct Site restoration activities in areas (including on-Site and off-Site areas) that are disturbed during, and as a result of, the implementation of the demolition. Proposed activities are presented in Section 1.31 of the SCP and in general include the following:

- Installing safety barriers throughout the Site on top of the remaining foundation walls and any other on-Site areas (vaults, pits, sumps, etc.) where an 18-inch or greater drop is created following demolition
- Installing temporary orange construction fencing around the perimeter of the open utility tunnel area inside the Building A footprint
- Repairing/restoring all on-Site and off-Site features that have been damaged or otherwise disturbed during the demolition
- Relocating existing jersey barriers and installing fencing to secure the Site perimeter

- Installing gates at the entrance to each courtyard
- Installing temporary vegetative cover on soil areas within the building perimeters

At the completion of the demolition activities, Brandenburg will perform a survey and generate as-built record drawings documenting final conditions at the Site. The as-built record drawings will be signed and sealed by a Professional Surveyor registered in the state of New Jersey.

## **4.21 Demobilization (Buildings A and B RAD Work Task R2)**

Under this work task, Brandenburg will decontaminate non-disposable equipment and tools in accordance with the Decontamination Plan included in Appendix A to this Building C POP Amendment. Decontamination fluids generated as a result of decontamination activities will be managed in accordance with Brandenburg's Water Management Plan (Appendix C to this Building C POP Amendment). Following confirmation of equipment decontamination, equipment and personnel will be demobilized.

In addition, Brandenburg will remove sediment and erosion control measures; restore areas disturbed to accommodate support areas, and any other areas identified by the Engineer; and remove and restore temporary access areas. Removed materials will be disposed in accordance with the Buildings A and B RAD and the Demolition Debris Management Plan.

## **4.22 Waste Management, Transportation, and Disposal**

Appendix F to this Building C POP Amendment presents the detailed Waste Transportation and Disposal Plan, which was prepared by Arcadis to supplement the Demolition Debris Management Plan included in the Buildings A and B RAD. Appendix F includes identification of the specific waste disposal facilities and transporters that will perform the waste transport and disposal activities, along with relevant facility and transporter information (such as permit information). Also included in Appendix F are the completed Region 2 Off-Site Rule Request Forms for each of the proposed waste disposal facilities. Appendix I to the Building C POP Amendment presents a Scrap Management Plan that includes the offsite facility to which recyclable metals will be transported.

Brandenburg's SCP (Appendix A) includes descriptions (by task) of anticipated means and methods for the handling, sizing, and loading of waste materials into the appropriate transport containers. In addition, Brandenburg's Traffic Plan in the SCP provides an overview of proposed truck traffic flow during removal of waste materials.

## **4.23 Air Monitoring**

Air monitoring activities will be performed to document that work activities have not impacted the safety of workers, or resulted in a release of airborne constituents outside the work area at concentrations above the action levels specified in the CAMP. Air monitoring will be conducted as

outlined in Section 3.14 of the Building C POP with the exception of Off-Site/Community Air Monitoring. During implementation of the Buildings A and B demolition, one additional off-Site air monitoring location will be added, and off-Site air monitoring will be performed at a minimum of four locations in the immediate vicinity of the Site during implementation of certain RA activities in both buildings at the same time. The attached Figures 4-1 through 4-4 present potential locations for Site perimeter and off-Site/community air monitoring stations during the Buildings A, B and C demolition activities. Per the CAMP work area perimeter air monitoring (i.e., manual measurements) will be performed during superstructure demolition and demolition debris waste loadout activities for Buildings A, B, and C.

Based on the current schedule, the Building C slab will remain in place following the demolition of Building C during the demolition of Buildings A and B. Anchor QEA will screen the breathing zone of the Building C slab for mercury vapor during this period (minimum daily during the expected warmest part of the day, but can be adjusted with USEPA approval) to document that mercury vapors are not being generated by the Building C slab at concentrations above CAMP action levels.

## 5 References

Anchor QEA, 2020a. *Buildings A and B Removal Action Design*. Vo-Toys Site – Harrison, New Jersey. CERCLA Docket No. 02-2019-2028. Prepared for General Electric Company. October 2020.

Anchor QEA, 2020b. *Project Operations Plan for Building C Removal Action*. Vo-Toys Site – Harrison, New Jersey. CERCLA Docket No. 02-2019-2028. Prepared for General Electric Company. August 2020.

NJDEP (New Jersey Department of Environmental Protection), 2010. *Guidance for Characterization of Concrete and Clean Material Certification for Recycling*.

USEPA (U.S. Environmental Protection Agency), 2019. Administrative Settlement Agreement and Order on Consent for Removal Action. In the Matter of: Vo-Toys Site, Harrison, New Jersey. General Electric Company. USEPA Region 2 CERCLA Docket No. 02-2019-2028. July 2019.

## Tables

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**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/ Document Reference   | Submittal Description   | Submittal Timeframe  | Date Received |
|---------------------------------|---|---|--|---------------|
|                                 | Buildings A and B<br>Removal Action Design<br>Section 1.3.5 Contractor  | Evidence of 40-hour training and 8-hour refresher updates for on-site personnel   | Prior to mobilization  | ongoing       |
|                                 | Buildings A and B<br>Removal Action Design<br>Section 1.5 Technical Bid<br>Information  | Narrative discussion of the proposed approach for completing the Removal Action activities with additional information as specified | Submit with Bid Proposal   |               |
|                                 | Buildings A and B<br>Removal Action Design<br>Section 5.3 Permitting and<br>Notification<br>Considerations                          | Permits, licenses, and/or approvals (including associated certified checks) (or as permit equivalencies)                            | Prior to Implementation  |               |
|                                 | Buildings A and B<br>Removal Action Design<br>Section 6.1 Work Task S1<br>Preparation and Review of<br>Removal Action<br>Submittals | Site Construction Plan  | Within 21 days following award of contract and prior to mobilization |               |
|                                 |   | Decontamination Plan  | Within 21 days following award of contract and prior to mobilization |               |
|                                 |   | Asbestos Abatement Plan   | Within 21 days following award of contract and prior to mobilization |               |



**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/<br>Document Reference  | Submittal Description                | Submittal Timeframe  | Date Received |
|---------------------------------|---|--------------------------------------|--|---------------|
|                                 | Buildings A and B<br>Removal Action Design<br>Section 6.1 Work Task S1<br>Preparation and Review of<br>Removal Action<br>Submittals (continued) | Traffic Control Plan                 | Within 21 days following<br>award of contract and<br>prior to mobilization |               |
|                                 |   | Water Management Plan                | Within 21 days following<br>award of contract and<br>prior to mobilization |               |
|                                 |   | Site-Specific Health and Safety Plan | Within 21 days following<br>award of contract and<br>prior to mobilization |               |
|                                 |   | COVID-19 Management Plan             | Within 21 days following<br>award of contract and<br>prior to mobilization |               |

**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/ Document Reference   | Submittal Description   | Submittal Timeframe  | Date Received |
|---------------------------------|---|---|--|---------------|
|                                 | Buildings A and B<br>Removal Action Design<br>Section 6.2.5 Weekly<br>Progress Meetings | Name of project management personnel who will attend weekly progress meetings | Submit with Bid Proposal   |               |
|                                 |   | Task-specific project schedule and updates                                    | Prior to weekly progress meetings  |               |
|                                 |   | 3-week lookahead schedule   | Prior to weekly progress meetings  |               |
|                                 | Buildings A and B<br>Removal Action Design<br>Section 15 Air Monitoring                 | Air monitoring logs   | End of each work shift   |               |
|                                 |   | Analytical results of personal air sampling conducted by the Contractor       | Upon receipt from analytical laboratory  |               |
|                                 | Buildings A and B<br>Removal Action Design<br>Section 16 As-Built<br>Record Drawings    | As-built record drawing   | Within 21 days following completion of Removal Action activities                                   |               |
|                                 | Appendix D Technical<br>Specification<br>Section 00 73 63 Site<br>Security and Control  | Permit applications for street and sidewalk closures                          | Minimum of 10 working days in advance of Contractor's intended submittal to Town                   |               |
|                                 |   | Street and sidewalk permit approvals  | Due day following receipt from Town  |               |
|                                 |   | Product information for perimeter fence cover                                 | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 | Appendix D Technical<br>Specification<br>Section 01 31 19 Project<br>Meetings           | Meeting minutes from Daily Site Safety/Coordination Meetings                  | Due day following meeting  |               |

**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/ Document Reference   | Submittal Description   | Submittal Timeframe  | Date Received |
|---------------------------------|---|---|--|---------------|
|                                 | Appendix D Technical Specification Section 01 57 13                                     | Product information for temporary sediment barriers and absorbent booms                                     | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 | Temporary Erosion and Sediment Control  | Proposed method for protecting storm drain inlets and product information as part of Site Construction Plan | Within 21 days following award of contract and prior to mobilization                               |               |
|                                 | Appendix D Technical Specification Section 01 57 19<br>Temporary Environmental Controls | Safety Data Sheets for dust and vapor control/suppressant products  | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 |   | Dust suppression equipment product information sheet  | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 |   | Air handling system design and specifications (if utilized)   | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |

**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/ Document Reference   | Submittal Description                                      | Submittal Timeframe  | Date Received |
|---------------------------------|---|--|--|---------------|
|                                 | Appendix D Technical Specification  | Sketch of proposed project sign                            | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 | Section 01 58 13 Temporary Project Signage  | Figure showing proposed locations and orientation of signs | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 | Appendix D Technical Specification<br>Section 01 71 13 Mobilization/ Demobilization | Written qualifications for operators (if requested)        | Within 5 working days of request and prior to working on site                                      |               |

**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/ Document Reference   | Submittal Description  | Submittal Timeframe  | Date Received |
|---------------------------------|---|--|--|---------------|
|                                 | Appendix D Technical Specification<br>Section 01 74 00 Waste Movement, Transportation and Disposition | Proposed scrap recovery facility   | As part of bid proposal  |               |
|                                 |   | Estimated weight of materials shipped off site   | Daily  |               |
|                                 |   | Procedures for waste management, as part of the Site Construction Plan   | Within 21 days following award of contract and prior to mobilization |               |
|                                 |   | Training records for personnel operating aerial lifts  | Within 5 working days of request and prior to working on site        |               |
|                                 |   | If a chute is used, a design prepared, sealed, and signed by a Professional Engineer registered in the state of New Jersey, as part of the Contractor's Site Construction Plan | Within 21 days following award of contract and prior to mobilization |               |
|                                 | Appendix D Technical Specification<br>Section 01 74 23 Final Cleaning and Restoration of Surfaces     | A description of materials and methods proposed to perform the repair/restoration work and a description of a final product/feature  | 7 calendar days prior to initiating the repair/restoration           |               |
|                                 |   | Information pertaining to the proposed subcontractor (if any) to be used to perform the repair/restoration work.   | 7 calendar days prior to initiating the repair/restoration           |               |

**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/<br>Document Reference   | Submittal Description  | Submittal Timeframe  | Date Received |
|---------------------------------|--|--|--|---------------|
|                                 | Appendix D Technical Specification<br>Section 02 05 19.13<br>Geotextile Fabric | For non-woven geotextile:  | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 |  | · Manufacturer's data  |  |               |
|                                 |  | · Written certification that minimum average roll values are guaranteed by manufacturer                |  |               |
|                                 |  | · Manufacturer's QA/QC program manuals   |  |               |
|                                 |  | · Manufacturer's standard warranty   |  |               |
|                                 |  | · Results of QC tests  |  |               |
|                                 |  | · Contractor's written certification that field-delivered material meets manufacturer's specifications |  |               |
|                                 |  | For woven geotextile:  | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 |  | · Manufacturer's data  |  |               |
|                                 |  | · Written certification that minimum average roll values are guaranteed by manufacturer                |  |               |
|                                 |  | · Manufacturer's QA/QC program manuals   |  |               |
|                                 |  | · Manufacturer's standard warranty   |  |               |
|                                 |  | · Results of QC tests  |  |               |
|                                 |  | · Contractor's written certification that field-delivered material meets manufacturer's specifications |  |               |

**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/ Document Reference                 | Submittal Description   | Submittal Timeframe  | Date Received |
|---------------------------------|---|---|--|---------------|
|                                 | Appendix D Technical Specification                | Written guarantee that minimum test values specified are guaranteed by manufacturer   |  |               |
|                                 | Section 02 05 19.13 Geotextile Fabric (continued) | Contractor's proposed transportation, handling, storage and installation techniques as part of Site Construction Plan             | Within 21 days following award of contract and prior to mobilization |               |
|                                 |   | Written certification that field-delivered geotextiles have not been damaged due to improper transportation, handling, or storage | Prior to installation  |               |
|                                 | Appendix D Technical Specification                | Written request to use flame-emitting device  | At least 14 days prior to proposed use of device                     |               |
|                                 | Section 02 41 00 Demolition                       | Detailed approach for demolition as part of Site Construction Plan  | Within 21 days following award of contract and prior to mobilization |               |

**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/<br>Document Reference                                      | Submittal Description   | Submittal Timeframe  | Date Received |
|---------------------------------|---|---|--|---------------|
|                                 | Appendix D Technical Specification<br>Section 02 82 13 Asbestos Abatement | Asbestos Abatement Plan   | Within 21 days following award of contract and prior to mobilization |               |
|                                 |   | Copies of permits and notifications (and associated certified checks)   | Prior to the commencement of asbestos abatement activities           |               |
|                                 |   | Name of subcontractors including qualifications, licenses, locations of origin, and description of project assignments  | Due as part of Technical Bid Information                             |               |
|                                 |   | Copies of valid asbestos project designer certificate for personnel engaged in design, planning, and phasing of asbestos abatement activities, as part of Asbestos Abatement Plan | Within 21 days following award of contract and prior to mobilization |               |
|                                 |   | Names, qualifications and certifications of abatement designer, on-site asbestos abatement supervisor, and primary contact for Engineer, as part of Asbestos Abatement Plan       | Within 21 days following award of contract and prior to mobilization |               |
|                                 |   | Copies of valid asbestos worker and asbestos supervisor certificates and/or licenses for personnel  | Prior to initiating asbestos abatement activities                    |               |
|                                 |   | Proof of appropriate employee training or accreditation   | Prior to initiating asbestos abatement activities                    |               |
|                                 |   | Medical monitoring certificates and respiratory fit documentation   | Prior to initiating asbestos abatement activities                    |               |
|                                 |   | Copy of Contractor's Respiratory Protection Program   | Prior to initiating asbestos abatement activities                    |               |



**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/ Document Reference   | Submittal Description   | Submittal Timeframe  | Date Received |
|---------------------------------|---|---|--|---------------|
|                                 | Appendix D Technical Specification<br>Section 02 82 13 Asbestos Abatement (continued) | Variance applications   | Minimum of 10 working days in advance of submission to regulatory agencies |               |
|                                 |   | Daily copies of site entry logbooks with worker and visitor access                        | Weekly basis or following asbestos abatement activities                    |               |
|                                 |   | Daily written logs documenting quantity and type of asbestos-containing materials removed | Weekly basis or following asbestos abatement activities                    |               |
|                                 |   | Documentation of OSHA-required monitoring of on-site personnel                            | Upon completion of asbestos abatement activities                           |               |
|                                 |   | Copies of all manifests, trip tickets, and disposal records for asbestos wastes           | Weekly basis or following asbestos abatement activities                    |               |
|                                 |   | Daily tally of asbestos-containing material removed                                       | End of each workday  |               |

**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

| Submittal Identification Number | Specification/ Document Reference   | Submittal Description   | Submittal Timeframe  | Date Received |
|---------------------------------|---|---|--|---------------|
|                                 | Appendix D Technical Specification<br>Section 02 83 19 Loose Lead-Based Paint Removal | OSHA-compliant documentation related to Contractor's lead-abatement program, including but not limited to, the Medical Monitoring Program, Hazard Communication Program, and summary of required lead testing to be performed and as required for the work                                  | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 | Appendix D Technical Specification<br>Section 31 23 16 Earthwork                      | Results of in-place density testing   | Following testing (same day)   |               |
|                                 | Appendix D Technical Specification<br>Section 31 23 23 Fill                           | Identification of proposed off-site fill sources (names, addresses, and any state or local approvals as fill sources). If no prior state or local approval is available for the source, the Contractor shall provide a brief history of the use of property which is the source of the fill | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 |   | Certification that the fill material (for fill materials imported from a quarry or mine) is coming from a licensed facility that has not been subject to a discharged hazardous substance at any time in accordance with the requirements of NJDEP's Fill Material Guidance for SRP Sites   | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 |   | Description of controlled low strength material (CLSM) mixture design, if proposed for use by the Contractor, including sources and proportions of CLSM ingredients   | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 |   | CLSM producer's certification that the mixture design will achieve the strength specified in this section   | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |

**Table 4-1 Submittal Register**  
**Contractor Submittals for the Demolition of Buildings A and B**  
**Vo-Toys Site, Harrison, NJ**

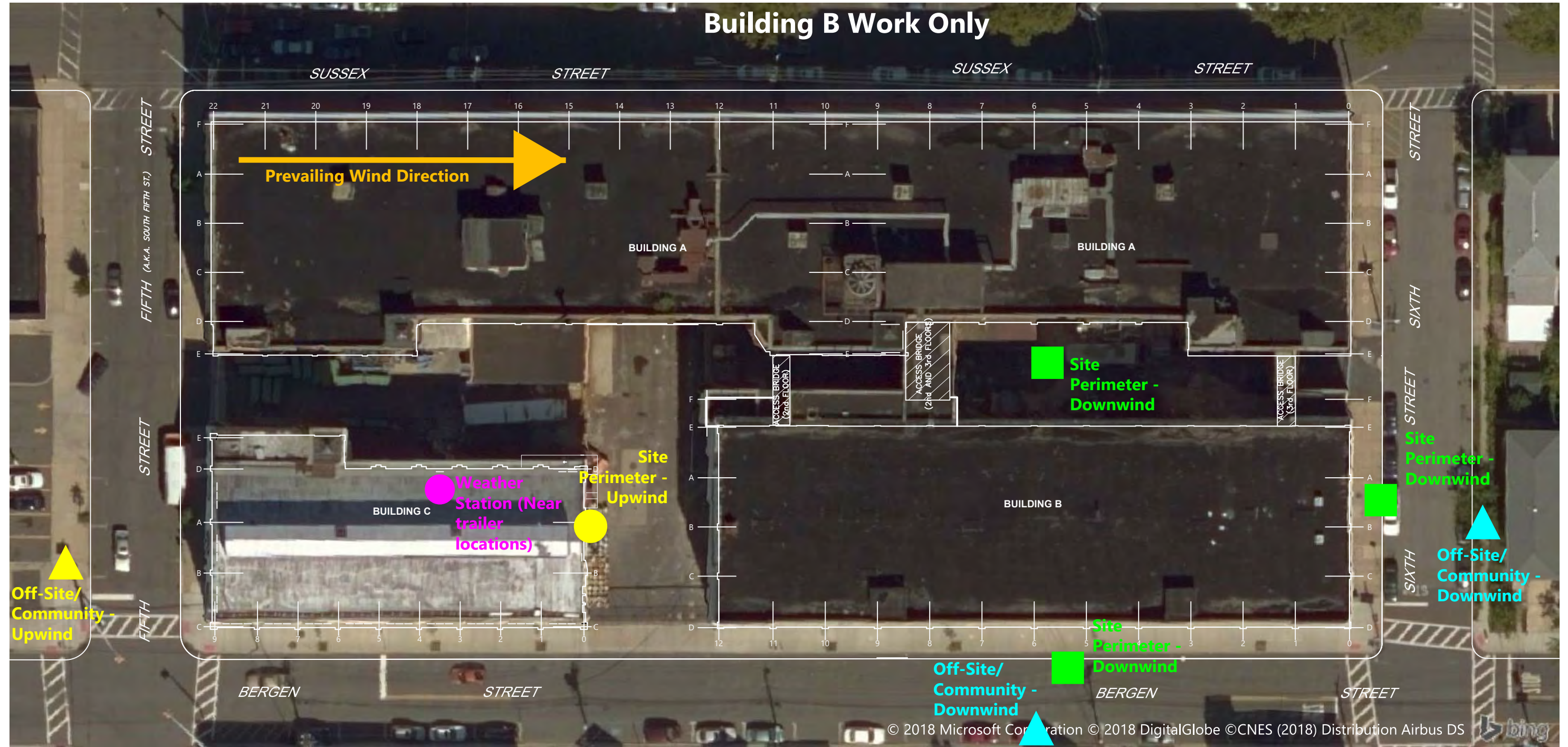
| Submittal Identification Number | Specification/ Document Reference                                       | Submittal Description  | Submittal Timeframe  | Date Received |
|---------------------------------|---|--|--|---------------|
|                                 | Appendix D Technical Specification<br>Section 31 23 23 Fill (continued) | Contractor's proposed areas of use on-site and method of placement for CLSM  | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 |   | Bills of lading for the transport and delivery of imported fill materials to the site (documenting that the materials were obtained from NJDEP-approved sources in accordance with NJDEP's Fill Material Guidance for SRP Sites) | Minimum of 10 working days in advance of the Contractor's intended performance of the related work |               |
|                                 |   | Certified batch reports for CLSM delivered to the site (documenting that the CLSM was prepared in accordance with the approved mixture design)   | Following delivery and prior to use  |               |

Notes:

1. Submittal Status Nomenclature : R = Reviewed; N = Reviewed and Noted; S = Resubmit; J= Rejected; I= For Your Information

## Figures

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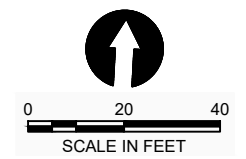
**SOURCE:** Floor plans compiled from CAD file entitled: "FIG05-REV071615" provided by AMEC Foster Wheeler, Inc. on March 31, 2016. Subsurface utilities and features compiled from CAD file entitled: "NUMBERED\_SITEMAP\_20101" provided by General Electric Company on March 3, 2016.  
**HORIZONTAL DATUM:** New Jersey State Plane, North American Datum 1983, U.S. Feet (NJ83F).  
**VERTICAL DATUM:** (None).

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**LEGEND**  
 A,1 — — — BUILDING COLUMN LINE

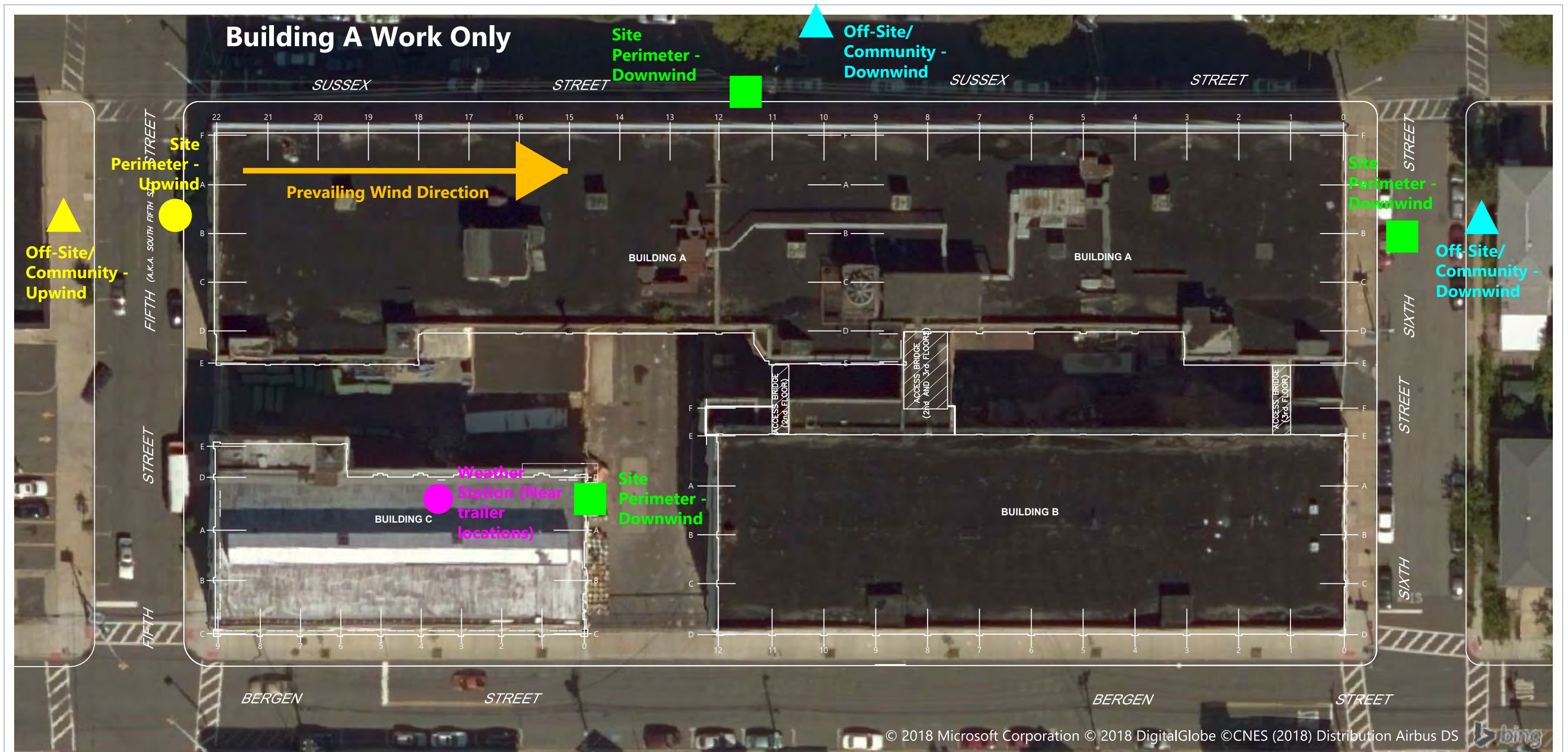
- Proposed Site Perimeter Air Monitoring Location
- Proposed Upwind Site Perimeter Monitoring Location
- ▲ Proposed Off-Site/Community Air Monitoring Location (Yellow is upwind off-site location)



**Figure 4-1**  
**Potential Air Monitoring Station Locations - Building B Work Only**

Vo-Toys Site Addendum to the Building C POP  
 General Electric Company





**SOURCE:** Floor plans compiled from CAD file entitled: "FIG05-REV071615" provided by AMEC Foster Wheeler, Inc. on March 31, 2016. Subsurface utilities and features compiled from CAD file entitled: "NUMBERED\_SITEMAP\_20101" provided by General Electric Company on March 3, 2016.

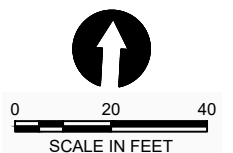
**HORIZONTAL DATUM:** New Jersey State Plane, North American Datum 1983, U.S. Feet (NJ83F).

**VERTICAL DATUM:** (None).

**LEGEND**

A,1 — — — BUILDING COLUMN LINE

- Proposed Site Perimeter Air Monitoring Location
- Proposed Upwind Site Perimeter Monitoring Location
- ▲ Proposed Off-Site/Community Air Monitoring Location (Yellow is upwind off-site location)



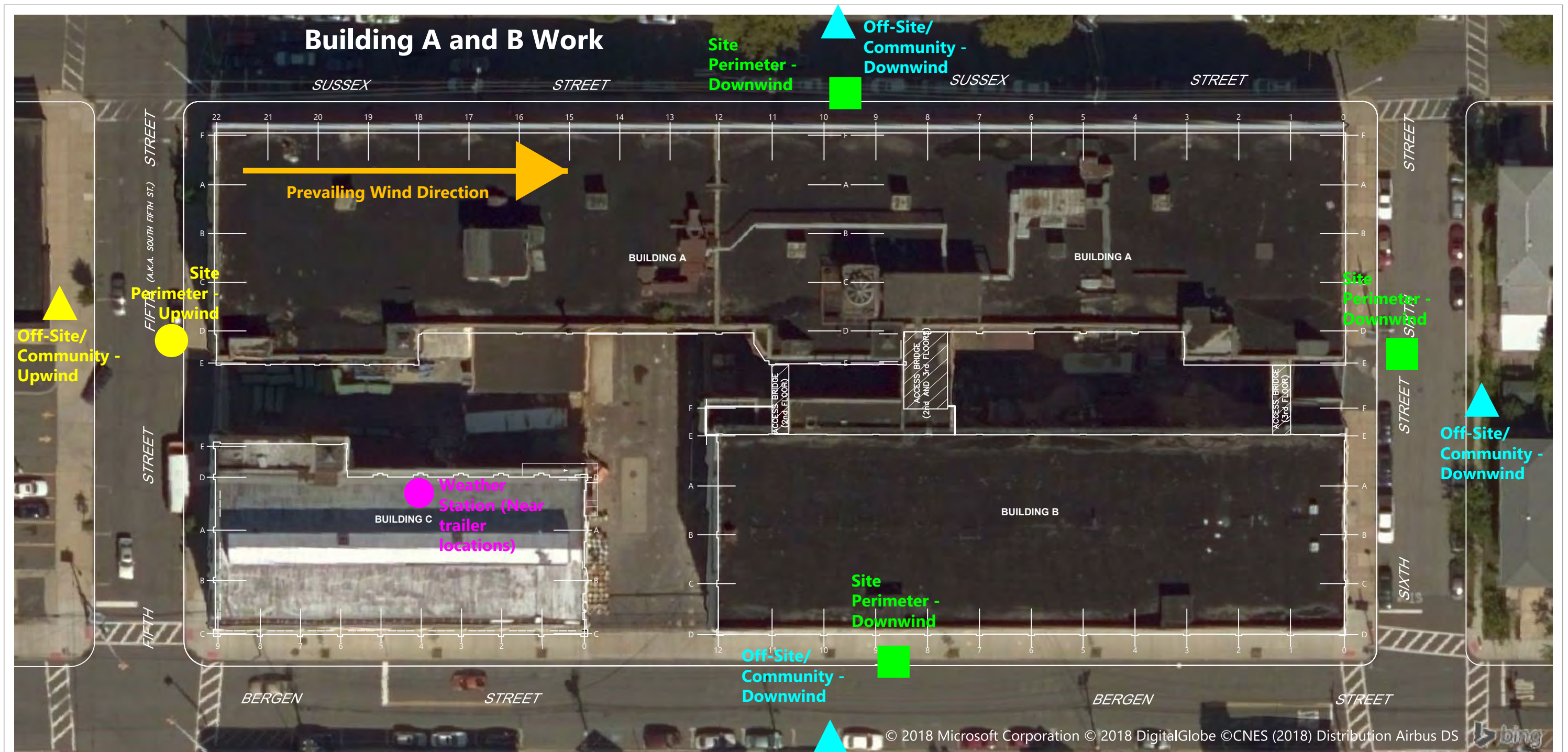
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**Figure 4-2**  
**Potential Air Monitoring Station Locations - Building A Work Only**

Vo-Toys Site Addendum to the Building C POP  
General Electric Company

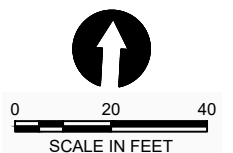




**SOURCE:** Floor plans compiled from CAD file entitled: "FIG05-REV071615" provided by AMEC Foster Wheeler, Inc. on March 31, 2016. Subsurface utilities and features compiled from CAD file entitled: "NUMBERED\_SITEMAP\_20101" provided by General Electric Company on March 3, 2016.  
**HORIZONTAL DATUM:** New Jersey State Plane, North American Datum 1983, U.S. Feet (NJ83F).  
**VERTICAL DATUM:** (None).

**LEGEND**  
 A,1 — — — BUILDING COLUMN LINE

- Proposed Site Perimeter Air Monitoring Location
- Proposed Upwind Site Perimeter Monitoring Location
- ▲ Proposed Off-Site/Community Air Monitoring Location (Yellow is upwind off-site location)



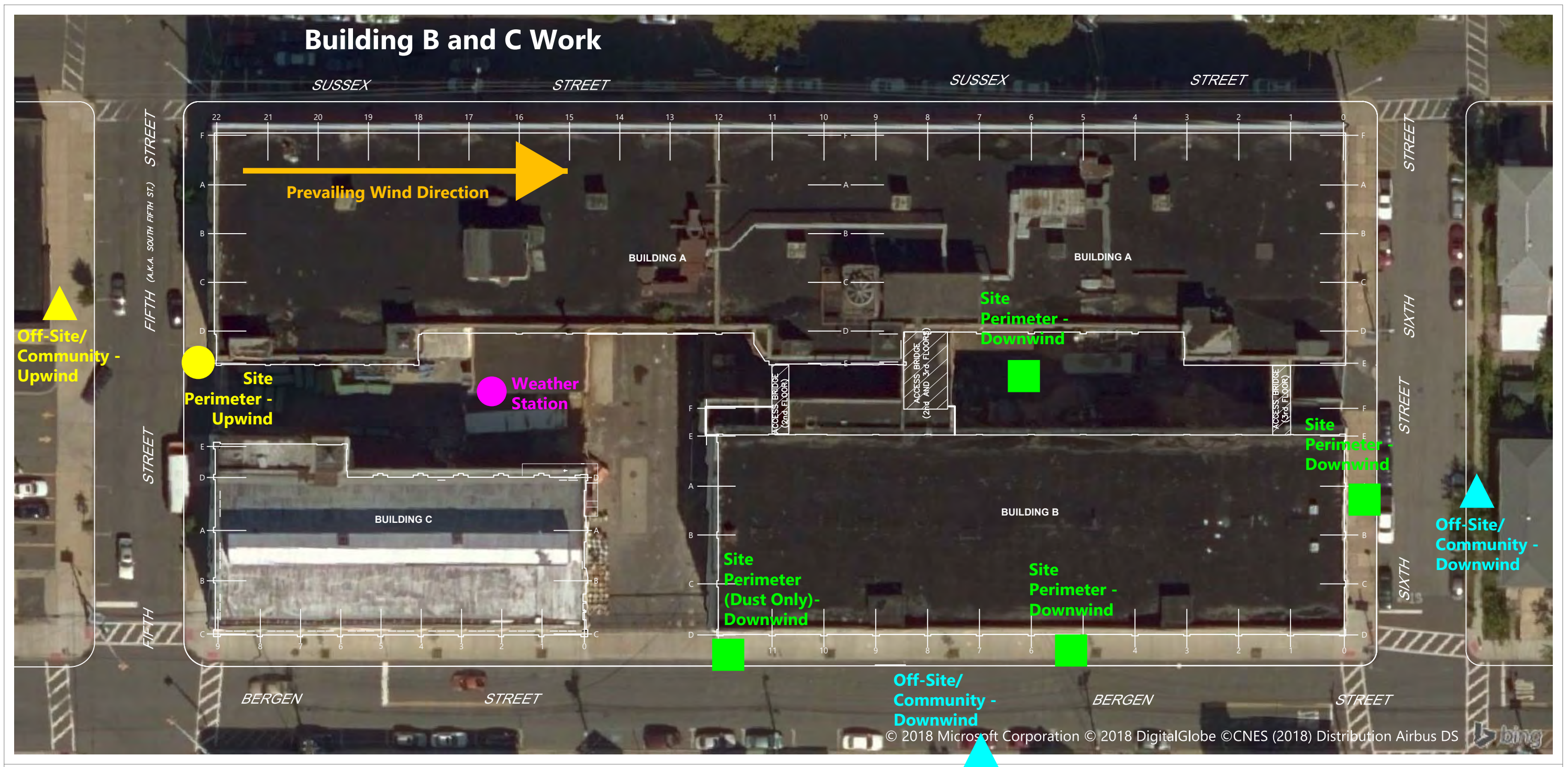
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**Figure 4-3**  
**Potential Air Monitoring Station Locations - Building A and B Work**

Vo-Toys Site Addendum to the Building C POP  
 General Electric Company





**SOURCE:** Floor plans compiled from CAD file entitled: "FIG05-REV071615" provided by AMEC Foster Wheeler, Inc. on March 31, 2016. Subsurface utilities and features compiled from CAD file entitled: "NUMBERED\_SITEMAP\_20101" provided by General Electric Company on March 3, 2016.

**HORIZONTAL DATUM:** New Jersey State Plane, North American Datum 1983, U.S. Feet (NJ83F).

**VERTICAL DATUM:** (None).

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**Figure 4-4**  
**Potential Air Monitoring Station Locations - Building B and C Work**

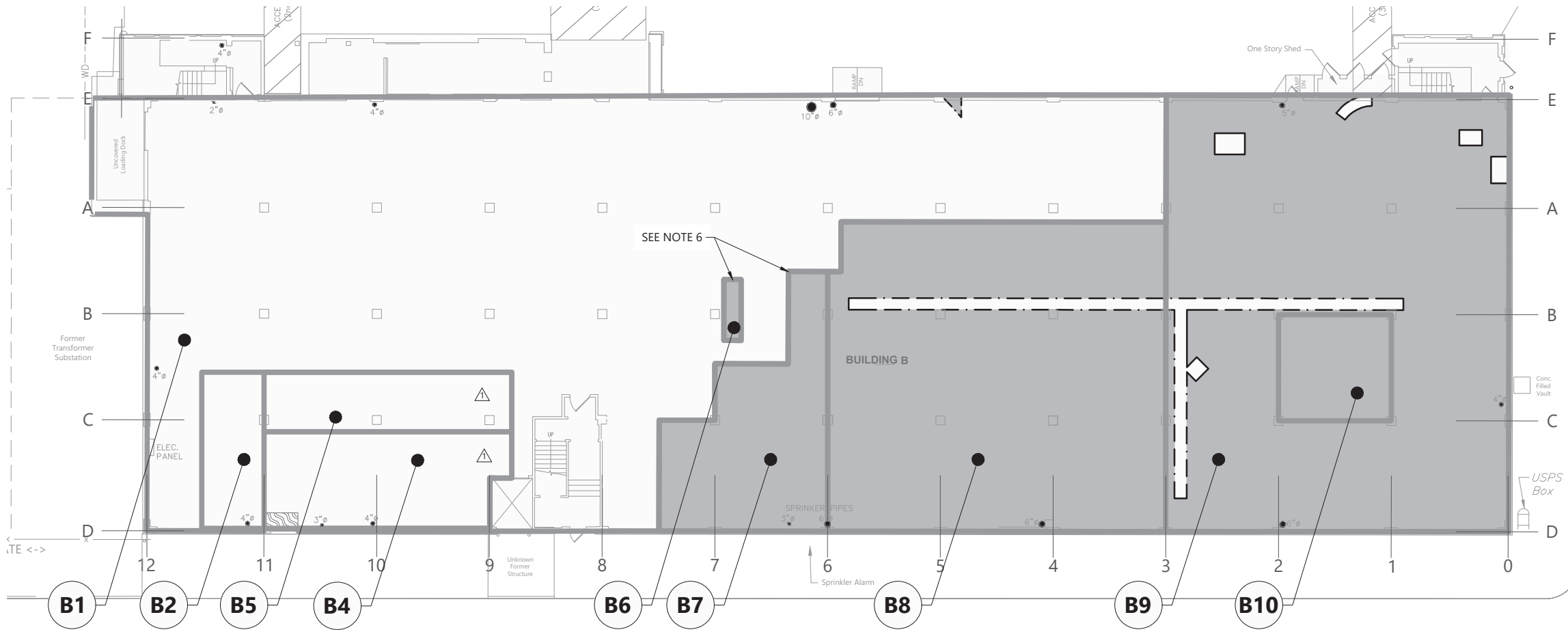
Vo-Toys Site Addendum to the Building C POP  
General Electric Company



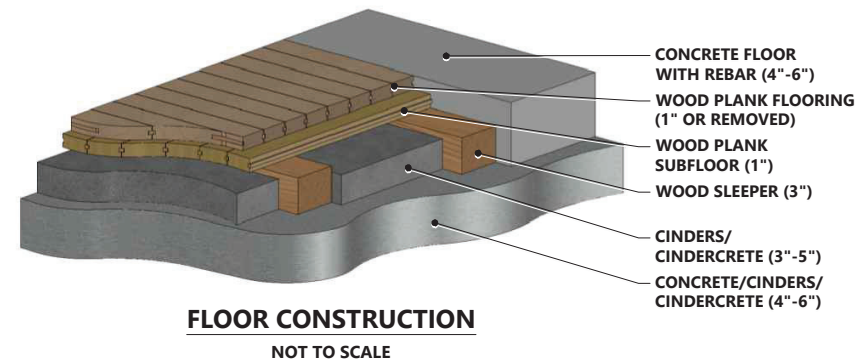
## Revised Contract Drawings

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Mar 18, 2021 5:51pm ipetrie



| REMOVAL AREA ID | FLOOR LAYERS TO BE REMOVED  | WASTE CHARACTERIZATION  |
|-----------------|---|---|
| B1              | CONCRETE FLOOR WITH REBAR/CINDERS/CINDERCRETE/WOOD SLEEPERS/BASE CONCRETE | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
| B2              | CONCRETE FLOOR WITH REBAR   | NON-HAZARDOUS SOLID WASTE (HIGH-MERCURY)                      |
|                 | CINDERS/CINDERCRETE/WOOD SLEEPERS/BASE CONCRETE                           | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
| B4              | CONCRETE FLOOR WITH REBAR   | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
|                 | CINDERS/CINDERCRETE/WOOD SLEEPERS/BASE CONCRETE                           | NON-HAZARDOUS SOLID WASTE (HIGH-MERCURY)                      |
| B5              | CONCRETE FLOOR WITH REBAR/CINDERS/CINDERCRETE/WOOD SLEEPERS/BASE CONCRETE | NON-HAZARDOUS SOLID WASTE (HIGH-MERCURY)                      |
| B6              | WOOD PLANK FLOORING AND SUBFLOORING                                       | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
|                 | CINDERS/CINDERCRETE/WOOD SLEEPERS/BASE CONCRETE                           | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
| B7              | WOOD PLANK FLOORING AND SUBFLOORING                                       | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
|                 | CINDERS/CINDERCRETE/WOOD SLEEPERS/BASE CONCRETE                           | NON-HAZARDOUS SOLID WASTE (HIGH-MERCURY)                      |
| B8              | WOOD PLANK FLOORING AND SUBFLOORING/WOOD SLEEPERS/BASE CONCRETE           | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
|                 | CINDERS/CINDERCRETE   | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
| B9              | WOOD PLANK FLOORING AND SUBFLOORING/WOOD SLEEPERS/BASE CONCRETE           | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
|                 | CINDERS/CINDERCRETE   | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
| B10             | WOOD PLANK FLOORING AND SUBFLOORING                                       | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
|                 | WOOD SLEEPERS/BASE CONCRETE   | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
|                 | CINDERS/CINDERCRETE   | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |



NOTES (CONTINUED):

- FLOORING WILL BE REMOVED TO SOIL INTERFACE IN THE MAIN BUILDING AREA (GRIDS D1-A12).
- CONCRETE FEATURES (EQUIPMENT BASES, FLOOR PATCHES, INTERIOR WALL FOUNDATIONS) WITHIN THE FIRST-FLOOR FOOTPRINT MAY EXTEND TO DEPTHS BELOW THE CINDERCRETE/SOIL INTERFACE. THE CONTRACTOR SHALL COMPLETELY REMOVE ALL CONCRETE FEATURES WITHIN SELECT CINDERCRETE FLOORING REMOVAL AREAS.
- THE CONTRACTOR CAN CUT OFF CONCRETE FEATURES AT THE TOP OF THE CINDERCRETE FLOOR LAYER IN AREAS WHERE CINDERCRETE REMOVAL IS NOT REQUIRED.
- AREAS WITHOUT ANY FLOORING TYPE INDICATED ARE PRESUMED TO BE CONCRETE.

NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.

- NOTES:
- FLOOR SLAB AREAS MARKED FOR REMOVAL SHALL BE REMOVED PRIOR TO BUILDING DEMOLITION.
  - THE TOP LAYER OF FLOORING IS THE WOOD PLANK AND WOOD PLANK SUBFLOORING LAYER (APPROXIMATELY 2 INCHES THICK) ON THE EASTERN END OF THE FIRST FLOOR AND THE CONCRETE LAYER ON THE WESTERN END OF THE FIRST FLOOR (APPROXIMATELY 6 INCHES THICK). FLOOR LAYER THICKNESSES VARY THROUGHOUT THE FLOOR.
  - UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, ALL OTHER BUILDING MATERIALS NOT HATCHED SHALL BE RECOVERED AND SEGREGATED AS NONHAZARDOUS SOLID WASTE CONTAINING TOTAL MERCURY CONCENTRATIONS LESS THAN 260 MG/KG.
  - CONTRACTOR SHALL NOTIFY ENGINEER AS SOON AS POSSIBLE IF ANY UNIDENTIFIED LAYERS ARE ENCOUNTERED. CONTRACTOR SHALL REMOVE AND SEGREGATE ANY UNIDENTIFIED LAYERS, IF ENCOUNTERED, IN ACCORDANCE WITH CONTRACT DOCUMENTS.
  - THE CONCRETE SLAB AT THE BOTTOM OF THE ELEVATOR SHAFT SHALL BE REMOVED AND STAGED FOR SUBSEQUENT CHARACTERIZATION BY THE ENGINEER. THE REMOVED CONCRETE SHALL BE STOCKPILED SEPARATELY. FOLLOWING CHARACTERIZATION, THE CONCRETE SHALL BE SENT FOR OFF-SITE TRANSPORTATION AND DISPOSAL BASED ON CHARACTERIZATION RESULTS.
  - TAR PAPER BETWEEN WOOD FLOOR LAYERS SHALL BE REMOVED AND SEGREGATED AS A HAZARDOUS DEBRIS (TOXICITY CHARACTERISTIC FOR MERCURY CONTAINING TOTAL MERCURY AT CONCENTRATIONS EXCEEDING 260 MG/KG).
  - THE CONTRACTOR SHALL ALLOW THE ENGINEER ACCESS DURING REMOVAL ACTIVITIES TO VISUALLY INSPECT FOR BULK MERCURY AND ASSESS FOR POTENTIAL RECLASSIFICATION OF WASTE STREAMS BASED ON FIELD CONDITIONS.
  - CONTRACTOR SHALL COLLECT ANY VISIBLE MERCURY ENCOUNTERED DURING REMOVAL ACTIVITIES INCLUDING SURROUNDING DUST, DIRT, AND OTHER FINE RESIDUALS USING A MERCURY RECOVERY VACUUM OR ANOTHER METHOD PROPOSED BY THE CONTRACTOR AND REVIEWED BY THE ENGINEER.
  - CONTRACTOR SHALL ASSESS STRUCTURAL CONDITION OF FLOORS PRIOR TO ANY REMOVAL ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF ANY PORTION OF THE FLOOR IS NOT ABLE TO SUPPORT THEIR LABOR, MATERIALS, AND EQUIPMENT DURING REMOVAL ACTIVITIES. IF STRUCTURAL DETERIORATION OR OTHER BUILDING CONDITIONS PREVENT THE CONTRACTOR FROM ACCESSING A CERTAIN AREA OF FLOORING FOR REMOVAL, THE CONTRACTOR SHALL IMPLEMENT METHODS TO MITIGATE RISK TO WORKERS, AT NO ADDITIONAL COST TO THE RESPONDENT.
  - IF DURING REMOVAL ACTIVITIES, AIR MONITORING RESULTS EXCEED ACTION LEVELS DEFINED IN THE CAMP (APPENDIX C), THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROL MEASURES (I.E., AIR HANDLING SYSTEM, MERCURY RECOVERY VACUUM, VENTILATION, AND/OR MERCURY VAPOR SUPPRESSANTS) TO MINIMIZE THE GENERATION AND MIGRATION OF DUST PARTICULATES AND MERCURY VAPORS.
  - UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, CONTRACTOR SHALL ASSUME THAT STEEL AND OTHER METAL CAN BE TRANSPORTED OFF-SITE FOR RECYCLING.
  - EXTERNAL WALL THICKNESS (AND OTHER BUILDING COMPONENTS) ARE NOT NECESSARILY SHOWN TO SCALE.
  - FLOOR CONSTRUCTION DETAILS ARE APPROXIMATE.
  - CONCRETE SLAB SHALL BE REMOVED PRIOR TO BUILDING DEMOLITION TO ALLOW ENGINEER ACCESS TO INSPECT AND SAMPLE THE UNDERLYING CINDERCRETE LAYER. FOLLOWING CHARACTERIZATION, THE CINDERCRETE MAY BE SENT FOR OFF-SITE TRANSPORTATION AND DISPOSAL BASED ON CHARACTERIZATION RESULTS.
  - POLY LINER ON THE FIRST FLOOR TO BE REMOVED AND SENT FOR OFF-SITE TRANSPORTATION AND DISPOSAL AS A NONHAZARDOUS SOLID WASTE CONTAINING TOTAL MERCURY CONCENTRATIONS LESS THAN 260 MG/KG.
  - NOT ALL EQUIPMENT BASED MAY BE DEPICTED ON DRAWING. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EQUIPMENT BASES WITHIN THE FIRST FLOOR FOOTPRINT IN THEIR ENTIRETY.
  - ANY CINDER OR CINDERCRETE MATERIAL MAY BE SAMPLED POST-GENERATION BY THE ENGINEER.
- (NOTES CONTINUED ON LEFT)

0 12 24  
SCALE IN FEET



ONE INCH  
= 12 FEET  
AT FULL SIZE, IF NOT ONE  
INCH SCALE ACCORDINGLY

PREPARED BY



ANCHOR QEA, LLC  
290 ELWOOD DAVIS ROAD  
SUITE 340  
LIVERPOOL, NEW YORK 13088  
PHONE: (315)-453-9009

ANCHOR QEA, LLC.  
NEW JERSEY ENGINEERING  
CERTIFICATE OF AUTHORIZATION  
NUMBER 24GA28261100  
Professional Engineer's Name  
**MARGARET A. CARRILLO-SHERIDAN, P.E.**  
Professional Engineer's No.  
038667  
State  
NEW JERSEY  
Date Signed



| REVISIONS |         |     |       |  | DESCRIPTION   |
|-----------|---------|-----|-------|--|---|
| REV       | DATE    | BY  | APP'D |  |   |
| 1         | 3/11/21 | RLP | Yes   |  | REMOVAL AREAS B3 AND B4 WERE COMBINED FOR MORE EFFICIENT FIELD IMPLEMENTATION AND LABELED B4 BASED ON THE MORE CONSERVATIVE WASTE CHARACTERIZATION. REMOVAL AREAS B2 WAS REDUCED AND AREA B5 EXPANDED FOR MORE EFFICIENT FIELD IMPLEMENTATION |
| 2         | 3/18/21 | RLP | Yes   |  | REMOVAL AREAS B8, B9 AND B10 CINDER/CINDERCRETE LAYER WASTE CHARACTERIZATION DESCRIPTION MODIFICATION   |

DESIGNED BY: T. NOWAK  
DRAWN BY: R. PETRIE  
CHECKED BY: D. MUSSER  
APPROVED BY: M. CARRILLO-SHERIDAN  
SCALE: AS NOTED  
DATE: OCTOBER 6, 2020

**BUILDINGS A AND B REMOVAL ACTION DESIGN**  
**VO-TOYS SITE**  
**HUDSON COUNTY HARRISON, NEW JERSEY**

**BUILDING B, FIRST FLOOR,**  
**PRE-DEMOLITION FLOOR REMOVAL**

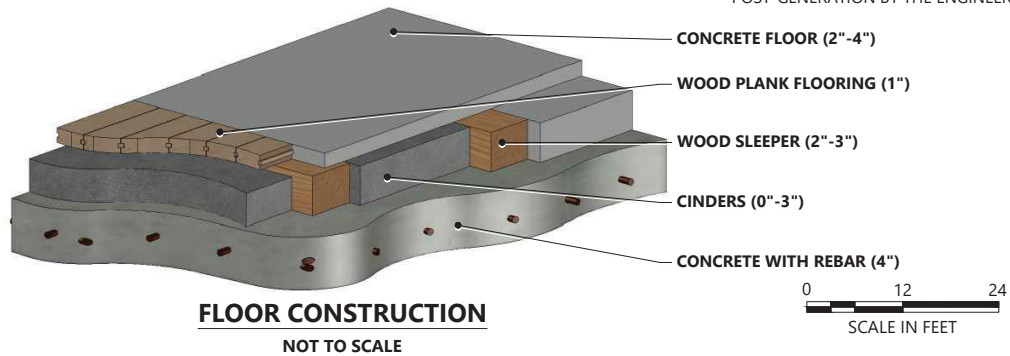
**21**

SHEET # **21** OF **31**

Mar 11, 2021 1:02pm ipetrie  
k:\Projects\0469-general electric\VO-Toys\Construction plans\RAD-A8B\0469-PL-006-VO-Toys RAD-A8B-3rd-Rev1.dwg 23



| REMOVAL AREA ID                   | FLOOR LAYERS TO BE REMOVED  | WASTE CHARACTERIZATION  |
|-----------------------------------|---|---|
| B14                               | WOOD PLANK FLOORING   | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
|                                   | TAR PAPER   | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
|                                   | CINDERS AND WOOD SLEEPERS   | NON-HAZARDOUS SOLID WASTE (HIGH-MERCURY)                      |
| B15                               | CONCRETE FLOOR  | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
|                                   | CINDERS AND WOOD SLEEPERS   | NON-HAZARDOUS SOLID WASTE (HIGH-MERCURY)                      |
| B16                               | WOOD PLANK FLOORING   | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
|                                   | TAR PAPER AND WOOD SLEEPERS   | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
| B17                               | CONCRETE FLOOR  | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
|                                   | WOOD SLEEPERS AND CONCRETE WITH REBAR                                 | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
| B18                               | CONCRETE FLOOR  | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
|                                   | CINDERS AND WOOD SLEEPERS   | NON-HAZARDOUS SOLID WASTE (HIGH-MERCURY)                      |
| B19                               | WOOD PLANK FLOORING   | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
|                                   | TAR PAPER, WOOD SLEEPERS AND CONCRETE WITH REBAR                      | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
| B20                               | CONCRETE FLOOR  | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
|                                   | WOOD SLEEPERS AND CONCRETE WITH REBAR                                 | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
| B21                               | WOOD PLANK FLOORING, TAR PAPER, WOOD SLEEPERS AND CONCRETE WITH REBAR | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
| B22                               | WOOD PLANK FLOORING, TAR PAPER AND WOOD SLEEPERS                      | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
| B23                               | CONCRETE FLOOR  | NON-HAZARDOUS SOLID WASTE (LOW-MERCURY)                       |
|                                   | WOOD SLEEPERS   | TOXICITY CHARACTERISTIC HAZARDOUS DEBRIS (D009, HIGH-MERCURY) |
| B16, B17, B19, B20, B21, B22, B23 | CINDERS   | WASTE TO BE CHARACTERIZED FOLLOWING REMOVAL                   |



NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.

NOTES:

- FLOOR SLAB AREAS MARKED FOR REMOVAL SHALL BE REMOVED PRIOR TO BUILDING DEMOLITION.
- THE TOP LAYER OF FLOORING IS THE WOOD FLOORING LAYER (APPROXIMATELY 1 TO 2 INCHES THICK) AND THE CONCRETE LAYER (APPROXIMATELY 2 TO 4 INCHES THICK). FLOOR LAYER THICKNESSES VARY THROUGHOUT THE FLOOR.
- UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, ALL OTHER BUILDING MATERIALS NOT HATCHED SHALL BE RECOVERED AND SEGREGATED AS NONHAZARDOUS SOLID WASTE CONTAINING TOTAL MERCURY CONCENTRATIONS LESS THAN 260 MG/KG.
- CONTRACTOR SHALL NOTIFY ENGINEER AS SOON AS POSSIBLE IF ANY UNIDENTIFIED LAYERS ARE ENCOUNTERED. CONTRACTOR SHALL REMOVE AND SEGREGATE ANY UNIDENTIFIED LAYERS, IF ENCOUNTERED, IN ACCORDANCE WITH CONTRACT DOCUMENTS.
- TAR PAPER BETWEEN WOOD FLOOR LAYERS SHALL BE REMOVED AND SEGREGATED AS A HAZARDOUS DEBRIS (TOXICITY CHARACTERISTIC FOR MERCURY CONTAINING TOTAL MERCURY AT CONCENTRATIONS EXCEEDING 260 MG/KG).
- THE CONTRACTOR SHALL ALLOW THE ENGINEER ACCESS DURING REMOVAL ACTIVITIES TO VISUALLY INSPECT FOR BULK MERCURY AND ASSESS FOR POTENTIAL RECLASSIFICATION OF WASTE STREAMS BASED ON FIELD CONDITIONS.
- CONTRACTOR SHALL COLLECT ANY VISIBLE MERCURY ENCOUNTERED DURING REMOVAL ACTIVITIES INCLUDING SURROUNDING DUST, DIRT, AND OTHER FINE RESIDUALS USING A MERCURY RECOVERY VACUUM OR ANOTHER METHOD PROPOSED BY THE CONTRACTOR AND REVIEWED BY THE ENGINEER.
- CONTRACTOR SHALL ASSESS STRUCTURAL CONDITION OF FLOORS PRIOR TO ANY REMOVAL ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF ANY PORTION OF THE FLOOR IS NOT ABLE TO SUPPORT THEIR LABOR, MATERIALS, AND EQUIPMENT DURING REMOVAL ACTIVITIES. IF STRUCTURAL DETERIORATION OR OTHER BUILDING CONDITIONS PREVENT THE CONTRACTOR FROM ACCESSING A CERTAIN AREA OF FLOORING FOR REMOVAL, THE CONTRACTOR SHALL IMPLEMENT METHODS TO MITIGATE RISK TO WORKERS, AT NO ADDITIONAL COST TO THE RESPONDENT.
- THE CONTRACTOR SHALL PLACE OSHA-COMPLIANT BARRICADES, MARKING, AND SIGNS AROUND AREAS WHERE THE SUBFLOOR HAS BEEN REMOVED TO PREVENT FALLS.
- IF DURING REMOVAL ACTIVITIES, AIR MONITORING RESULTS EXCEED ACTION LEVELS DEFINED IN THE CAMP (APPENDIX C), THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROL MEASURES (I.E., AIR HANDLING SYSTEM, MERCURY RECOVERY VACUUM, VENTILATION, AND/OR MERCURY VAPOR SUPPRESSANTS) TO MINIMIZE THE GENERATION AND MIGRATION OF DUST PARTICULATES AND MERCURY VAPORS.
- UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, CONTRACTOR SHALL ASSUME THAT STEEL AND OTHER METAL CAN BE TRANSPORTED OFF-SITE FOR RECYCLING.
- EXTERNAL WALL THICKNESS (AND OTHER BUILDING COMPONENTS) ARE NOT NECESSARILY SHOWN TO SCALE.
- FLOOR CONSTRUCTION DETAILS ARE APPROXIMATE.
- WOOD TRIM BASE AROUND FLOOR PERIMETER SHALL BE REMOVED IN ITS ENTIRETY AND SEGREGATED AS NON-HAZARDOUS SOLID WASTE CONTAINING TOTAL MERCURY GREATER THAN 260 MG/KG.
- AREAS WITHOUT ANY FLOORING TYPE INDICATED ARE PRESUMED TO BE CONCRETE.
- ANY CINDER OR CINDERCRETE MATERIAL MAY BE SAMPLED POST-GENERATION BY THE ENGINEER.

PREPARED BY



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ANCHOR QEA, LLC.  
NEW JERSEY ENGINEERING  
CERTIFICATE OF AUTHORIZATION  
NUMBER 24GA28261100  
Professional Engineer's Name  
**MARGARET A. CARRILLO-SHERIDAN, P.E.**  
Professional Engineer's No.  
038667  
State  
NEW JERSEY  
Date Signed



| REVISIONS |         |     |       |  |  |
|-----------|---------|-----|-------|--|--|
| REV       | DATE    | BY  | APP'D | DESCRIPTION  |  |
| 1         | 3/11/21 | RLP | Yes   | REMOVAL AREA 17 IN NORTHEAST CORNER OF BUILDING B THIRD FLOOR CHANGED TO B16 TO CORRECT THE TYPE OF FLOOR MATERIAL IN THE AREA |  |
|           |         |     |       |  |  |
|           |         |     |       |  |  |
|           |         |     |       |  |  |
|           |         |     |       |  |  |
|           |         |     |       |  |  |

DESIGNED BY: T. NOWAK  
DRAWN BY: R. PETRIE  
CHECKED BY: D. MUSSER  
APPROVED BY: M. CARRILLO-SHERIDAN  
SCALE: AS NOTED  
DATE: OCTOBER 6, 2020

**BUILDINGS A AND B REMOVAL ACTION DESIGN**  
**VO-TOYS SITE**  
**HUDSON COUNTY HARRISON, NEW JERSEY**

**BUILDING B, THIRD FLOOR,**  
**PRE-DEMOLITION FLOOR REMOVAL**

**23**

SHEET # **23** OF **31**

# Appendix A

## Site Construction Plan

---



290 Elwood Davis Road, Suite 340  
Liverpool, New York 13088  
Phone 315.453.9009  
Fax 315.453.9010  
www.anchorqea.com

## SUBMITTAL REVIEW TRANSMITTAL

### CONTRACTOR INFORMATION:

NAME: Glenn Milarczyk  
Brandenburg Industrial Service  
COMPANY: Company  
ADDRESS 2217 Spillman Drive  
Bethlehem, Pennsylvania 18015

### PROJECT INFORMATION:

Buildings A and B Removal Action –  
PROJECT NAME: Vo-Toys Site  
PROJECT NO.: 160469-02.13  
Buildings A and B Demolition – Project  
SUBJECT: Site Construction Plan  
SUBMITTAL NO.: P-013300-003-D SCP\_rev03182021  
DATE: 03/19/2021

Subcontractor/Supplier:

### Check:

☐ Original Submittal ☒ Re-submittal ☐ Other

| Item No. | Specification Reference | Description | Other |
|----------|-------------------------|-------------|-------|
|          |                         |             |       |
|          |                         |             |       |

### Review action:

☐ R – Reviewed ☐ J – Rejected ☐ I – For Your Information  
☒ N – Reviewed and Noted ☐ S - Resubmit

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications and does not relieve the contractor from compliance with contract requirements. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

**Comments:** See comments in document

By:

Date: March 19, 2021

Cc:

# Brandenburg®

Transmittal No. P-013300-003-D

Date 3/15/2021

Attn Doug Musser

Project Name GE Vo Toys

Project CD MA0852

Document No. Site Construction Plan - A and B

Revision No. \_\_\_\_\_

Reference \_\_\_\_\_

Subject:

Transmitted For:

Sent Via:

Action Taken:

|          |  |
|----------|--|
| Plans    |  |
| Approval |  |
| Email    | <a href="mailto:dmusser@anchorgea.com">dmusser@anchorgea.com</a> |
|          |  |

| ITEM | SUBMITTAL                    | REV. | COPIES | DATE      | DESCRIPTION  |
|------|------------------------------|------|--------|-----------|--------------|
|      | Site Construction Plan - A&B | 4    | 1      | 3/15/2021 | as requested |
|      |                              |      |        |           |              |
|      |                              |      |        |           |              |
|      |                              |      |        |           |              |
|      |                              |      |        |           |              |
|      |                              |      |        |           |              |

Signed: Glenn Milarczyk

Comments: \_\_\_\_\_  
\_\_\_\_\_

CC: [mcarrillo-sheridan@anchorgea.com](mailto:mcarrillo-sheridan@anchorgea.com); MA0852 job file

## Brandenburg Industrial

### Service Company

**501 West Lake Street**, 2625 South Loomis Street Chicago, IL 60608-5414 Ph (312) 326-5800 Fax (312) 326-5055

**Suite 104**, 1 North Broadway Stop 670 Gary, IN 46402-3101 Ph (219) 881-0200 Fax (219) 880-4330

**Elmhurst, IL 60126-1419**, 200 East Big Beaver Rd Troy, MI 48083-1208 Ph (313) 382-2500 Fax (800) 849-1589

2217 Spillman Drive Bethlehem, PA 18015-1982 Ph (610) 691-1800 Fax (610) 691-4200

**Phone (630) 956-7200**, 800 Town & Country Blvd Ste 500 Houston, TX 77024-3916 Ph (832) 431-3287 Fax (800) 849-1589

**Fax (630) 956-7222**

## **GE Vo Toys Building A and B Demolition**

### **Project Site Construction Plan**

This Site Construction Plan includes the sequences and detailed approach to complete the removal of GE Vo Toys Building A and B located at 400 South 5th Street, Harrison, NJ. Additionally, slabs and select underground removal actions will also be a part of this phase.

This Site Construction Plan has been developed according to the Project RAD, and includes requirements as outlined in Appendix A: Minimum Requirements for Preparation of Plans, Site Construction Plan.

**I Description of the sequencing of the RA activities**

**II Project Schedule**

**III Site Drawings and Layout**

**IV Security**

**V Key Personnel**

**VI Major Equipment and remediation tools**

**Appendix A: Decontamination Plan**

## **I Description of the sequence of the Demolition activities**

### **1.0 Introduction**

This Site Construction Plan (SCP) has been prepared for the existing Building A and B activities at the former Vo-Toys site located at 400 South Fifth Street in Harrison, NJ. This document forms part of the Project Operations Plan (POP) intended to guide field personnel, contractors, and other involved parties in all aspects of field operations. This plan shall be considered fluid in nature; existing site conditions shall determine final methodologies.

### **1.1 Purpose and Scope**

The Work includes the removal action activities and demolition of Buildings A and B as well as remaining slab of Building C.

The purpose of this Plan is to describe the activities that will be conducted to accomplish the following work tasks (further described herein).

- Preparation of Removal Action Submittals
- Pre-Removal Action Activities / Mobilization
- Utility Disconnection / Termination
- Asbestos Abatement
- Select Concrete Floor Removal
- Subsurface Structure Residual Removal
- Concrete Floor Cleaning
- Regulated and Miscellaneous Items Removal
- Loosed Lead-Based Paint Removal
- Foundation Paint / Coating Removal
- Wood Floor & Tar Paper Removal
- Select Wood Subfloor Removal
- Cinders Removal
- Pre-Demolition Cleaning
- Building Demolition
- Slab and Sub-Slab Piping Removal
- Handling, Segregation, Containerization, Transportation, & Off-Site Disposition of Demolition Debris
- Air Monitoring



- Water Management
- Site Restoration
- Demobilization

Specifically, this SCP will address the tasks to be performed prior to the initiation of demolition activities, the sequence of demolition activities, the specific work activities associated with the demolition, and the handling requirements for materials and debris to be generated during the demolition activities. The following sections further describe these activities.

## **1.2 Site Description**

The site is located at 400 South Fifth Street, Harrison, NJ.

The site work consists of two buildings, Buildings A and B. Each building is a three-story reinforced concrete structure. The third building on site, Building C is addressed in a separate SCP, with the exception of the slab and foundation removal which will be removed during this removal action.

Building A is a reinforced concrete structure built in two phases - 1913 and 1914. The ground floor is a concrete slab-on-grade with steam system vaults. The upper floors and roof are concrete decks supported by reinforced concrete beams and girders. Averaged column spacing is 20 feet by 20 feet. Column width ranges from 24 inches at the first floor to 16 inches at the third floor. The foundations are poured-in-place, reinforced concrete at the building perimeter. The exterior walls are primarily brick masonry between the exterior brick-faced concrete wall columns.

Building B was constructed in 1907 and was constructed as a reinforced concrete structure. Average column spacing is approximately 20 feet by 20 feet. Column widths range between 20 inches and 15-1/4 inches. The floors and roof are concrete decks supported by beams and girders. Foundations are poured-in-place reinforced concrete at the building perimeter.

Previous manufacturing activities at the site include incandescent bulbs, radio vacuum tubes, and pet product warehouse / distribution.

## **1.3 Work Task S1 – Preparation & Review of Removal Action Submittals**

Under this work task, Brandenburg will prepare, submit, and revise (if necessary) required project plans, submittals, drawings, etc. Plans to be submitted include, but are not limited to:

- This Site Construction Plan
- Traffic Control Plan

- Water Management Plan
- Health and Safety Plan (HASP)
- Asbestos Abatement Plan

Additional required plans / submittals can be found in Appendix D of the specifications.

#### **1.4 Work Task S2 – Project Meetings**

Under this work task, Brandenburg shall attend the following anticipated meetings:

- Pre-Removal Action Meeting
  - Review contract requirements and schedule
- Public Information Meeting
  - Familiarize local community with work
  - Discuss potential street / sidewalk closures
  - Meet with local Police & Emergency Responders
- Pre-Removal Action Inspection
  - Confirm proper procedures and equipment are in place
- Daily Site Safety / Coordination Meeting
  - Twice daily meeting to discuss site safety and work activities
- Weekly Progress Meeting
  - Project Status
  - Schedule
  - Scope / Project Implementation
- Pre-Demolition Inspection
  - Confirm pre-demo activities are complete
  - Inspection form is included in Appendix K
- Pre-Final Inspection
  - Determine completeness of the Removal Actions

#### **1.5 Work Task S3 – Mobilization**

Under this work task, Brandenburg will perform the following mobilization / site set-up activities.

Brandenburg will obtain permits required to perform the removal and demolition activities, which may include street and sidewalk closures, parking meter closures (along S. 5<sup>th</sup> Street), City of Harrison demolition permits, and NESHAPs.

Brandenburg will install erosion control measures and storm water management

control measures / protection for the six (6) existing catch basins as shown on Drawing 3 of 31 in accordance with the Removal Action Design.

Perimeter fencing will be established utilizing the existing fence along Sussex Street and installing new fence on 5<sup>th</sup> and 6<sup>th</sup> streets. The existing fence along Sussex Street will be incorporated into new fence on 5<sup>th</sup> and 6<sup>th</sup> streets, just inside the curb line, closing off all of the sidewalk located on the perimeter of the site. The new fence on 5<sup>th</sup> street will extend from the truck gate installed for Building C RAD, to the Northwest corner of existing fence along Sussex Street. The new fence on 6<sup>th</sup> street will extend from the end jersey barrier installed on east end of Bergen Street, North to the Northeast corner of existing fence on Sussex Street, but will be installed to utilize existing site access gate between Buildings A and B, and also to allow access to all fire hydrants. Removal of the USPS transfer boxes will be coordinated with the USPS ("Notches" in the fence line will be constructed to accommodate access until the boxes are permanently removed. A double layer of mesh fabric in kind to the material installed for Building C RAD will be installed on the fence. Additionally, jersey barriers will be installed on the outside of the fence extending from the north side of truck gate on 5<sup>th</sup> Street to the corner of Bergen and 6<sup>th</sup> Street.

Prior to superstructure demolition, jersey barriers and fencing may be moved outward taking up the parking lanes of 5<sup>th</sup>, 6<sup>th</sup>, and Sussex Street.

Brandenburg will protect the existing monitoring wells located within the project limits by placing steel plate, or similar, over the top of the wells prior to removal activities.

Brandenburg will construct a waste staging area within the first floor of existing Building A during removal activities in Building A and B; the waste staging area shall consist of a snap-up containment berm that will be installed utilizing laborers and forklifts. The waste staging area shall be located as shown on the attached site logistics plan. The existing waste staging location constructed for Building C will be utilized as long as feasible. Once the liner needs to be installed in this area, an effort will be made to ship material located in this area, or it will be shifted to install the liner.

Brandenburg will construct a personnel decontamination area in an area adjacent to the removal activities; said decontamination area will be field constructed or a prefabricated trailer as used in Building C RAD.

If needed and feasible, Brandenburg will construct a truck entrance pad as shown on Detail 1 of Sheet 30 of 31, or similar, utilizing skid steers and laborers. Entrance pad shall be located as show on the attached site logistics plan.

Brandenburg will utilize the existing three (3) mobile office trailers currently on site for Building C removal activities, one (1) for Brandenburg's use, one (1) for the Engineer and Waste Coordinator's use, and one (1) for the USEPA's use. The office trailers will be located in the adjacent lot to the work site. Brandenburg will mobilize the following anticipated equipment to the site to perform the removal efforts.

- Liebherr 954 Excavator(s)
- Skid steer(s)
- Man lift(s)
- Scissor Lift(s)
- Forklift(s)
- Dingo(s)
- Crane(s)

#### **1.6 Work Task S4 – Utility Disconnection & Termination**

Brandenburg will coordinate with local utility companies to verify the disconnection of utilities currently servicing the building. In general, utilities will be cut and capped at the building perimeter in accordance with Public Utility Requirements and Section 01 18 00 of the Technical Specifications.

Brandenburg will verify termination prior to any removal activities.

- A natural gas line is present in the boiler room located on the south side of Building A. The status of the line or presence of additional lines is not known. Other inactive natural gas lines may enter the buildings, but confirmed locations are unknown.
- Electric service remains active in Buildings A and B. The electric service enters Building A on the north side and Building B on the southwest corner. Meters and related electrical equipment are present in the buildings. Overhead electric and utility lines run along the edge of the sidewalk along Sussex Street north of Building A. Electric service is to be terminated by BRG in accordance with BRG/GE settlement.
- A Town of Harrison active potable water line enters Building A on the east side near column B0. Another water line enters the west side of Building A, but its status is unknown. Contract drawings indicate that water is fed to Building B through Building A. It is not known if water lines are present and in service directly from the street into Building B.
  - Brandenburg shall perform the disconnection by completely removing the service branch as required by the Town of Harrison DPW. The lines running into the building shall be terminated at the foundation wall of the building.
- All fire hydrants on site will also be terminated at the street. Brandenburg will coordinate this work with its subcontractor and the DPW accordingly.

- Some sanitary sewer piping remains, and it is presumed that the piping is connected to the Town of Harrison sanitary sewer system.
  - Brandenburg shall disconnect the sanitary waste system piping in the street where it connects with the Town of Harrison sewer system as well as at the perimeter of the building wall.
  - The pipe located between the disconnect locations shall be filled with flowable fill and the pipe ends capped.
- Telephone and coaxial lines enter Building A on the north side and Building B on the south side and southwest corner.
  - Brandenburg shall remove telephone lines and cables attached to the buildings that are connected to utility poles.
  - Brandenburg will coordinate with utility companies to relocate guy wires.
- Roof drains are located in each building and convey rainwater through vertical piping to the Town of Harrison combined sanitary sewer/storm water sewer system.
  - Brandenburg may elect to perform select repairs to the existing roof drains prior to removal activities in order to limit the volume of water that needs to be collected and disposed of during the interior removal activities.

Vertical roof drain piping that penetrates the first-floor slab shall be cut and capped following the last interior pre-demolition task and prior to superstructure demolition.

Brandenburg will verify the disconnection of each utility. Removal of utilities will not occur unless each line has been checked and clearly marked. Brandenburg's disconnection verification procedure requires a visible break in utility lines, with green paint applied to disconnected utilities and red paint applied to live utilities.

Brandenburg will perform Zero Energy State verification of utilities for the site structures. A Zero Energy State Verification Form shall be signed by both the Brandenburg Site Superintendent and the Customer Representative, stating that all utilities are at zero energy state, or that specific controls are in place to prevent injury to site workers (lockout / tagout procedures). The completed and signed form will be attached to this Site Specific Safety Plan.

All utilities will be disconnected and verified prior to any structural demolition.

## **1.7 Work Task S5 – Water Management**

Under this work task, Brandenburg will capture and containerize contact water

generated during the removal efforts.

Brandenburg shall contain water in accordance with Technical Specifications section 01 57 23 and prevent water from entering the storm system. As the water is generated, it shall be collected in sumps located within the first floor slabs in both Buildings A and B and pumped into an approved storage container. The stored water shall be tested and characterized for disposal.

The water shall be managed and collected until the first floor liner(s) has been removed.

### **1.8 Work Task A1 – Asbestos Abatement**

Please see standalone ACM work plan

### **1.9 Work Task A2 – Regulated & Miscellaneous Materials**

Under this work task, Brandenburg will remove and containerize regulated and universal wastes located within Building A.

Mercury contained within electrical devices will first be removed from the individual components and moved to the chemical staging area. The devices will be staged in a work area where 40-hour HAZWOPER trained workers equipped with respirator / mercury vapor cartridge will lab-pack the materials for disposal.

Bulk accumulations of grease will be scraped off process equipment and other surfaces and then will be placed into lined roll off containers within the staging area.

High Intensity Discharge Lamps (Mercury/Sodium vapor) and fluorescent light bulbs will be removed from within the facility intact. They will be packed in DOT containers with insulating material in order to prevent breakage. The containers will then be labeled and shipped to a customer approved disposal facility.

All oils (if encountered) will be sampled (by Engineer) via chlorine test kit to verify that the materials are not PCB-contaminated. If the materials are non-chlorinated, the oils will be loaded and shipped out in compliance with the used oil regulations to a customer approved reclamation facility.

Electronic equipment (E-waste) such as computers, copiers, monitors, etc. shall be collected and packaged prior to placing in the staging area.

PCB light ballasts will be removed, placed into approved containers, and disposed of as PCB containing wastes.

On the roof of Building A, Brandenburg shall remove the wall-mounted electrical transformer / capacitor / breaker equipment located on the northern side of the

room, and the exhaust fan and motor, and containerize the equipment for disposal as a PCB bulk-product waste.

Brandenburg shall also remove visible residues from painted metal supports within the room. Brandenburg shall containerize the grime and cleaning materials for disposal as a TSCA remediation waste.

### **1.10 Work Task A3 – Subsurface Equipment and Residue Removal**

Under this work task, Brandenburg shall remove sediment and debris from the following interior areas:

- Utility tunnel structure oriented east-west along the length of the first floor (including smaller spurs oriented north-south)
- One sump/pit located in grid B1 first floor
- One sump/pit located in grid A11 first floor
- One sump/pit located in grid B22 first floor
- Two subgrade pump rooms (both areas contain sumps and equipment)
- Various bathroom floor drains and traps (located throughout the building)
- Two (2) Elevator Pits

Brandenburg shall remove sediments, debris, etc. from the above areas utilizing laborers equipped with hand scrapers, shovels, or similar tools. The accumulated material shall be packaged and staged for disposal following the removal efforts. If any piping exists within the above areas, Brandenburg shall clean the pipes to at least one (1) lineal foot. After the pipe is cleaned, a mechanical plug and non-shrink grout shall be installed in the pipe.

If any liquids are encountered during the removal activities, it shall be collected and transferred to an onsite storage tanks / drum to await categorization and disposal.

Prior to removing items and materials within the utility tunnel, Brandenburg shall remove the top (ceiling) portion of the tunnel to allow safe access for the Engineer to collect waste characterization and suspect asbestos samples from piping and debris within the tunnel. Brandenburg shall create small hole(s) in the top of the tunnel ceiling utilizing a core drill or hydraulic hammer; this will be done every five (5) feet or so and will provide a location to wrap a chain down through one hole and up through the other creating a binding location. The chain will be attached to a skid steer, or similar. The slab will then be either saw cut or hammered parallel to the perimeter tunnel foundation wall on both sides in approximately 5' sections and finally saw cut or hammered perpendicular to the tunnel foundation wall. As the slab section is freed, the skid steer with the chain attached, shall drag the 5' section of concrete tunnel ceiling off the foundation walls so that the removed concrete does not fall into the tunnel cavity. As the

sections of tunnel ceiling are removed, Brandenburg can place a ¾" piece of plywood under the tunnel ceiling sections in order to catch any small material that may fall into the tunnel cavity during the removal operations. The plywood will be vacuumed utilizing a HEPA vacuum if any material falls onto it during the removal operations. Plywood shall be moved along with the removal efforts every time a slab is to be removed. This process shall continue until the tunnel ceiling has been removed.

#### **1.11 Work Task A4 – Select Pre-Containment Floor Removal**

Under this work task, Brandenburg shall remove wood plank flooring (1" thick) and wood plank subflooring (2" thick), and tar paper layers, if any, down to the base concrete floor from select areas labeled as area A1 on Sheet 9 of 31 and area A2 on Sheet 10 of 31.

The top wood flooring layer shall be cut (blade depth shall be set so that it does not penetrate the wood subfloor layer below) and removed in approximately 3' sections. The flooring shall be pried up utilizing wrecking bars, shovels, skid steers, etc. The material shall be placed into approved storage containers and staged for disposal, or live loaded into roll offs for disposal, depending on waste characterization/shipping constraints. The material shall eventually be removed from the building through the overhead doors located between D13-D14. Brandenburg shall only have a maximum of four (4) column grids opened and exposed at any one (1) time. As the flooring is removed, Brandenburg shall have two vacuums available for cleanup. A HEPA Vacuum will be used to clean the exposed middle layer of flooring of dust and debris, and a mercury recovery vacuum to collect any bulk mercury that may be discovered during floor removal. This process will continue until the entire top layer of Area A1 and A2 has been removed. If encountered, the tarpaper layer shall be removed utilizing laborers. The materials will be containerized in DOT-approved 55-gallon drums, or approved equal, within the work areas. Labels will be affixed to waste containers that will adhere to guidelines for characterization and identification of a hazardous waste. Labels will state the words "HAZARDOUS WASTE" where applicable, and include appropriate terminology, coloring, font, and size; the date that waste was first introduced to the container will be included, along with appropriate generator information. The hazardous waste code of D009 will be used to indicate waste with a toxicity characteristic of mercury in accordance with 40 CFR Part 261 Subpart C.

Once the top layer has been completely removed, Brandenburg will commence with removal of the subfloor layer of wood tongue and groove flooring utilizing the



same methods stated above. The entire subfloor shall be vacuumed with a mercury recovery vacuum as the middle layer of flooring is removed.

If, during the flooring removal operations, Brandenburg discovers any bulk mercury or elevated mercury vapor levels, Brandenburg shall use a mercury vacuum to collect the mercury and then containerize the material in DOT-approved packaging. A final HEPA vacuum effort will be completed to collect any residual debris, followed by a final sweep with the Vapor Analyzer to verify. The first floor select removal activities shall be completed prior to implementation of Work Task A7 to minimize the potential for the generation of mercury-impacted dust and mercury vapors during subsequent RA activities.

Based on the potential for bulk mercury to be encountered between layers of wood flooring and/or tar paper/cinder layer, the wood floor and tar paper removal activities shall be conducted on a layer-by-layer basis.

Wood flooring on the first floor that is located outside of Area 1 and 2, and is not specifically called out to be removed during this phase, shall remain intact and be removed during the building demolition portion of the work.

#### **1.12 Work Task A5 – Loose Lead Paint Removal**

Under this work task, Brandenburg will remove loose / flaking lead-based paint from the interior walls, ceilings, and floors.

Brandenburg will remove the loose lead paint from the interior brick walls, concrete and wood floors, and ceilings utilizing wet work methods and sweep the loose paint from the face of the surfaces.

The material will be collected and placed into drums for offsite disposal.

This work shall be performed prior to Work Task A7.

#### **1.13 Work Task A6 – Foundation Paint / Coating Removal**

Portions of Building A perimeter foundation along the northern, eastern, and western sides of the building are proposed to remain in place following demolition as shown on Detail 1 and 2 of Sheet 31 of 31. The painted portions of the wall to remain have tested positive for PCB's at concentrations more than 7.68 mg/kg. Brandenburg shall remove the paint / coating from the vertical interior portion of this concrete foundation utilizing laborers equipped with hand tools. The paint / coating shall be removed to bare concrete (based on visual confirmation), and will be performed prior to Work Task A7. Brandenburg plans on utilizing the MMLJ Group Model DB225 Dustless Blasting system to remove the wall coating on the first floor foundation wall. Please see the attached general operating guidelines for this system.

An amendment will be provided at a later time that will include the following details:

- Containment type and locations
- Removal method, including anticipated pressure, media, and waste collection procedure
- PPE and personnel monitoring
- HASP amendment and TSA – to be provided no later than 3 weeks prior to work

#### **1.14 Work Task A7 – Floor Cleaning and Containment**

Under this work task, Brandenburg shall collect accumulated debris and dust on the first floor concrete slab, and install a temporary containment system over the first floor slab.

Brandenburg may utilize scrapers, shovels, or chisels to assist in the removal of floor grime on the first floor slab. HEPA and mercury recovery vacuums will be used in conjunction to collect dust, debris, and any potential bulk mercury. The material will be loaded into storage drums and placed in the waste accumulation area to await off-site disposal.

Brandenburg will not utilize brooms and / or sweeping tools to perform the removal efforts as it has the potential to increase airborne dust.

Brandenburg will install a 1120N non-woven geotextile “cushion” on the top of the first floor concrete slab. The geotextile shall be installed utilizing laborers to roll out the material over the first floor slab.

Subsequent to the geotextile material installation, Brandenburg shall install a low permeability 15-mil polyethylene liner over the top of the geotextile fabric. The liner shall be installed and placed one (1) foot up the perimeter walls. The liner shall also run one (1) foot up the existing columns located above the first floor slab. Portions of the liner shall be overlapped and shall be sealed together utilizing a spray adhesive followed by duct tape. Liner will be inspected periodically for compromises, and repaired as needed.

Brandenburg shall install a lined sump(s) into the existing sumps / pits located near column B0 and A22. Liquids generated during the interior removal action activities shall be directed toward the lined sump for collection. The accumulated material shall be pumped out of the sump into a storage container to await characterization for disposal.

Prior to superstructure demolition, a 3”-6” layer of protective sand, gravel, or

similar (possibly steel plate on top of aggregate cushion) over the top of the 15 mil liner to assist in the prevention of liner puncture during the removal activities. The protective layer shall be installed utilizing skid steers equipped with biter buckets. The skid steers will access the first floor slab area through the overhead doors located near columns D13-D14. The material shall be placed starting closest to the overhead doors and continue out from there until the entire liner over the first floor has been covered.

Brandenburg shall place supports over open tunnel and pit areas prior to the installation of the liner, or may elect to leave the tunnel open and install the liner within the tunnel cavity to assist in water collection.

The polyethylene liner does not need to be placed in the stairwells or side rooms along the southern side of Building A with intact floor slabs.

### **1.15 Work Task A8 – Select Floor Removal**

Under this Work Task, Brandenburg shall remove select areas of flooring (including wood flooring, top layer concrete, tar paper, wood sleepers, and cinders) down to, but not including, the underlying base concrete layer. The select floor removal areas are identified as: Area A3 on the 2<sup>nd</sup> Floor, and Area A4, A5, A6, and A7 on the 3<sup>rd</sup> floor.

Removal activities shall commence on the third floor and proceed down to the second floor. Prior to the commencement of floor removal activities on the third floor Brandenburg will install minimum 6-mil polyethylene sheeting on the second floor directly below the activities above. The poly sheeting shall extend one additional grid in each direction beyond the active work area.

The top wood flooring layer shall be cut (blade depth shall be set so that it does not penetrate the wood subfloor layer below) and removed in approximately 3' sections. The flooring shall be pried up utilizing wrecking bars, shovels, skid steers, etc. The material shall be placed into approved storage containers and staged for disposal. The material shall eventually be removed from the building through openings created in the exterior brick walls located between columns D13-D14 located on both the 2<sup>nd</sup> and 3<sup>rd</sup> floors. The material will be picked down from the 2<sup>nd</sup> and 3<sup>rd</sup> floors utilizing a crane or telescoping fork lift placed on the south side of Building A in the existing courtyard. Brandenburg shall only have a maximum of four (4) column grids opened and exposed at any one (1) time. As the flooring is removed, Brandenburg shall vacuum the exposed underside of removed and underlying layer of flooring utilizing HEPA and mercury recovery vacuums in conjunction to collect any dust and / or bulk mercury that may be discovered during floor removal. This process will continue until the entire top

layer of Areas A3-A7 has been removed. If encountered, the tarpaper layer shall be removed utilizing laborers. The materials will be containerized in DOT-approved 55-gallon drums, or approved equal, within the work areas. Labels will be affixed to waste containers that will adhere to guidelines for characterization and identification of a hazardous waste. Labels will state the words “HAZARDOUS WASTE” and include appropriate terminology, coloring, font, and size; the date that waste was first introduced to the container will be included, along with appropriate generator information. The hazardous waste code of D008 and/or D009 will be used to indicate waste with a toxicity characteristic of mercury and/or lead in accordance with 40 CFR Part 261 Subpart C.

Once the top layer has been completely removed, Brandenburg will commence with removal of the subfloor layer of wood tongue and groove flooring utilizing the same methods stated above. The entire subfloor shall be vacuumed with HEPA and/or mercury recovery vacuum as the middle layer of flooring is removed.

If wood sleepers and cinders are encountered, Brandenburg shall apply a solution of calcium polysulfide on areas of cinder layers if the potential to generate mercury vapors at concentrations above the air monitoring criteria are found, followed by application of heptahydrate ferrous sulfate to minimize the potential for mercury vapor generation. Brandenburg laborers shall rake the cinders during the application process to ensure a thorough mixture of the material. Brandenburg anticipates the following dilutions and application rates will be required prior to removal of cinders from areas designated as “high mercury vapor areas”:

- Calcium polysulfide solution: 29% calcium polysulfide solution with an application rate of 20 gallons per 100 square feet
- Heptahydrate ferrous sulfate solution: 1 pound heptahydrate ferrous sulfate mixed in 1 gallon of water with an application rate of 20 gallons per 100 square feet

Brandenburg shall utilize skid steers equipped with biter buckets to remove the material. The material shall be placed into approved storage containers and staged for disposal. The material shall eventually be removed from the building through openings created in the exterior brick walls located between columns D13-D14 located on both the 2<sup>nd</sup> and 3<sup>rd</sup> floors. The material will be picked down from the 2<sup>nd</sup> and 3<sup>rd</sup> floors utilizing a crane or telescoping forklift placed on the south side of Building A in the existing courtyard. The cinders shall be segregated from the wood sleepers and loaded into cubic yard boxes by skid steers equipped with biter buckets and then staged for disposal. The material shall eventually be removed from the building through openings created in the exterior brick walls located between columns D13-D14 located on both the 2<sup>nd</sup>

and 3<sup>rd</sup> floors. The material will be picked down from the 2<sup>nd</sup> and 3<sup>rd</sup> floors utilizing a crane or telescoping forklift placed on the south side of Building A in the existing courtyard. Brandenburg shall only have a maximum of four (4) column grids opened and exposed at any one (1) time. As the wood sleepers and cinders are removed, Brandenburg shall vacuum the exposed underside layer of flooring utilizing HEPA or mercury recovery vacuum to collect any dust and / or bulk mercury that may be discovered during floor removal. This process will continue until the entire top layer of wood sleepers and cinders is removed.

Area A7 on the third floor requires the removal of the top layer of concrete floor (3"-5" thick) prior to removal of cinders and wood sleepers. Brandenburg will remove this top layer of concrete by performing multiple saw cuts of the concrete floor slab and then prying up the top layer of concrete utilizing skid steers equipped with biter buckets, or utilizing skid steers equipped with hydraulic hammers. Brandenburg will be careful not to impact the wood sleepers and cinder layers below the top concrete floor layer during the removal activities. The material shall be placed into approved storage containers and staged for disposal. The material shall eventually be removed from the building through openings created in the exterior brick walls located between columns D13-D14 located on both the 2<sup>nd</sup> and 3<sup>rd</sup> floors. The material will be picked down from the 2<sup>nd</sup> and 3<sup>rd</sup> floors utilizing a crane or telescoping forklift placed on the south side of Building A in the existing courtyard.

If, during the flooring removal operations, Brandenburg discovers any bulk mercury, Brandenburg shall place a Spilfyter® brand mercury spill amalgamation powder to the work area in accordance with the manufacturer's recommendations or use a mercury recovery vacuum.

Based on the potential for bulk mercury to be encountered between layers of wood flooring and/or tar paper/cinder layer, the wood floor and tar paper removal activities shall be conducted on a layer-by-layer basis.

#### **1.16 Work Task A9 – Pre-Demolition Cleaning**

Under this work task, Brandenburg shall remove loose debris from horizontal surfaces and within structures on the roof utilizing HEPA vacuum, scrapers, shovels, etc. to a visual clean standard.

Brandenburg shall collect elemental mercury from two (2) HVAC structures on the roof where broken flowmeters were observed utilizing a mercury spill kit with amalgamating powder and mercury recovery vacuum.

Brandenburg shall also remove loose debris from select areas below the cooling tower equipment platform on the roof using a mercury spill kit with amalgamating powder and mercury recovery vacuum.

Brandenburg shall remove loose debris from horizontal surfaces in the building, including the bridges, interior to a visual clean standard using a pressurized water spray. Power washing shall begin on the third floor and be implemented in a top down approach from the third floor down to the first floor.

All wash water generated during the power washing activities shall be managed by Brandenburg as described in Work Task S5.

### **1.17 Work Task A10 – Building Demolition**

Under this work task, Brandenburg shall raze Building A down to the top of the first floor slab elevation.

Barricades, caution tape, and signs warning of demolition activities, and potential protection structures such as deflection shields and crane mats, will be posted around the perimeter of each demolition zone. A drop zone will be established within the demolition zone to protect against pieces of debris that may fall during demolition activities. A member of the project demolition team on the ground will be responsible for maintain the drop zone. A fire-watch zone will be delineated within the demolition zone if torch cutting will be employed. Whenever torch work or an open flame is used for demolition, a demolition team member will be assigned to fire watch duties.

Due to the close proximity of the aerial power lines located along Sussex Street and potentially 6<sup>th</sup> Street, Brandenburg will coordinate with the local power company to install electrical shields / covers over the existing power lines (if required), and remove guy wire from building. Brandenburg shall remove the exterior brick façade and infill along the north face of the building utilizing laborers equipped with jack hammers working from scissor lifts. Skid steers shall also be utilized inside of the building to assist in the removal of the brick infill. The removed brick / block shall either be placed inside of the existing building and allowed to accumulate on the concrete floor slabs for removal during superstructure demolition, or removed as it is accumulated.

Once the infill brick / block along Sussex St. has been removed, the building will be razed from either east to west or west to east systematically from top down utilizing a Liebherr 954 excavator, or similar, equipped with a demolition attachment. The removed materials will consist mainly of brick, steel, non-hazardous wood subfloor, and roofing materials; materials will be segregated from each other during the demolition process. The brick, wood, concrete, and roofing materials will be loaded into approved containers for offsite disposal. The

scrap materials will be segregated, sized, and placed into approved trucks for offsite recycling. Loading of materials will take place as close to the center of property as possible. Prior to loading, scrap will be sampled by Anchor in accordance with the Project RAD.

Dust suppression via water misting and spraying will be generated from a location to make the greatest effect of minimizing dust, this could be from a location above or below the work taking place. A quantity of water that will be sufficient to control dust, but not enough to leave residual water accumulations on the ground surface. Water misting and spraying devices will be installed in various portions of the work zone and will assist in reducing visible dust emissions in work areas. Brandenburg will obtain proper permits to use water from town fire hydrants

The first floor concrete walls shall be removed to a distance by means of hydraulic hammer and saw cut horizontally as shown on Detail 1 and 2 of Sheet 31 of 31.

Once the building has been completely removed, Brandenburg shall remove the protective layer (sand, steel, etc.) as well as the geotextile, and poly liner from the first floor slab. The material will be removed utilizing a Liebherr 954 excavator, 430 loader, and/or skid steers. The material will be loaded into approved trucks for offsite disposal. Brandenburg shall use HEPA or mercury recovery vacuums to remove all debris from the polyethylene liner and shall containerize the materials for offsite disposal.

#### **1.18 Work Task A11 – Slab & Sub slab Piping Removal**

Under this task Brandenburg shall remove all remaining areas of the Building A 1st floor slab that were not otherwise previously removed during Work Task A4. Demolition includes the demolition/removal of slab concrete and materials within the slab including piping to 18" below the bottom of the slab elevation to the limits of the building footprint. If piping extends below 18 inches, Brandenburg shall cut / cap the remaining piping and provide as-built style drawings regarding the locations. The only exception to abandon in place is sewer piping which shall be removed completely, even if deeper than 18 inches. If any piping extends beyond the building footprint, the pipe shall be cut / capped at the interior side of the building foundation. If excavation is required to remove piping, the excavated soil can be placed back into the excavated area to achieve final grade. During excavation, spoils will be placed on a layer of poly to prevent cross contamination and placed directly back in the void after pipe removal. Brandenburg shall remove piping utilizing a Liebherr 954 excavator equipped with a bucket

attachment, or similar, to excavate and remove the pipe. Prior to capping and loading of scrap, piping will be sampled by Anchor in accordance with the Project RAD.

Brandenburg shall also remove cobbles and stones from the subslab surface soil that are greater than 4 inches in any one direction.

The tunnel and sump/pit walls shall be removed to the bottom elevation of the floor slab and remaining subsurface floors (tunnel, elevator pits, sumps, pits, subgrade vaults, etc.) shall be fractured in place to prevent potential ponding. This shall be accomplished utilizing a hydraulic hammer to remove the concrete pit walls as well as fracture the below grade pit slabs. Prior to fracturing, access will be made for the Engineers to sample the elevator floors.

### **1.19 Work Task B1 – Asbestos Removal**

Please see stand-alone ACM work plan

### **1.20 Work Task B2 – Regulated & Miscellaneous Materials**

Under this work task, Brandenburg will remove and containerize regulated and universal wastes located within Building B.

Mercury contained within electrical devices will first be removed from the individual components and moved to the chemical staging area. The devices will be staged in a work area where 40-hour HAZWOPER trained workers equipped with respirator / mercury vapor cartridge will lab-pack the materials for disposal.

Bulk accumulations of grease will be scraped off process equipment and other surfaces and then will be placed into lined roll off containers within the staging area.

High Intensity Discharge Lamps (Mercury/Sodium vapor) and fluorescent light bulbs will be removed from within the facility intact. They will be packed in DOT containers with insulating material in order to prevent breakage. The containers will then be labeled and shipped to a customer approved disposal facility.

All oils (if encountered) will be sampled and characterized (by Engineer) via chlorine test kit to verify that the materials are not PCB-contaminated. If the materials are non-chlorinated, the oils will be loaded and shipped out in compliance with the used oil regulations to a customer approved reclamation facility.

Electronic equipment (E-waste) such as computers, copiers, monitors, etc. shall be collected and packaged prior to placing in the staging area.

PCB light ballasts will be removed, placed into approved containers, and



disposed of as PCB containing wastes.

### 1.21 Work Task B3 - Subsurface Equipment and Residue Removal

Under this work task, Brandenburg shall remove sediment and debris from the following interior areas:

- Various bathroom floor drains and traps
- One elevator pit
- Various floor drains (located throughout the first floor)

Brandenburg shall remove sediments, debris, etc. from the above areas utilizing laborers equipped with hand scrapers, shovels, or similar tools. The accumulated material shall be packaged and staged for disposal following the removal efforts. If any piping exists within the above areas, Brandenburg shall clean the pipes to at least one (1) lineal foot. After the pipe is cleaned, a mechanical plug and non-shrink grout shall be installed in the pipe. ←

Prior to grouting and plugging, Anchor QEA will collect MVA readings from the cut pipe.

If any liquids are encountered during the removal activities, it shall be collected and transferred to an onsite storage tanks / drum to await categorization and disposal.

### 1.22 Work Task B4 – Loose Lead-Based Paint Removal

Under this work task, Brandenburg will remove loose / flaking lead-based paint from the interior walls, ceilings, and floors.

Brandenburg will remove the loose lead paint from the interior brick walls, concrete and wood floors, and ceilings utilizing wet work methods and sweep the loose paint from the face of the surfaces.

The material will be collected and placed into drums for offsite disposal.

This work shall be performed prior to Work Task B5.

### 1.23 Work Task B5 – Select Pre-Containment Flooring Removal

Under this work task, Brandenburg shall remove concrete, wood floor, equipment bases, cinder, wood sleepers, cindercrete, and tar paper layers down to, but not including, the underlying subgrade soil material from select areas in the first floor. Areas that require select floor removal are identified as Areas B1, B2, B3, B4, B5, B6, B7, B8, B9, and B10 as shown on Sheet 21 of 31.

The top wood flooring layer shall be cut (blade depth shall be set so that it does not penetrate the wood subfloor layer below) and removed in approximately 3' sections. The flooring shall be pried up utilizing wrecking bars, shovels, skid steers, etc. The material shall be placed into approved storage containers and staged for disposal. The material shall be removed from the building through the

overhead door located between columns A12-E12 on the northwest side of the building. Brandenburg shall only have a maximum of four (4) column grids opened and exposed at any one (1) time. As the flooring is removed, Brandenburg shall vacuum the exposed lower layer of flooring utilizing HEPA and mercury recovery vacuums to collect any dust and / or bulk mercury that may be discovered during floor removal. This process will continue until the entire top wood floor layer has been removed. If encountered, the tarpaper layer shall be removed utilizing laborers. The materials will be containerized in DOT-approved 55-gallon drums, or approved equal, within the work areas. Labels will be affixed to waste containers that will adhere to guidelines for characterization and identification of a hazardous waste. Labels will state the words "HAZARDOUS WASTE" and include appropriate terminology, coloring, font, and size; the date that waste was first introduced to the container will be included, along with appropriate generator information. The hazardous waste code of D009 will be used to indicate waste with a toxicity characteristic of mercury in accordance with 40 CFR Part 261 Subpart C.

Once the top layer has been completely removed, Brandenburg will commence with removal of the subfloor layer of wood tongue and groove flooring utilizing the same methods herein. The entire subfloor shall be vacuumed with HEPA and/or mercury recovery vacuums as the subfloor layer of flooring is removed.

If wood sleepers and cinders are encountered, Brandenburg shall apply a solution of calcium polysulfide on areas of cinder layers with the potential to generate mercury vapors at concentrations above the air monitoring criteria, followed by application of heptahydrate ferrous sulfate to minimize the potential for mercury vapor generation. Brandenburg anticipates the following dilutions and application rates will be required prior to removal of cinders from areas designated as "high mercury vapor areas":

- Calcium polysulfide solution: 29% calcium polysulfide solution with an application rate of up to 20 gallons per 100 square feet
- Heptahydrate ferrous sulfate solution: 1 pound heptahydrate ferrous sulfate mixed in 1 gallon of water with an application rate of 20 gallons per 100 square feet

Brandenburg shall collect the wood sleepers utilizing skid steers equipped with biter buckets. Wood sleepers and cindercrete shall be placed into approved storage containers and staged for disposal. The material will be removed from the

building through overhead door at the northwest corner of the building. Brandenburg shall only have a maximum of four (4) column grids opened and exposed at any one (1) time. As the wood sleepers and cinders are removed, Brandenburg shall vacuum the exposed underside layer of flooring utilizing a HEPA or mercury recovery vacuum to collect any dust and / or bulk mercury that may be discovered during floor removal. This process will continue until the entire top layer of wood sleepers and cinders is removed.

Areas B1, B2, B3, B4, and B5 require the removal of the top layer of concrete floor (4"-6" thick) prior to removal of cinders and wood sleepers. Brandenburg will size the top layer of concrete by performing multiple saw cuts in a grid and then remove the floor with skid steers. Brandenburg will be careful not to impact the wood sleepers and cinder layers below the top concrete floor layer during the removal activities. The material shall be placed into approved storage containers and staged for disposal. The material will be removed from the building through overhead door at the northwest corner of the building.

Brandenburg shall remove the concrete base layer of the first floor slab down to soil interface subsequent to the removal of all flooring systems located on top of the base layer. Demolition includes slab concrete and materials within the slab including piping to 18" below the bottom of the slab elevation to the limits of the building footprint. If piping extends below 18 inches, Brandenburg shall cut / cap the remaining piping and provide as-built drawings from fixed locations. The only exception to abandon in place is sewer piping which shall be removed completely, even if deeper than 18 inches. If piping extends beyond the building footprint, the piping shall be cut / capped at the interior side of the building foundation. If excavation is required to remove piping, the excavated soil will be placed on poly to be placed back into the excavated area to achieve final grade. If visible mercury is witnessed, Anchor QEA will be notified. Brandenburg will remove concrete utilizing a CAT 314 hydraulic excavator, or similar, equipped with a hydraulic hammer. The removed concrete shall be placed into approved storage containers and staged for disposal. The material shall be removed from the building through the overhead door at the northwest corner of the building. Brandenburg shall also remove cobbles and stones from the soil that are greater than 4 inches in any one direction. Anchor QEA will screen cut pipes prior to capping and also screen removed pipes proposed for scrap recycling.

The sump / pit walls shall be removed to the bottom elevation of the floor slab and remaining subsurface floors (elevator pits, sumps, pits, subgrade vaults, etc.) shall be fractured in place to prevent potential ponding. This shall be accomplished utilizing a hydraulic hammer to remove the concrete pit walls as

well as fracture the below grade pit slabs. Access will be made for Engineers to sample elevator floor prior to fracturing.

If, during the flooring removal operations, Brandenburg discovers any bulk mercury, Brandenburg shall use either a Mercury Recovery Vacuum or place a Spilfyter® brand mercury spill amalgamation powder to the work area in accordance with the manufacturer's recommendations. This powder solidifies into a putty-like texture in order to absorb the liquid elemental mercury. The amalgamation / mercury mixture will then be containerized in DOT-approved 55-gallon drums. A final HEPA and mercury recovery vacuum effort will be completed to collect any residual debris and non-reacted amalgamation powder, followed by a final sweep with the Vapor Analyzer to verify.

Based on the potential for bulk mercury to be encountered between layers of wood flooring and/or tar paper/cinder layer, the wood floor and tar paper removal activities shall be conducted on a layer-by-layer basis. ←

If air monitoring action levels are exceeded during work, contingency plans will be discussed with Anchor QEA.

#### **1.24 Work Task B6 – Concrete Floor Cleaning & Containment**

Under this work task, Brandenburg shall collect accumulated debris and dust in the side rooms and stairwells on the first floor, and install a temporary containment system over the first floor.

Brandenburg may utilize scrapers, shovels, or chisels to assist in the removal of floor grime on the first floor slab. HEPA and mercury recovery vacuums will be utilized to collect dust, debris, and any potential bulk mercury. The material will be loaded into storage drums and placed in the waste accumulation area to await off-site disposal.

Brandenburg will not utilize brooms and / or sweeping tools to perform the removal efforts as it has the potential to increase airborne dust.

Brandenburg will install a 1120N non-woven geotextile “cushion” (see attached spec sheet) on the top of the first floor concrete slab. The geotextile shall be installed utilizing laborers to roll out the material over the first floor slab.

Subsequent to the geotextile material installation, Brandenburg shall install a low permeability 15-mil polyethylene liner over the top of the geotextile fabric. The liner shall be installed and placed one (1) foot up the perimeter walls. The liner shall also run one (1) foot up the existing columns located above the first floor slab. Portions of the liner shall be overlapped and shall be sealed together utilizing a spray adhesive followed by duct tape. Liner will be inspected periodically for compromises, and repaired as needed.

Brandenburg shall install a lined sump(s) into the existing sumps / pits located near column B12. Liquids generated during the interior removal action activities shall be directed toward the lined sump for collection. The accumulated material shall be pumped out of the sump into a storage container to await characterization for disposal.

Prior to superstructure demolition, a 3"-6" layer of protective sand, gravel, or similar (possibly steel plate) over the top of the 15 mil liner to assist in the prevention of liner puncture during the removal activities. The protective layer shall be installed utilizing skid steers equipped with biter buckets. The skid steers will access the first floor slab area through the overhead doors located near columns A12. The material shall be placed starting closest to the overhead door and continue out from there until the entire liner over the first floor has been covered.

Brandenburg shall place supports over open pit(s) areas prior to the installation of the liner, or may elect to leave the pit(s) open and install the liner within the cavity to assist in water collection.

The polyethylene liner does not need to be placed in the stairwells or side rooms with intact floor slabs.

### **1.25 Work Task B7 – Select Flooring Removal**

Under this Work Task, Brandenburg shall remove select areas of flooring (including wood flooring, top layer concrete, tar paper, wood sleepers, cinders, and base concrete) down to, the underlying base concrete layer. In select areas (B17, B19, B20, and B21) the base concrete layer shall also be removed under Work Task B8 described herein. The select floor removal areas are identified as: Areas B11, B12, and B13 on the 2<sup>nd</sup> Floor, and Areas B14, B15, B16, B17, B18, B19, B20, B21, B22, and B23 on the 3<sup>rd</sup> Floor.

Removal activities shall commence on the third floor and proceed down to the second floor. Prior to the commencement of floor removal activities on the third floor Brandenburg will install minimum 6-mil polyethylene sheeting on the second floor directly below the activities above. The poly sheeting shall extend one additional grid in each direction beyond the active work area.

The top wood flooring layer shall be cut (blade depth shall be set so that it does not penetrate the wood subfloor layer below) and removed in approximately 3' sections. The flooring shall be pried up utilizing wrecking bars, shovels, skid steers, etc. The material shall be placed into approved storage containers and staged for disposal. The material shall be removed from the building through

openings created in the exterior brick walls located between columns A12-B12 located on both the 2<sup>nd</sup> and 3<sup>rd</sup> floors. The material will be picked down from the 2<sup>nd</sup> and 3<sup>rd</sup> floors utilizing a crane or telescoping forklift placed on the west side of Building B in the existing courtyard. Brandenburg shall only have a maximum of four (4) column grids opened and exposed at any one (1) time. As the flooring is removed, Brandenburg shall vacuum the exposed underside layer of flooring utilizing HEPA and mercury recovery vacuums to collect any dust and / or bulk mercury that may be discovered during floor removal. This process will continue until the entire top layer of flooring has been removed. If encountered, the tarpaper layer shall be removed utilizing laborers. The materials will be containerized in DOT-approved 55-gallon drums, or approved equal, within the work areas. Labels will be affixed to waste containers that will adhere to guidelines for characterization and identification of a hazardous waste. Labels will state the words "HAZARDOUS WASTE" and include appropriate terminology, coloring, font, and size; the date that waste was first introduced to the container will be included, along with appropriate generator information. The hazardous waste code of D009 will be used to indicate waste with a toxicity characteristic of mercury in accordance with 40 CFR Part 261 Subpart C.

Once the top layer has been completely removed, Brandenburg will commence with removal of the subfloor layer of wood tongue and groove flooring utilizing the same methods stated above. The entire subfloor shall be vacuumed with a mercury recovery vacuum as the middle layer of flooring is removed.

If wood sleepers and cinders are encountered, Brandenburg shall apply a solution of calcium polysulfide on areas of cinder layers with the potential to generate mercury vapors at concentrations above the air monitoring criteria, followed by application of heptahydrate ferrous sulfate to minimize the potential for mercury vapor generation. Brandenburg laborers shall rake the cinders during the application process to ensure a thorough mixture of the material.

Brandenburg anticipates the following dilutions and application rates will be required prior to removal of cinders from areas designated as "high mercury vapor areas":

- Calcium polysulfide solution: 29% calcium polysulfide solution with an application rate of up to 20 gallons per 100 square feet
- Heptahydrate ferrous sulfate solution: 1 pound heptahydrate ferrous sulfate mixed in 1 gallon of water with an application rate of 20 gallons per 100 square feet

Brandenburg shall collect the wood sleepers utilizing skid steers equipped with biter buckets. The material shall be placed into approved storage containers and staged for disposal. The material shall be removed from the building through

openings created in the exterior brick walls located between columns A12-B12 located on both the 2<sup>nd</sup> and 3<sup>rd</sup> floors. The cinders shall be segregated from the wood sleepers and / or other and loaded into cubic yard boxes utilizing skid steers equipped with biter buckets and staged for disposal. The material shall be removed from the building through openings created in the exterior brick walls located between columns A12-B12 located on both the 2<sup>nd</sup> and 3<sup>rd</sup> floors. The material will be picked down from the 2<sup>nd</sup> and 3<sup>rd</sup> floors utilizing a crane or telescoping forklift placed on the west side of Building B in the existing courtyard. Brandenburg shall only have a maximum of four (4) column grids opened and exposed at any one (1) time. As the wood sleepers and cinders are removed, Brandenburg shall vacuum the exposed underside layer of flooring utilizing a HEPA or mercury recovery vacuum to collect any dust and / or bulk mercury that may be discovered during floor removal. This process will continue until the entire layer of wood sleepers and cinders is removed.

Areas B12, B13, B15, B17, BN18, B20, and B23 on the second and third floor requires the removal of the top layer of concrete floor (2"-4" thick) prior to removal of cinders and wood sleepers. Brandenburg will size the top layer of concrete by saw cutting a 3' x 3' grids or hydraulically hammering the concrete floor slab and then prying up the top layer of concrete utilizing skid steers equipped with biter buckets. Brandenburg will be careful not to impact the wood sleepers and cinder layers below the top concrete floor layer during the removal activities. The material shall be placed into approved storage containers and staged for disposal. The material shall be removed from the building through openings created in the exterior brick walls located between columns A12-B12 located on both the 2<sup>nd</sup> and 3<sup>rd</sup> floors. The material will be picked down from the 2<sup>nd</sup> and 3<sup>rd</sup> floors utilizing a crane or telescoping forklift placed on the west side of Building B in the existing courtyard.

If, during the flooring removal operations, Brandenburg discovers any bulk mercury, Brandenburg shall place a Spilfyter® brand mercury spill amalgamation powder to the work area in accordance with the manufacturer's recommendations. This powder solidifies into a putty-like texture in order to absorb the liquid elemental mercury. The amalgamation / mercury mixture will then be containerized in DOT-approved 55-gallon drums. A final HEPA vacuum effort will be completed to collect any residual debris and non-reacted amalgamation powder, followed by a final sweep with the Vapor Analyzer to verify.

Based on the potential for bulk mercury to be encountered between layers of wood flooring and/or tar paper/cinder layer, the wood floor and tar paper removal

activities shall be conducted on a layer-by-layer basis.

If air monitoring action levels are exceeded during work, contingency plans will be discussed with Anchor QEA.

### **1.26 Work Task B8 – Select Base Removal**

Under this task, Brandenburg shall remove portions of the base concrete floor slab (4" thick) located in Areas B17, B19, B20, and B21 located in the third floor.

Brandenburg shall assess the structural condition of the base concrete prior to removal. The removal activities shall not include removal of structural members of the building. Prior to the commencement of floor removal activities on the third floor Brandenburg will install minimum 6-mil polyethylene sheeting on the second floor directly below the activities above. The poly sheeting shall extend one additional grid in each direction beyond the active work area.

Brandenburg shall utilize a skid steer equipped with a hydraulic hammer to remove the selected areas of base concrete flooring. A hopper shall be placed directly below the removal area in order to catch concrete as it is removed from the floor above. The removal work shall take place working from east back to west in order to avoid the need to traverse over an area that has already had the flooring removed. The material shall be placed into approved storage containers and staged for disposal. The material shall eventually be removed from the building through openings created in the exterior brick walls located between columns A12-B12 located on the 3<sup>rd</sup> floor. The material will be picked down from the 3<sup>rd</sup> floor utilizing a crane or telescoping forklift placed on the west side of Building B in the existing courtyard.

Brandenburg shall install temporary handrail / fall protection around the openings created in the floor slab that meets OSHA fall protection requirements.

### **1.27 Work Task B9 – Pre-Demo Cleaning**

Under this work task, Brandenburg shall remove loose debris from horizontal surfaces and within structures on the roof utilizing HEPA vacuum, scrapers, shovels, etc. to a visual clean standard.

Brandenburg shall remove loose debris from horizontal surfaces in the building interior to a visual clean standard using a pressurized water spray. Power washing shall begin on the third floor and be implemented in a top down approach from the third floor down to the first floor.

All wash water generated during the power washing activities shall be managed by Brandenburg as described in Work Task S5.

### **1.28 Work Task B10 – Building Demolition**

Under this work task, Brandenburg shall raze Building B down to the top of the first floor soil elevation.



Barricades, caution tape and signs warning of demolition activities, and potential protection structures such as deflection shields and crane mats will be posted around the perimeter of each demolition zone. A drop zone will be established within the demolition zone to protect against pieces of debris that may fall during demolition activities. A member of the project demolition team on the ground will be responsible for managing the drop zone. A fire-watch zone will be delineated within the demolition zone if torch cutting will be employed. Whenever torch work or an open flame is used for demolition, a demolition team member will be assigned to fire watch duties.

The building will be razed from west to east or east to west systematically from top down utilizing a Liebherr 954 excavator, or similar, equipped with a demolition attachment. The removed materials will consist mainly of brick, steel, concrete, and roofing materials; materials will be segregated from each other during the demolition process for disposal. The brick, wood, concrete, and roofing materials will be loaded into approved containers for offsite disposal. The ferrous materials will be segregated, sized, and placed into approved trucks for offsite recycling.

Dust suppression via water misting and spraying will use a quantity of water that will be sufficient to control dust, but not enough to leave residual water accumulations on the ground surface. Water misting and spraying devices will be installed in various portions of the work zone and will assist in reducing visible dust emissions in work areas.

The first floor concrete walls shall be saw cut horizontally as shown on Detail 3 and 4 of Sheet 31 of 31.

Once the building has been completely removed, Brandenburg shall remove the protective layer (sand, steel, etc.) as well as the geotextile, and poly liner from the first floor slab. The material will be removed utilizing a Liebherr 954 excavator or skid steers. The material will be loaded into approved trucks for offsite disposal.

### **1.29 Work Task B11 – Slab and Sub slab Piping Removal**

Under this work task, Brandenburg shall demolish and remove all remaining areas of the Building B floor slab and below grade piping that were not otherwise previously removed under Work Task B5.

Demolition includes slab concrete and materials within the slab including piping to 18" below the bottom of the slab elevation to the limits of the building footprint. If piping extends below 18 inches, Brandenburg shall cut / cap the remaining

piping and provide as-built information from fixed locations. The only exception to abandon in place pipe is sewer piping which shall be removed completely, even if deeper than 18 inches. If piping extends beyond the building footprint, the piping shall be cut / capped at the interior side of the building foundation. All piping to be capped or recycled will be screened by Anchor QEA prior to the final disposition. If excavation is required to remove piping, the excavated soil can be placed back into the excavated area to achieve final grade. All spoils from excavation will be placed on poly and placed directly back in the excavation. If any liquid mercury is observed, Anchor QEA will be notified for further direction. Brandenburg shall also remove cobbles and stones from the soil that are greater than 4 inches in any one direction.

The sump / pit walls shall be removed to the bottom elevation of the floor slab and remaining subsurface floors (elevator pits, sumps, pits, subgrade vaults, etc.) shall be fractured in place to prevent potential ponding. This shall be accomplished utilizing a hydraulic hammer to remove the concrete pit walls as well as fracture the below grade pit slabs. Prior to fracturing, access will be made for Engineers to sample elevator floors.

### **1.30 Work Task SS1 – Building C Slab and Sub slab Piping Removal**

Under this task Brandenburg shall remove all remaining areas of the Building C 1st floor slab that were not otherwise previously removed during previously contracted work. Demolition includes the demolition/removal of slab concrete and materials within the slab including piping to 18" below the bottom of the slab elevation to the limits of the building footprint. All spoils from excavation will be placed on poly and placed directly back in the excavation. If any liquid mercury is observed, Anchor QEA will be notified for further direction. If piping extends below 18 inches, Brandenburg shall cut / cap the remaining piping and provide as-built information from fixed locations. The only exception to abandon in place is sewer piping which shall be removed completely, even if deeper than 18 inches. If piping extends beyond the building footprint, the piping shall be cut / capped at the interior side of the building foundation. All piping to be capped or recycled will be screened by Anchor QEA prior to the final disposition. If excavation is required to remove piping, the excavated soil can be placed back into the excavated area to achieve final grade. Brandenburg shall remove said piping utilizing a Liebherr 954 excavator equipped with a bucket attachment, or similar, to excavate and remove the pipe.

Brandenburg shall also remove cobbles and stones from the soil that are greater than 4 inches in any one direction.

The sump/pit walls shall be removed to the bottom elevation of the floor slab and

remaining subsurface floors (tunnel, elevator pits, sumps, pits, subgrade vaults, etc.) shall be fractured in place to prevent potential ponding. This shall be accomplished utilizing a hydraulic hammer to remove the concrete pit walls as well as fracture the below grade pit slabs. Prior to fracturing, access will be made for Engineers for any sampling.

### **1.31 Work Task R1 - Site Restoration**

Under this work task, Brandenburg shall conduct Site restoration activities in areas that are disturbed during the implementation of the work activities.

Brandenburg shall perform the following Site restoration activities:

- Install safety barriers throughout the Site on top of the remaining foundation walls and any other on-Site areas where an 18-inch or greater drop is created following demolition
- Install temporary orange construction fencing around the perimeter of the open utility tunnel area inside the Building A footprint.
- Repairing / restoring site features, if any, that have been damaged or otherwise disturbed
- Installing chain-link fencing and gates around the Site perimeter
- Installing temporary cover on soil areas within the building perimeters
- Remove and decontaminate (if applicable) any features installed to perform the work (steel plate, ramps, pads, etc.)
- Provide As-Built information

### **1.32 Work Task R2 – Demobilization**

Under this work task, Brandenburg shall decon site equipment, remove erosion control and water control measures, and demobilize site equipment.

All equipment and tools shall be cleaned prior to removal from the site as described in Section 01 71 13 of Appendix D.

Brandenburg shall remove all erosion control and water control measures previously installed. The removed material shall be packaged into approved containers for offsite disposal.

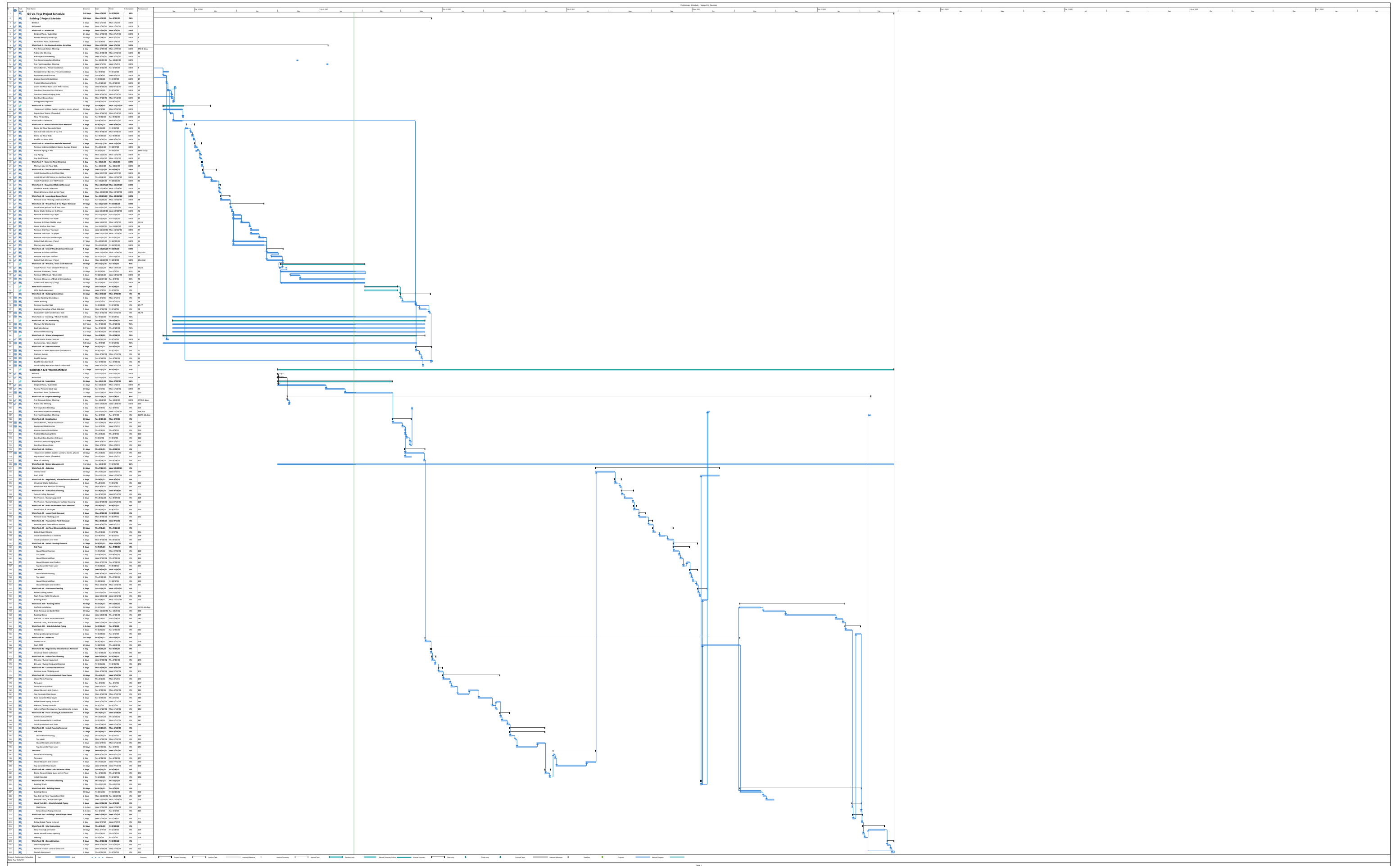
After the cleaning efforts, Brandenburg shall demobilize the equipment from the site.

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2217 Spillman Drive  
Bethlehem, Pennsylvania 18015-1982  
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FAX (610) 691-4200

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## **II Project Schedule**

Remaining tasks from Building C have been combined with A and B to provide an all inclusive schedule. Schedule will be provided separately in Microsoft Project.

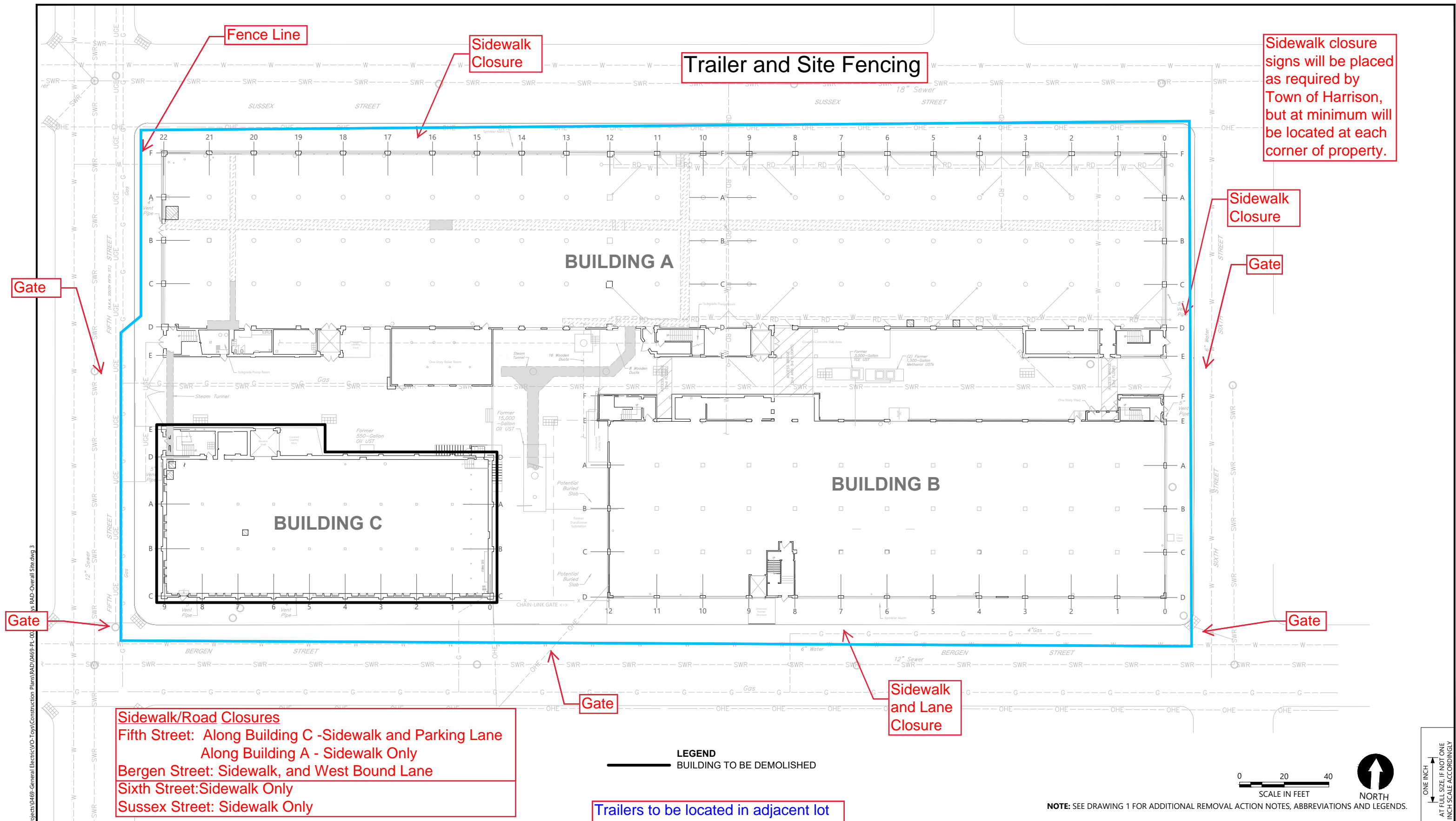


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### **III Site Drawings and Layout**

- A. Trailers and Work Site Barrier Location
- B. On-Site Waste Storage Location
- C. Waste Load Out Areas
- D. Community Traffic Plan
- E. Site Traffic Plan
- F. Decontamination/ Containment Unit Locations



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ANCHOR QEA, LLC  
290 ELWOOD DAVIS ROAD  
SUITE 340  
LIVERPOOL, NEW YORK 13088  
PHONE: (315)-453-9009

ANCHOR QEA, LLC.  
NEW JERSEY ENGINEERING  
CERTIFICATE OF AUTHORIZATION  
NUMBER 24GA28261100  
Professional Engineer's Name  
**MARGARET CARRILO-SHERIDAN, P.E.**  
Professional Engineer's No.  
038667  
State  
NEW JERSEY  
Date Signed

| REVISIONS |      |    |       |             |  |
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DESIGNED BY: T. NOWAK  
DRAWN BY: R. PETRIE  
CHECKED BY: D. MUSSER  
APPROVED BY: M. CARRILLO-SHERIDAN  
SCALE: AS NOTED  
DATE: NOVEMBER 22, 2019

**3**  
SHEET # **4** OF **17**

On Site Waste Storage

On Site Waste Storage Area

1. Sizing of overall storage area and size of individual containment to be determined as work progresses.
2. No storage containments will be placed on soil.
3. Existing exterior door will be utilized for access to Building A.
4. Feasibility of elevated truck dock TBD

Elevated Truck Dock

LEGEND  
BUILDING TO BE DEMOLISHED

0 20 40  
SCALE IN FEET



NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.



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Professional Engineer's Name  
**MARGARET CARRILO-SHERIDAN, P.E.**  
Professional Engineer's No.  
038667  
State  
NEW JERSEY  
Date Signed

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DESIGNED BY: T. NOWAK  
DRAWN BY: R. PETRIE  
CHECKED BY: D. MUSSER  
APPROVED BY: M. CARRILLO-SHERIDAN  
SCALE: AS NOTED  
DATE: NOVEMBER 22, 2019

**BUILDING C REMOVAL ACTION DESIGN**  
**VO-TOYS SITE**  
**HUDSON COUNTY HARRISON, NEW JERSEY**

**EXISTING CONDITIONS BLOCK 156**

**3**

SHEET # **4** OF **17**



1. Loading material directly from building to roll off containers within staging area will not necessitate a truck decontamination pad. 2. Self Dumping Hopper will be equipped with solid, hinged lid to contain material during move from Building to Roll Off. Lid will be closed properly prior to movement.

Waste Load Out Area

Building A Live Load Area TBD 3 weeks prior to building demolition

Roll Off Staging Area

Building B Live Load Area

LEGEND  
BUILDING TO BE DEMOLISHED

0 20 40  
SCALE IN FEET



NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.

PREPARED BY



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ANCHOR QEA, LLC.  
NEW JERSEY ENGINEERING  
CERTIFICATE OF AUTHORIZATION  
NUMBER 24GA28261100

Professional Engineer's Name  
**MARGARET CARRILO-SHERIDAN, P.E.**

Professional Engineer's No.  
038667

State  
NEW JERSEY

Date Signed

REVISIONS

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DESIGNED BY: T. NOWAK  
DRAWN BY: R. PETRIE  
CHECKED BY: D. MUSSER  
APPROVED BY: M. CARRILLO-SHERIDAN  
SCALE: AS NOTED  
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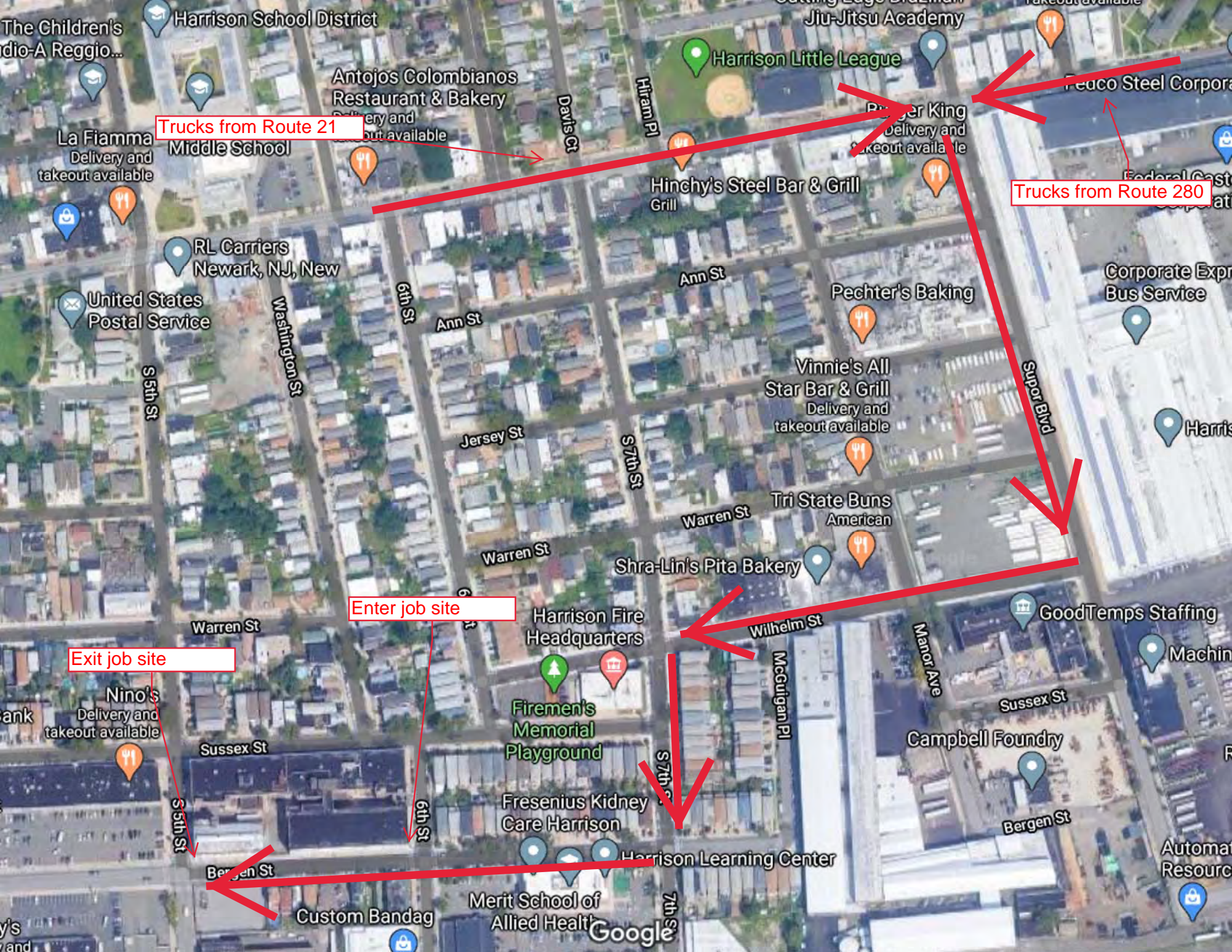
**BUILDING C REMOVAL ACTION DESIGN**  
**VO-TOYS SITE**  
**HUDSON COUNTY HARRISON, NEW JERSEY**

**EXISTING CONDITIONS BLOCK 156**

**3**

SHEET # **4** OF **17**





Trucks from Route 21

Trucks from Route 280

Enter job site

Exit job site



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#### **IV Security**

## **GE Vo Toys Building A and B Demolition Project**

### **Site Security**

Site security will be maintained during the project, in accordance with Project RAD Technical Specification 00 73 63 - Site Security and Control.

#### **Security Guards**

Throughout the project, Brandenburg and a third party security firm, G4S will manage site security. During normal work hours, typically between 7:00 am and 5:00 pm, Brandenburg will self-perform site security, and during off workdays and hours G4S will be subcontracted to perform security.

#### **Site Fencing**

Site fencing will be installed in the locations described in the SCP, with a double layer of fabric in kind to material installed for Building C.

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**V Key Personnel**

Glenn Milarczyk  
Michael Masiello  
Nicholas McGarel

## Glenn Milarczyk

Brandenburg Industrial Service Company  
2217 Spillman Drive | Bethlehem, PA 18015  
(610) 691-1800  
milglea@brandenburg.com

### Work Experience

- 2016-Present     **Brandenburg Industrial Service Company**  
                         Project Manager
- ✓ Interface with regulatory agencies such as OSHA, Departments of Labor, FAA and Industry/Departments of Administrative Services
  - ✓ Manage Project Contract change orders, Subcontractor contracts and activity and compliance with project specific required documentation
  - ✓ Interface with the customer staff (plant and corporate) to execute project specifications and secure customer approval of progress estimates
- 2007-2016     **Brandenburg Industrial Service Company**  
                         Superintendent / Field Engineer
- 2006             **Nicholson Construction,**  
                         Field Engineer

### Education

- 2000-2007             **New Jersey Institute of Technology, Construction Management Technology**

### Special Training

- ✓ Fall Protection
- ✓ Defensive & Fatigue Driving
- ✓ Crane Signal Person
- ✓ Hazardous Materials Awareness
- ✓ Supervisor Training
- ✓ Hazard Communication
- ✓ Asbestos Abatement Supervisor
- ✓ Fire Prevention Extinguisher Safety
- ✓ Arsenic Hazard Awareness
- ✓ Crystalline Silica Hazard Awareness
- ✓ Hazardous Materials Transportation (DOT)
- ✓ OSHA 30 Hour In Construction Safety & Health
- ✓ Rigging Safety
- ✓ Lead Hazard Training
- ✓ Lead Awareness
- ✓ First Aid, CPR & AED
- ✓ Hazwoper Site Supervisor
- ✓ Hazwoper Site Worker
- ✓ JLG Aerial Work Platform Safety
- ✓ Lead Abatement Supervisor
- ✓ Cadmium Hazard Awareness
- ✓ Powder Actuated Tools
- ✓ Transportation Worker Identification Credential (TWIC)
- ✓ Supervisor Training

## Relevant Projects

| PROJECT   | LOCATION         | CONTRACT AMOUNT | TYPE OF WORK  |
|---|------------------|-----------------|---|
| MA0846 – Millipore (WWT and Misc. Outbuildings)   | Bedford, MA      | \$677,650       | Demolition of 2 WWT basins, Underground storage tanks (UST), and several small structures to -3' below grade, site restoration of asphalt and topsoil and seed.   |
| MA0843 – Energy Transfer Marcus Hook LSG          | Marcus Hook, PA  | \$1,987,292     | Removal of buildings, tanks, foundations, and other miscellaneous equipment and structures in refinery.   |
| MA0838 – Celgene Summit NJ Buildings S1 & S8/9/10 | Summit, NJ       | \$6,705,000     | Demolition of 4 concrete buildings totaling 347,000 sq.ft. Buildings S8/9/10 are post tension construction with foam insulation. Demo buildings to grade, remove slabs and foundations including basements (S1 slab is contaminated).   |
| MA0792 – Novartis                                 | East Hanover, NJ | \$2,975,000     | Demolition of 4 story steel framed former vivarium. Attached to building 436 (to remain) on west face and loading dock on north side.   |
| MA0774 – CITGO Petty Island                       | Pennsauken, NJ   | \$1,843,971     | Asbestos abatement and demolition of above ground storage tanks, building demolition and site restoration.  |
| MA0752 – G.E. Erie Bldg. 24                       | Erie, PA         | \$252,236       | Asbestos and PCB abatement and demolition of 1 and 2 story brick and concrete building with additions. Approximately 10,000 s.f.  |
| MA0730 – Calpine – Deepwater                      | Pennsville, NJ   | \$9,713,000     | Asbestos abatement, environmental remediation and demolition to grade of Calpine boiler house, turbine hall, precipitators, coal yard, and miscellaneous buildings in abandoned power plant.  |
| MA0666 – DOW Bound Brook                          | Bound Brook, NJ  | \$3,923,013     | Decommissioning multi-story steel, concrete and brick buildings, asbestos abatement and remove concrete to -18" below grade, crush concrete, backfill basements.  |
| MA0530 – Tyco                                     | Wrentham, MA     | \$1,600,000     | Asbestos abatement and demolition of wood, brick, and concrete 1 & 2 story structures. Work also included soil remediation, removal of two stacks, and underground storage tanks.   |
| MA0505 - Washington County Hospital               | Hagerstown, MD   | \$5,000,000     | Asbestos abatement and demolition of 485,000 sf, 8-story hospital with a 36,000 sf office outbuilding including the removal of universal wastes and two underground storage tanks. Work also included PCB caulk removal (building joints, windows), backfilling basements and top soil & seeding. |
| MA0540 - Allentown Arena Development              | Allentown, PA    | \$2,077,900     | Asbestos abatement and demolition of 300,000 sf of multiple residential and light commercial structures located within a square city block.   |

## Michael Masiello

Brandenburg Industrial Service Company  
2217 Spillman Drive | Bethlehem, Pennsylvania 18015  
(610) 691-1800  
masmic@brandenburg.com

### Work Experience

2008-Present **Brandenburg Industrial Service Company**

Project Superintendent

- ✓ Develop and implement plan to complete project scope, terms and conditions in accordance with company safety and environmental policies
- ✓ Designate project work methods to maintain productivity
- ✓ Interface with regulatory agencies such as OSHA, Departments of Labor, FAA and Industry/Departments of Administrative Services
- ✓ Manage subcontractor activity and compliance with project specifications to maintain dialogue with customer representatives
- ✓ Interface with the customer staff, both plant and corporate to execute project specifications and secure customer approval of progress estimates

1987-2008 **Mazzocchi Wrecking**  
Safety Officer

### Special Training

- ✓ Defensive & Fatigue Driving
- ✓ Hazard Communication
- ✓ Supervisor Training
- ✓ Rigging Safety
- ✓ OSHA 10/30 Hour Construction Safety
- ✓ Crane Signal Person / Crane Safety
- ✓ JLG Aerial Work Platform Safety
- ✓ HAZWOPER Site Supervisor
- ✓ Transportation Worker Identification (TWIC)
- ✓ Arsenic Hazard Awareness
- ✓ Crystalline Silica Hazard Awareness
- ✓ Powder Actuated Tools
- ✓ Fall Protection
- ✓ Lead Awareness
- ✓ Confined Space
- ✓ First Aid, CPR & AED
- ✓ Drug & Alcohol Supervisor Awareness
- ✓ Asbestos Abatement Supervisor
- ✓ HAZWOPER
- ✓ Electrical Safety
- ✓ Fire Extinguisher & Prevention
- ✓ Cadmium Hazard Awareness
- ✓ Scaffold User
- ✓ DOT Security



## Relevant Projects

| PROJECT   | LOCATION         | CONTRACT AMOUNT | TYPE OF WORK  |
|---|------------------|-----------------|---|
| MA0851 – USS ET Works – Tundish and Caster Maintenance Demo | Braddock, PA     | \$2,748,000     | Demolition of various Tundish and Caster Maintenance Buildings, support buildings and pipe racks. Demolition buildings to grade with select removal of foundations.   |
| MA0838 – Celgene Summit NJ Buildings S1 & S8/9/10           | Summit, NJ       | \$6,705,000     | Demolition of 4 concrete buildings totaling 347,000 sq. ft. Buildings S8/9/10 are post tension construction with foam insulation. Demo buildings to grade, remove slabs and foundations w/ basements (S1 slab is contaminated).   |
| MA0837 – Honeywell LCP Holtrachem                           | Riegelwood, NC   | \$1,475,000     | Asbestos abatement, universal and regulated waste removal, demolition to grade and fill pits of a former chlor-alkali manufacturing plant. This site is a Superfund site with PCB and Hg contamination in the soils. Structures include steel framed buildings, block buildings, tank farms and pipe racks. |
| MA0792 – Novartis   | East Hanover, NJ | \$2,975,000     | Demolition of 4-story steel framed former vivarium. Attached to building 436 (to remain) on west face and loading dock on north side.   |
| MA0767 – Pfizer Sanford                                     | Sanford, NC      | \$1,347,600     | Removal of interior equipment, walls, mezzanine structures and non structural components in pharmaceutical production space.  |
| MA0751 – Merck West Point Buildings 26A & 27                | Lansdale, PA     | \$2,325,000     | Asbestos and PCB caulk abatement, and demolition of Bldg 26A - 4-story concrete framed laboratory and Bldg 27 – 1&2 story steel framed construction. Remove slabs & foundations, preserve connected structures.   |
| MA0749 – PECO, Philadelphia, PA – Pierce Phelps Bldg        | Philadelphia, PA | \$1,884,000     | Asbestos abatement and demolition of high bay 1-story warehouse, steel frame with 3 story steel frame attached office, including slabs and foundations. Crush concrete, backfill office basement, grade for drainage.   |
| MA0719 – PSEG Sewaren Combined Cycle Site Prep              | Sewaren, NJ      | \$1,212,501     | Remove petroleum products residuals, asbestos abatement, demolition of above ground storage tanks, warehouse and remove all underground foundations and utilities associated with former tank farm in preparation for construction of a combined cycle plant.   |
| MA0481 – MLC Massena  | Massena, NY      | \$8,573,200     | Superfund Site – Asbestos abatement, PCB remediation (caulk, concrete, steel and soil), and demolition of steel casting facility and associated equipment. Work included utility reroutes, wastewater treatment, 16,000 tons of contaminated soil removed and demolition of 165' water tower.               |

## Nicholas McGarel, CHST, CIT

Brandenburg Industrial Service Company  
2625 South Loomis | Chicago, Illinois 60608  
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[mcgnic@brandenburg.com](mailto:mcgnic@brandenburg.com)

### Work Experience

2016-Present

#### **Brandenburg Industrial Service Company**

##### *Environmental Health & Safety Engineer*

- ✓ Responsible for the safety of Brandenburg Industrial Service Company personnel on various demolition and asbestos abatement projects
- ✓ Responsible for ensuring Brandenburg Industrial Service Company personnel comply with OSHA, MSHA and Site Specific safety requirements as well as all Brandenburg Industrial Service Company safety requirements
- ✓ Responsible for various safety training such as fire watch, hole watch, confined space, high reach and site specific training of Brandenburg Industrial Service Company personnel
- ✓ Responsible for reviewing, revising and creating Health and Safety Programs for project sites
- ✓ Responsible for respiratory fit testing of Brandenburg Industrial Service Company personnel
- ✓ Responsible for the review of site conditions before work commences to create a safe plan of work
- ✓ Interface with regulatory agencies such as OSHA, Departments of Labor and Industry and Departments of Administrative Services
- ✓ Interface with the customer safety staff (plant and corporate) to execute project specifications

### Special Training

- ✓ First Aid, CPR & AED
- ✓ Fire Extinguisher & Prevention
- ✓ Crystalline Silica Hazard Awareness
- ✓ JLG Aerial Work Platform Safety
- ✓ Fall Protection
- ✓ Lead Awareness
- ✓ Hazard Communication
- ✓ Certified Instructional Trainer (CIT)
- ✓ Asbestos Abatement Supervisor
- ✓ XRF Training
- ✓ OSHA 30 Hour In Construction Safety & Health
- ✓ Supervisor Training
- ✓ Hazard Recognition
- ✓ DOT Security Plan
- ✓ HAZWOPER Supervisor
- ✓ Hazardous Material Transportation (HM-181)
- ✓ Arsenic Hazard Awareness
- ✓ Cadmium Hazard Awareness
- ✓ Construction Health & Safety Technician (CHST)

## Relevant Projects

| PROJECT   | LOCATION         | CONTRACT AMOUNT | TYPE OF WORK   |
|---|------------------|-----------------|--|
| IL2147 – GM Hamtramck Body and Assembly Lines               | Detroit, MI      | \$11,774,237    | Interior strip out of 2,971,000 sf of equipment in body shop and general assembly area.  |
| IL2143 – USSGW Foul Gas Mains                               | Gary, IN         | \$1,634,953     | Asbestos abatement and demolition of 72" foul gas mains and supporting structures. Including removal of coake oven gas, under fire gas, flushing liquor, and utility piping.   |
| IL1973 – DOW Power 4  | Freeport, TX     | \$3,680,000     | Demolition of power block consisting of 2 steam boilers, 1 HRU boiler, 3 steam turbines, 2 condensers, 1 HRU Generator, multiple buildings, 2 overhead gantry cranes, pipe racks, and tank farms   |
| IL1945 – West Calumet Housing Complex Demo East Chicago, IN | East Chicago, IN | \$3,490,220     | Demolition of 112 residential structures located on approximately 38 acres, including slabs and foundations. Also includes SWPPP, sidewalks, asphalt.  |
| IL1940 – Cargill Eddyville Boilers 1-3                      | Eddyville, IA    | \$2,089,751     | Asbestos abatement and demolition of three coal fired stoker hanging boilers   |
| IL1866 – Silver Cross Hospital                              | Joliet, IL       | \$3,352,000     | Demolition of 7-story reinforced concrete former hospital structures, including bridge structure and pavement. Crush all concrete, brick and asphalt and use as backfill, topsoil and hydro seed.  |
| IL1793 – St. Francis Beech Grove Hospital                   | Beech Grove, IN  | \$7,166,009     | Demolition of eleven story structural steel tower building with brick walls, 5-story masonry constructed (original wing) and multiple service buildings. Including site preparation, traffic control, utility & sewer disconnection, asbestos abatement, universal waste, loose chemicals, PCB transformers, artifact salvage, building demolition, slab & foundation removal, backfill, site restoration, topsoil & seed. |
| IL1784 – MRMC Interior & Exterior Demolition                | Wauwatosa, WI    | \$4,635,285     | Demolition of 3 boilers, precipitators, stacks, generators, coal conveyors, ash silo, cooling tower and chillers at Milwaukee Regional Medical Center Power Plant.   |
| IL1238 – Dow Unit 2 Oyster Creek                            | Freeport, TX     | \$10,100,000    | Asbestos abatement and demolition of entire Unit 2 Plant including pedestals to top of slab.   |
| IL1158 – Asarco Contop & Reverb Furnaces                    | El Paso, TX      | \$6,643,931     | Asbestos abatement, decontamination of structures from heavy metal, pressure wash structures, and demolition of Reverb & Contop structures, buck stays, and furnace structures.  |

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Brandenburg®  
[www.Brandenburg.com](http://www.Brandenburg.com)

**VI Major Equipment and remediation tools**

- A. 1120N non-woven geotextile fabric
- B. 15-mil liner (to be provided at later time)
- C. Nikro Mercury Recovery Vacuum
- D. Spilfyter
- E. Snap up Berms
- F. IBC
- G. Dustless Blast System - DB225

\*Technical Specs to be submitted under separate cover per specification section

# Mirafi® 1120N



Mirafi® 1120N is a needlepunched nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. Mirafi® 1120N is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.

TenCate Geosynthetics Americas Laboratories are accredited by a2La (The American Association for Laboratory Accreditation) and Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

| Mechanical Properties                    | Test Method | Unit  | Minimum Average Roll Value |            |
|--|-------------|---|----------------------------|------------|
|  |             |   | MD                         | CD         |
| Grab Tensile Strength                    | ASTM D4632  | lbs (N)   | 300 (1335)                 | 300 (1335) |
| Grab Tensile Elongation                  | ASTM D4632  | %   | 50                         | 50         |
| Trapezoid Tear Strength                  | ASTM D4533  | lbs (N)   | 115 (512)                  | 115 (512)  |
| CBR Puncture Strength                    | ASTM D6241  | lbs (N)   | 800 (3560)                 |            |
| Apparent Opening Size (AOS) <sup>1</sup> | ASTM D4751  | U.S. Sieve (mm)                                 | 100 (0.15)                 |            |
| Permittivity                             | ASTM D4491  | sec <sup>-1</sup>                               | 0.8                        |            |
| Flow Rate                                | ASTM D4491  | gal/min/ft <sup>2</sup> (l/min/m <sup>2</sup> ) | 65 (2648)                  |            |
| UV Resistance (at 500 hours)             | ASTM D4355  | % strength retained                             | 70                         |            |

<sup>1</sup> ASTM D4751: AOS is a Maximum Opening Diameter Value

| Physical Properties              | Unit                              | Typical Value <sup>2</sup> |
|----------------------------------|-----------------------------------|----------------------------|
| Roll Dimensions (width x length) | ft (m)                            | 15 x 300 (4.57 x 91.4)     |
| Roll Area                        | yd <sup>2</sup> (m <sup>2</sup> ) | 500 (418)                  |
| Estimated Roll Weight            | lb (kg)                           | 374 (170)                  |

<sup>2</sup> ASTM D4439 Standard Terminology for Geosynthetics: typical value, *n*—for geosynthetics, the mean value calculated from documented manufacturing quality control test results for a defined population obtained from one test method associated with on specific property.

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ETQR29



GAI-LAP-25-97



Testing Lab 1291.01 & 1291.02



# NIKRO

## MERCURY RECOVERY VACUUMS



*For A Safer Environment*



## MERCURY RECOVERY VACUUM

These **NIKRO** Mercury Vacuums are ideal for collecting both liquid mercury and mercury contaminated particulate matter, and returning clean air to the environment.

Each vacuum system features a liquid mercury separator (that allows the operator to collect and separate the mercury in a removable, seal-able collection jar), a disposable collection filter bag, a 99.97% @ 0.3 micron HEPA (High Efficiency Particulate Air) Filter and a high capacity activated carbon filter.

Extremely portable, each unit comes complete with a dolly cart assembly.

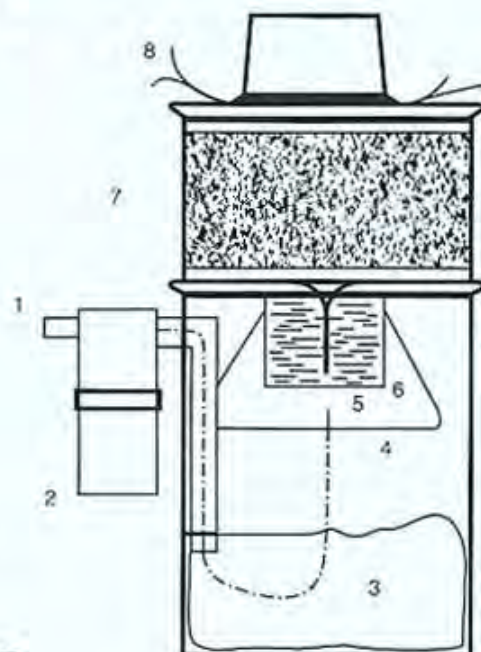
The **NIKRO** Mercury Vacuums are ideal for recovering mercury in labs, hospitals, emergency clean-up, and any other areas where the possibility of mercury contamination exists.

**NIKRO** offers four mercury vacuums to choose from, a 15 gallon stainless steel vacuum, 15 gallon painted steel, and a 15 gallon polyethylene for larger collection, or a 6 gallon stainless steel unit ideal for smaller spills.

When it comes to cleaning the air... TURN TO **NIKRO** FOR A SAFER ENVIRONMENT.

### OPERATION

- 1) Liquid mercury and mercury contaminated particulate enters the liquid mercury separator.
- 2) In the liquid mercury separator the liquid mercury is separated and collected in a removable jar.
- 3) The first stage of filtration is a disposable collection filter bag. Here is where dry contaminated particulate is collected.
- 4) The second stage filter is a non-clinging dacron filter bag.
- 5) The next stage of filtration is the micro impact filter designed to protect and extend the life of the HEPA Filter.
- 6) A 99.97% @ 0.3 micron HEPA Filter removes fine particulate from the air stream.
- 7) A high capacity activated carbon filter module, designed to trap mercury vapor.
- 8) Clean air is exhausted to the environment.



### SPECIFICATIONS

| MODEL #     | TANK SIZE | TANK TYPE       | CHARCOAL BED | AIR FLOW | STATIC LIFT | VOLTS/ AMP | TOOL KIT |
|-------------|-----------|-----------------|--------------|----------|-------------|------------|----------|
| MV00688-SS  | 6gal.     | Stainless Steel | 20lbs.       | 95       | 88"         | 115/8*     | 6pc      |
| MV15110-PLY | 15gal.    | Polyethylene    | 32lbs.       | 115      | 110"        | 115/13*    | 6pc      |
| MV15110-PTD | 15gal.    | Painted Steel   | 32lbs.       | 115      | 110"        | 115/13*    | 6pc      |
| MV15110-SS  | 15gal.    | Stainless Steel | 32lbs.       | 115      | 110"        | 115/13*    | 6pc      |

\*220V Optional



# Spilfyter Product Data Sheet

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**PRODUCT CODE:** 522500

**RANGE:** N/A

**PRODUCT TYPE:** Mercsorb® Powder  
2.5kg Shaker Bottle

**COMPONENTS:** N/A

**WEIGHT (KG):** 3.18

**ADSORBENCY (LITERS):** N/A

**PACKAGING:** Box

**LITERS/M3:** 0.01

**PALLET QTY:** 210

**FEATURES AND BENEFITS:** Used to convert elemental mercury into an amalgam which stops dangerous mercury vapors from being emitted. Can adsorb up to 15gr of Hg/100gr of carbon.



[www.spilfyter.eu](http://www.spilfyter.eu)

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## HOW TO USE MERCSORB® AMALGAMATION POWDER:

1. Evacuate employees from the spill area.
2. Personal protective equipment for exposure to mercury should be worn.
3. Ventilate the contaminated area.
4. Activate the MERCSORB® Amalgamation Powder with two (2) ounces (.06 liter) powder in a nine (9) ounce (.26 liters) plastic mixing cup.
5. Add four (4) ounces (.12 liter) water and mix with a wooden spatula to form a paste.
6. Apply a strip of the paste across the edge of the mercury contaminated area. Push the strip slowly across the contaminated surface with a wooden spatula. Apply the paste in one direction only. Small droplets of mercury will be absorbed in the MERCSORB® paste.
7. Apply a second strip of the MERCSORB® paste to the area and push the strip across the area a second time.
8. Place the contaminated paste into a sealed plastic container.
9. Scrub the contaminated area using a moist sponge and warm soapy water.
10. Dispose of the used items and products in accordance with all local, state and federal regulations.

| Product Sorbency Rates |                            |           |                      |                    |
|------------------------|----------------------------|-----------|----------------------|--------------------|
| Product Number         | Product Description        | Qty/ Case | Lbs. Sorbed per Case | ml Sorbed per Case |
| 520250                 | Mercury Spill Kit          | 1         | 0.75                 | 25                 |
| 520260                 | Economy Mercury Spill Kit  | 1         | 1.5                  | 50                 |
| 520270                 | Amalgamation Powder, 270g  | 1         | 0.75                 | 25                 |
| 520500                 | Amalgamation Powder, 500g  | 1         | 1.375                | 46                 |
| 522500                 | Amalgamation Powder, 2500g | 1         | 6.9                  | 230                |

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# STINGER SNAP-UP BERM™

**THE WORLDWIDE LEADER IN LARGE, AGGRESSIVE AND IMMEDIATE SPILL RESPONSE.**

The ENPAC® Stinger Berm™ leads the industry with its wide range of sizes and capacities for large-scale spill containment. Stinger Berms feature excellent rip, tear, and puncture resistance for the most demanding application or terrain. Ground Pad and TracMat™ provide additional protection.

- Easy to assemble snap-up design permits immediate response
- Compact storage and transport
- Air-lance tested containment welds for maximum product performance
- Lap joint welds for maximum strength
- Individual serial numbers
- CAD designed and cut components
- Fuel/chemical resistant containment area
- Custom sizes and special materials available
- Cold rated to -30° F/-34° C
- Available in Arctic Grade
- Now available in a 2' L-Bracket sidewall!



Easy set up and take down.  
Custom sizes and special materials available.



## STINGER SNAP-UP BERMS™

| Part #         | Dimensions L x W x H ft. (m)     | Weight lb. (kg) | Spill Cap. gal. (L) |
|----------------|----------------------------------|-----------------|---------------------|
| 4801-BK-SU     | 4 x 4 x 8" (1.2 x 1.2 x 20 cm)   | 11 (5)          | 80 (302)            |
| 4802-BK-SU     | 4 x 4 x 1 (1.2 x 1.2 x 30 cm)    | 18 (11.4)       | 119 (451)           |
| 4803-BK-SU     | 4 x 6 x 8" (1.2 x 1.8 x 20 cm)   | 25 (8)          | 119 (451)           |
| 4804-BK-SU     | 4 x 6 x 1 (1.2 x 1.8 x 30 cm)    | 28 (13)         | 179 (678)           |
| 4805-BK-SU     | 4 x 8 x 8" (1.2 x 2.4 x 20 cm)   | 21 (9.5)        | 159 (602)           |
| 48-5101-BK-SU  | 5 x 10 x 1 (1.5 x 3 x 30 cm)     | 45 (20)         | 374 (1,416)         |
| 4806-BK-SU     | 6 x 6 x 1 (1.8 x 1.8 x 30 cm)    | 37 (16.3)       | 269 (1,018)         |
| 4807-BK-SU     | 8 x 8 x 8" (2.4 x 2.4 x 20 cm)   | 35 (16)         | 319 (1,207)         |
| 4810-BK-SU     | 10 x 10 x 1 (3.1 x 3.1 x 30 cm)  | 60 (27.3)       | 748 (2,831)         |
| 4812-BK-SU     | 12 x 12 x 1 (3.7 x 3.7 x 30 cm)  | 80 (36.3)       | 1,077 (4,077)       |
| 4816-BK-SU     | 16 x 16 x 1 (4.9 x 4.9 x 30 cm)  | 113 (51)        | 1,914 (7,245)       |
| 4820-BK-SU     | 10 x 26 x 1 (3.1 x 7.9 x 30 cm)  | 122 (55)        | 1,944 (7,359)       |
| 48-10401-BK-SU | 10 x 40 x 1 (3 x 12.2 x 30 cm)   | 150 (68)        | 2,992 (11,326)      |
| 48-10451-BK-SU | 10 x 45 x 1 (3 x 13.7 x 30 cm)   | 155 (70)        | 3,366 (12,742)      |
| 48-12201-BK-SU | 12 x 20 x 1 (3.7 x 6 x 30 cm)    | 130 (58)        | 1,795 (6,795)       |
| 4826-BK-SU     | 12 X 26 X 1 (3.7 X 7.9 X 30 cm)  | 140 (63)        | 2,334 (8,835)       |
| 4836-BK-SU     | 12 x 36 x 1 (3.7 x 11 x 30 cm)   | 165 (74.8)      | 3,231 (12,230)      |
| 48-12501-BK-SU | 12 x 50 x 1 (3.7 x 15.2 x 30 cm) | 250 (113)       | 4,488 (16,989)      |
| 4850-BK-SU     | 15 x 50 x 1 (4.6 x 15.2 x 30 cm) | 268 (121)       | 5,610 (21,236)      |
| 4854-BK-SU     | 14 x 54 x 1 (4.3 x 16.5 x 30 cm) | 252 (114.5)     | 5,654 (21,402)      |
| 4860-BK-SU     | 12 x 60 x 1 (3.7 x 18.3 x 30 cm) | 285 (129)       | 5,385 (20,384)      |
| 4866-BK-SU     | 14 x 66 x 1 (4.3 x 20.1 x 30 cm) | 337 (153)       | 6,911 (26,160)      |
| 4885-BK-SU     | 14 x 85 x 1 (4.3 x 25.9 x 30 cm) | 500 (227)       | 8,901 (33,693)      |
| 48-20401-BK-SU | 20 x 40 x 1 (6 x 12.2 x 30 cm)   | 280 (127)       | 5,984 (22,652)      |
| 48-20601-BK-SU | 20 x 60 x 1 (6 x 18.3 x 30 cm)   | 600 (272)       | 8,976 (33,979)      |
| 48-25401-BK-SU | 25 x 40 x 1 (7.6 x 12.2 x 30 cm) | 310 (140)       | 7,480 (28,314)      |

Regulations: EPA 40 CFR 264.175, SPCC, NPDES

## STINGER L-BRACKET BERMS™

| Part #         | Dimensions L x W x H ft. (m)    | Weight lb. (kg) | Spill Cap. gal. (L) |
|----------------|---------------------------------|-----------------|---------------------|
| 48-10102-SU-SS | 10 x 10 x 2 (3 x 3 x 61 cm)     | 180 (81)        | 1,496 (5,663)       |
| 48-15152-SU-SS | 15 x 15 x 2 (4.6 x 4.6 x 61 cm) | 220 (99)        | 3,366 (12,742)      |
| 48-20202-SU-SS | 20 x 20 x 2 (6.1 x 6.1 x 61 cm) | 380 (172)       | 5,984 (22,652)      |

Regulations: EPA 40 CFR 264.175, SPCC, NPDES

\*Image not shown.

1-800-936-7229

21



## UN Rated Poly IBC (Intermediate Bulk Container)

DRM1142 330 gal., Composite Pallet, 39" x 47" x 53"

Eliminate the hassle of storing and moving up to six drums with just one of these FDA Compliant totes!

- Extrusion blow-molded HDPE tank is chemical resistant and specially shaped to completely discharge contents
- Galvanized square tube steel frame provides a strong, rust-resistant protective barrier
- Composite pallet is stronger than wood and lighter than steel; plastic corners resist breaking
- 4-way forklift entries on pallet let you stack units up to four high to save space
- Integrated 2" butterfly valve with outlet nozzle furnishes precise control for dispensing liquids
- 330 gallon capacity to handle bulk storage needs
- Made from FDA Compliant resins for containment of food and cosmetic products (must be cleaned prior to use)

### Specifications

|                  |  |
|------------------|--|
| Style            | Composite Pallet                       |
| Color            | White                                  |
| Dimensions       | 39" W x 47" L x 53" H                  |
| Storage Capacity | 330 gal.                               |
| Containment Type | IBC                                    |
| Drain            | 2" Dia. Drain                          |
| Top Opening      | (1) 6" Screw Cap w/ 2" Threaded Insert |
| Sold as          | 1 each                                 |
| Weight           | 126 lbs.                               |

### Composition

Frame - Galvanized Steel  
Pallet - Steel & Polyethylene (HDPE)  
Bottle - Polyethylene (HDPE)

### UNSPSC

24112110

### Pigalog® Page Number

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### Metric Equivalent

|                  |                                  |
|------------------|----------------------------------|
| Dimensions       | 99.1cm W x 119.4cm L x 134.6cm H |
| Storage Capacity | 1249.1 L                         |



# DB225<sup>®</sup>

## USER MANUAL





## The **Future** of **Surface Preparation**®

**MMLJ, INC.**  
5711 Schurmier Rd.  
Houston TX, 77048

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 **Youtube.com/MMLJManufacturing**

 **@DustlessBlaster**

 **Dustless\_Blasting**

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## A NOTICE TO INTERNATIONAL DISTRIBUTORS:

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**International Distributors are responsible for translation of the manual.**

**Please read and understand manual fully prior to operating any machinery.**

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## IMPORTANT

(Pertinent to blast machines)

### WARNING

Before operating any abrasive blast cleaning equipment READ ALL operating and maintenance instructions. Personal protective equipment is REQUIRED when using this type of equipment. Operator MUST be equipped with heavy canvas or leather gloves, aprons, and arm protectors. Safety shoes and hearing protection MUST be worn when required. NIOSH approved air fed respirators (helmets) furnished with at least Grade D breathing air MUST be used for protection against dust inhalation. Air MUST be filtered and monitored for Carbon Monoxide.

### DANGER.

Use of Abrasive cleaning equipment with silica sands may produce a heavy concentration of silica dust. Breathing this dust can produce "Silicosis", a permanent lung disease. Depending upon the object to be cleaned, blasting, even with non-silica abrasives, may release hazardous dust particles into the air that can cause permanent lung damage. Failure to use NIOSH approved air fed respirator (helmet) may cause SERIOUS lung DAMAGE. This warning, as to the proper use of an approved respirator (helmet), applies not only to the operator, but extends to all those working in or around the blasting area, such as pot tenders, painters, supervisors, etc.

### CAUTION

Blast cleaning equipment and components are subjected to wear and deterioration.

- Keep your equipment in good operable condition.
- MAINTAIN control of the nozzle at all times during operation.
- INSPECT machine, nozzles, hoses, and couplings.
- Inspect, clean, or replace helmet lens and filters frequently.
- Ground equipment to AVOID electrical shock.
- DO NOT operate any machine without thorough knowledge of machine operation.

Carefully READ the INSTALLATION, OPERATING, AND MAINTENANCE directions supplied with the machine from the factory. If you do not have a copy, please contact your employer (supervisor) or MMLJ Inc.

## IMPORTANTE

(Relativo a todas maquinas)

### ADVERTENCIA

Antes de operar cualquiera de los equipos de limpieza con chorro abrasivo, LEA TODOS las instrucciones de operacion y mantenimiento. ES OBLIGATORIO usar equipo protector personal al manejar este tipo de equipos. El Operador DEBE. estar equipado con guantes, delantales y protectores de brazos de cuero o lona pesada. DEBEN usarse zapatos de seguridad y proteccion para los oldos cuando aSI se exija. Los respiradores (cascos) alimentados por aire, aprobados por NIOSH y que esten previstos de por 10 menos aire respi rable de Grado D, DEBEN ser usados como proteccion contra la inhalacion de polvo. El aire DEBE ser filtrado y controlado para detectar monoxide de carbono.

### PELIGRO

Es posible que el uso de los equipos de limpieza por abrasion con arenas sillceas provoque una concentracion pesada de polvo sillceo. Este polvo, al ser respirado, puede producir "silicosis", que es una enfermedad pulmonar permanente. Dependiendo del objeto que va a limpiarse, es posible que la limpieza a chorro, aun con abrasives no sillceos, provoque el escape de partculas de pohio pel igrosas en el aire que pueden causar dano pulmonar permanente. Si nose usan los respiradores (cascos) alimentados por aire, aprobados por NIOSH, puede provocarse un GRAVE DANO a los pulmones. Esta advertencia sobre el uso adecuado de un respirador (casco) aprobado no solo se aplica al operador sino que comprende a todos aquellos que trabajan en el area de limpieza a chorro, o al rededor de la misma, como por ejemplo los que vigilan los recipientes, los pintores, supervisores, etc.

### PRECAUCION

El equipo de limpieza a chorro y sus componentes estan sujetos a desgaste y deterioro.

- Mantenga su equipo en buenas condiciones de operacion,
- MANTENGA el control de la boquilla en todo momento durante la operacion.
- INSPECCIONE la maquina, las boquillas, las mangueras y las uniones.
- ALAMBRE juntas todas las uniones de la manguera de rapido ajuste.
- Inspeccione, limpie o reemplace los lentes y filtros del casco frecuentemente.
- Conecte el equipo a tierra para EVITAR un shock electrico.
- NO opere ninguna maquina sin tener un detallado conocimiento de la operacion de la misma.

LEA cuidadosamente las instrucciones de INSTALACION, OPERACION Y MANTENIMIENTO que vienen incluidas de fabrica con la maquina. Si no tiene una copia, sllrvase comunicarse con su empleador (supervisor) con MMLJ Inc.

# **BLAST POT WARRANTY**

## **MMLJ, INC. LIMITED WARRANTY**

---

### **IMPORTANT: Terms of Warranty**

MMLJ, Inc. warrants that the product you have purchased is free from defects in materials or workmanship under normal use during the warranty period. Your sales receipt, showing the data of purchase for this product, is your proof of the date of purchase. This warranty is valid only if the product is assembled/installed according to the instructions included with the product. This warranty extends only to you, the original purchaser. It is not transferable to anyone who subsequently purchased the product from you.

During the warranty period, MMLJ, Inc. will repair or replace (at MMLJ, Inc.'s option) the product if it becomes defective or otherwise fails to conform to this Warranty under normal use. In repairing the product, MMLJ, Inc. may replace defective part with new, or at the option of MMLJ, Inc., serviceable used parts that are equivalent to new parts in performance. MMLJ, Inc. reserves the right to change manufacturers of any part to cover any existing warranty. This extends to items normally covered by a manufacturer other than MMLJ, Inc. used on this product within the first calendar year of purchase.

This warranty does not cover shipping charges; export taxes, custom duties and taxes, or any other charges associated with transportation of the parts or products. To obtain warranty service, you must contact MMLJ, Inc.'s customer service representative. Any parts determined to be defective must be brought to the attention of MMLJ, Inc. within 6 months of delivery of equipment. You must prepay any shipping charges, export taxes, custom duty taxes, or any other charges associated with transportation of the parts or product. In addition, you are responsible for insuring any parts or product shipped or returned. You assume the risk of loss during the shipment. You must present MMLJ, Inc. with proof-of-purchase documents (including the date of purchase). Any evidence of alteration, erasure, or forgery of proof-of-purchase documents will be cause to void this warranty.

The warranties listed above do not extend to any product that has been damaged or rendered defective (a) as a result of accident, misuse, or abuse (b) by the use of parts not manufactured or sold by MMLJ, Inc. and/or (c) by modification or improper installation of the product. Product on which the serial number has been defaced or removed is not eligible for warranty service. Should any product submitted for warranty service be found ineligible, an estimate of repair cost will be furnished and the repair will be made if requested by you upon MMLJ receipt of payment or acceptable arrangements for payment. Except, as expressly set forth in this warranty, MMLJ makes no other warranties, expressed or implied. This is the only express warranty applicable to Dustless Blasting® branded products. MMLJ does not assume, nor authorize anyone to assume for it any other express warranty.

### **BLAST POT, LIMITED LIFETIME WARRANTY:**

This warranty applies only to pressure vessels manufactured by MMLJ, Inc. under the Dustless Blasting® brand name. This product is backed by a limited lifetime warranty, excluding only expendable parts such as gauges and valves (which are covered by manufacturer other than MMLJ, Inc.) and paint.

This Limited Warranty does not extend to any product that has been damaged or rendered defective (a) as a result of lack of maintenance, accident, misuse, or (b) abuse by the use of parts not manufactured or sold by MMLJ, Inc. and/or (c) by modification or improper installation of the product.

### **IMPORTANT: Third Party Warranties**

For parts that are not covered by MMLJ, Inc., please contact our office and report the defect. MMLJ, Inc. will then proceed with the warranty process for the affected item on your behalf. All items not covered by MMLJ, Inc. will fall under a limited one year warranty free of manufacturer defects.

For more warranty information, visit [www.DustlessBlasting.com/legal/warranties](http://www.DustlessBlasting.com/legal/warranties).  
Please call our office for any questions on warranties or warranted items.

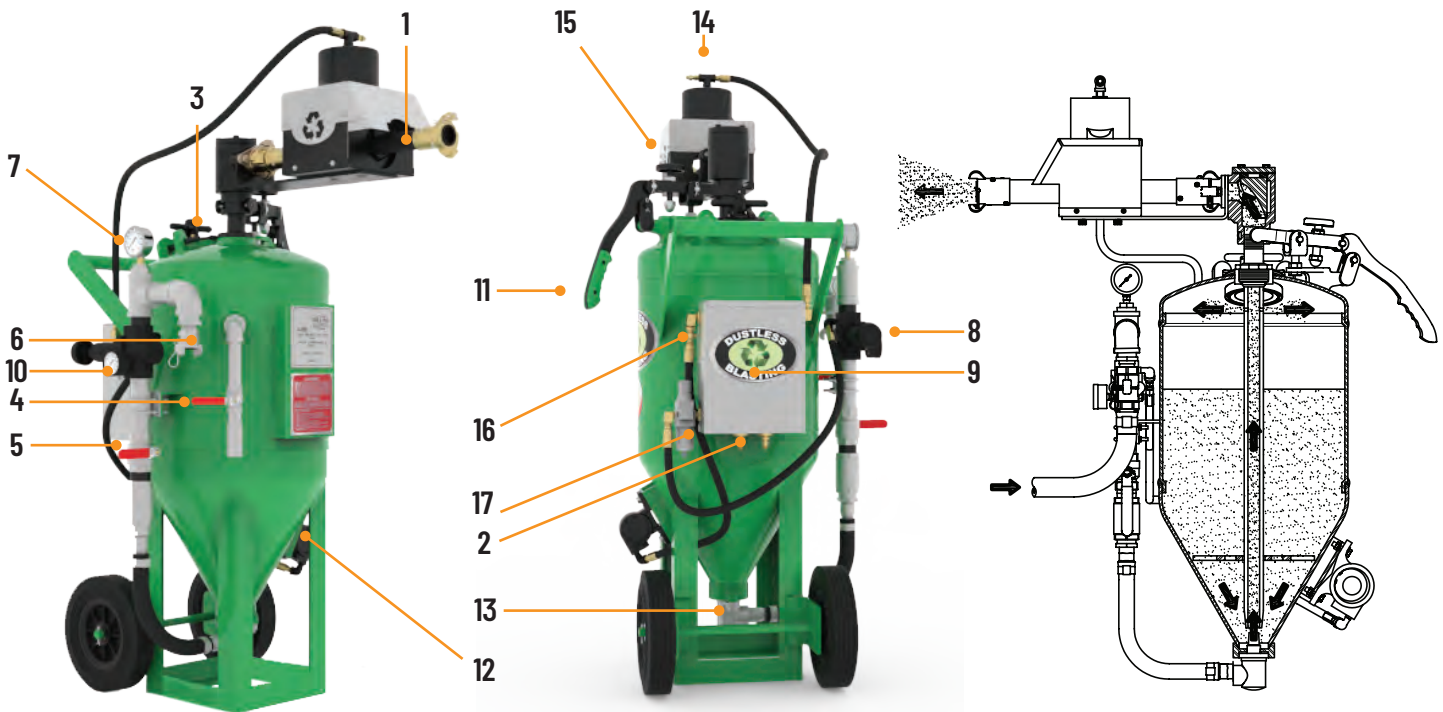
Toll Free: 800-717-5707  
International: +1 713-869-2227  
Support@DustlessBlasting.com





# INSTALLATION AND OPERATING INSTRUCTIONS

PLEASE READ CAREFULLY BEFORE OPERATING



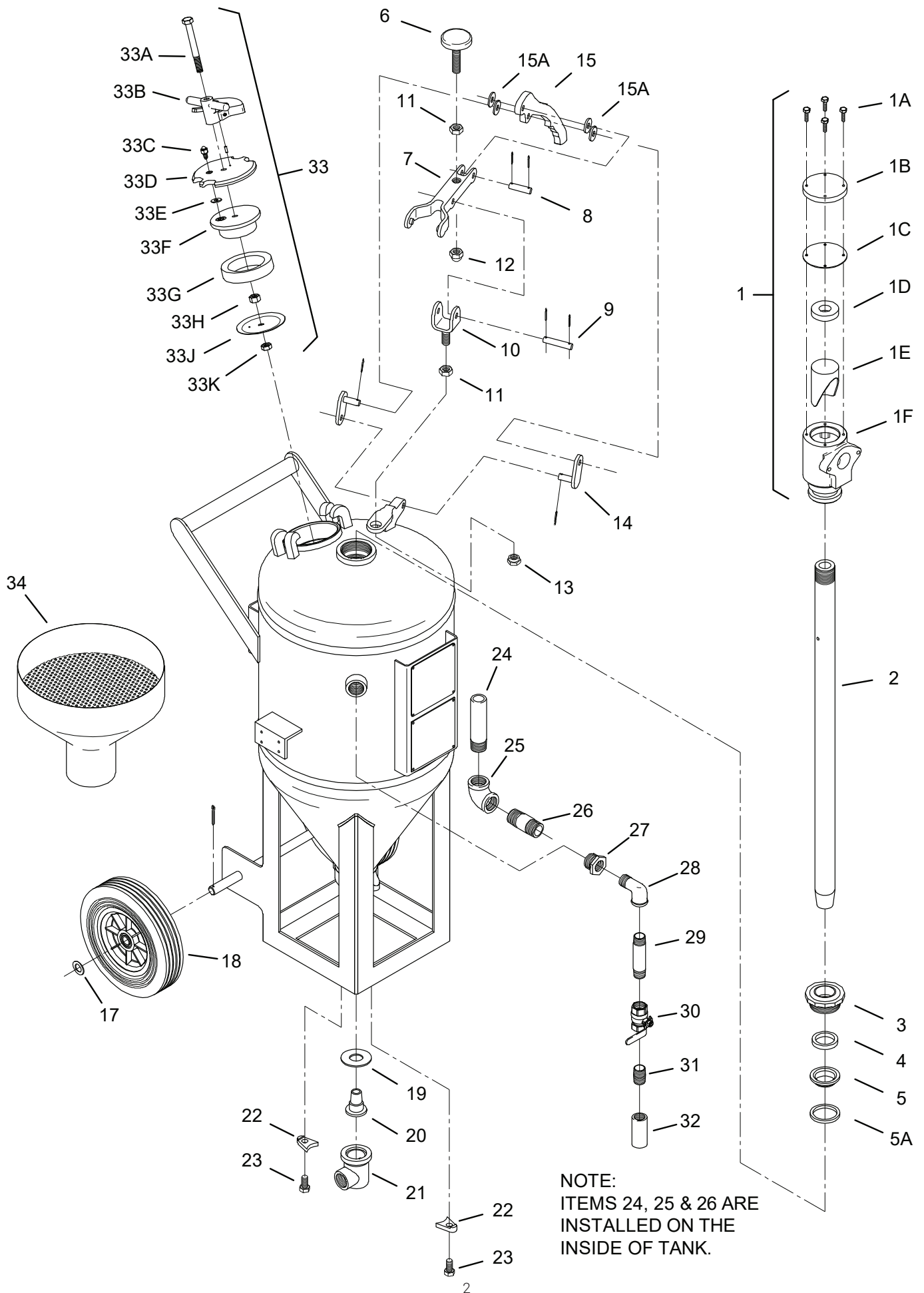
## MODEL DB225 FIGURES

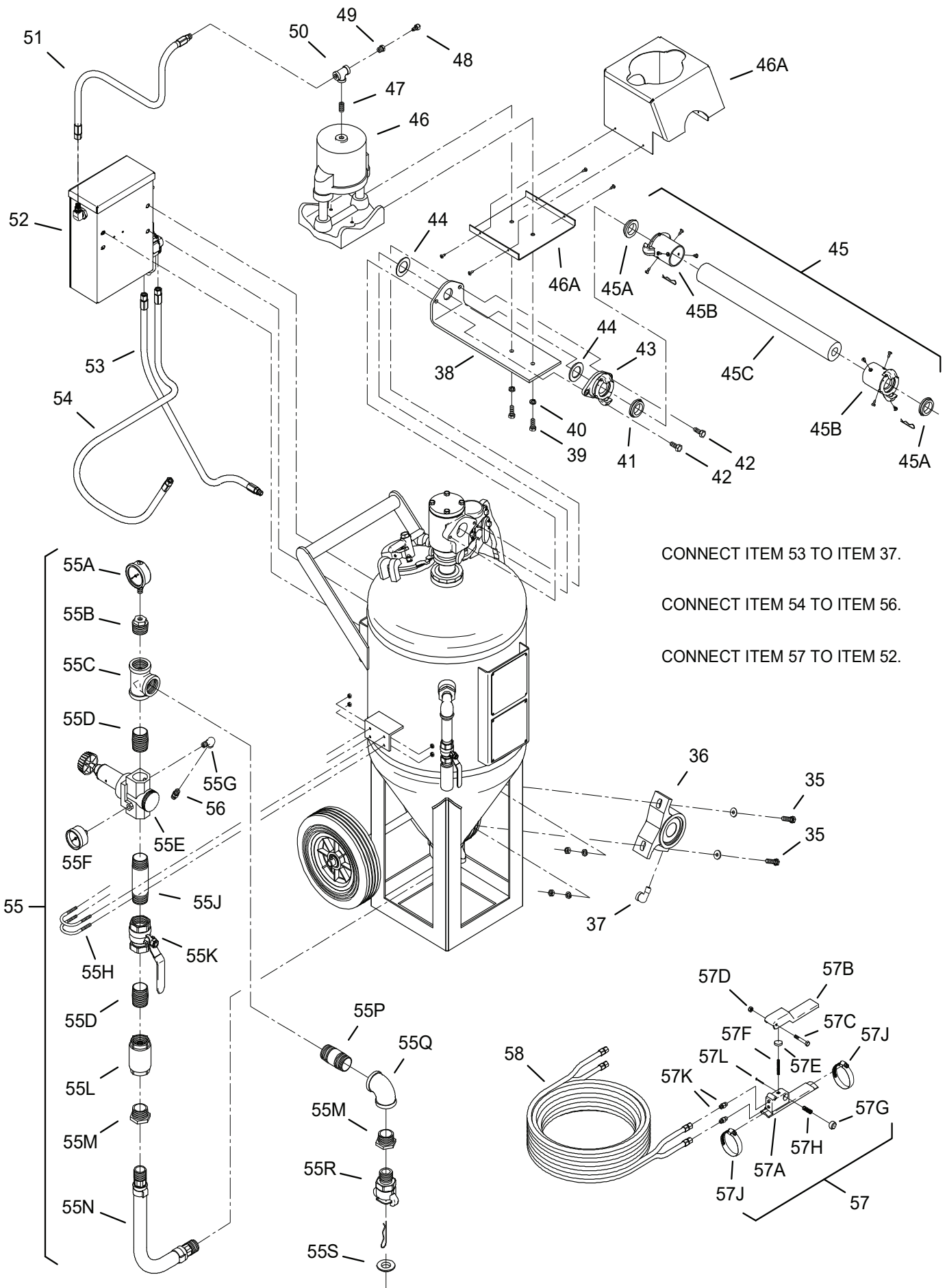
- |                                |                                  |                           |
|--------------------------------|----------------------------------|---------------------------|
| 1. Pinch Hose                  | 7. Compressed Air Pressure Gauge | 13. Air Inlet Valve Body  |
| 2. Control Box Input Couplings | 8. Pressure Regulator            | 14. Pinch Valve           |
| 3. Fill Port                   | 9. Control Box                   | 15. Abrasive Control Knob |
| 4. Blowdown Valve              | 10. Blast Pressure Gauge         | 16. Vibrator Valve        |
| 5. Air Inlet Valve             | 11. Rocker Arm                   | 17. Moisture Trap         |
| 6. Compressed Air Inlet        | 12. Vibrator                     |                           |

Carefully read the **INSTALLATION**, **OPERATING**, and **MAINTENANCE** directions supplied with the machine from the factory. If you do not have a copy, please contact your employer (supervisor) or the MMLJ Inc. Company.

This system will mix clean water, rust inhibitor, and abrasive together. The **DB225** is designed to hold:

- 10 gallons of clean water
- 14 oz of Rust Inhibitor
- 100 lbs of Abrasive, mesh size approx. 40/70





| Item No. | Description   | Part No.    | Stock No.        | Qty. |
|----------|---|-------------|------------------|------|
| 1        | Outlet Elbow Assembly Complete                            | M-17        | 72974/001        | 1    |
| 1A       | Outlet Elbow Cap Bolts (4)                                | M-17-D      | 82563/001        | 1    |
| 1B       | Outlet Elbow Cap  | M-17-C      | 131054/001       | 1    |
| 1C       | Outlet Elbow Cap Gasket                                   | M-17-G      | 131227/001       | 1    |
| 1D       | Outlet Elbow Insert Gasket                                | M-23-G      | 131147/001       | 1    |
| 1E       | Outlet Elbow Insert                                       | M-23        | 73602/001        | 1    |
| 1F       | Outlet Elbow Body   | M-17-B      | 80789/001        | 1    |
| 2        | 34-1/2" Outlet Pipe, 1-5/8" OD                            | 500-2       | 134613/001       | 1    |
| 3        | Packing Gland   | M-5-1       | 131102/001       | 1    |
| 4        | Gasket  | M-13        | 131226/001       | 1    |
| 5        | Gasket  | M-5-G       | 131225/001       | 1    |
| 5A       | Seal (manufactured after 5/15/13)                         |             | M-6-S 131226/002 | 1    |
| 6        | Rocker Arm Adjusting Screw                                | AB-8        | 73464/001        | 1    |
| 7        | Rocker Arm  | M-3         | 73481/001        | 1    |
| 8        | Abrasive Lever Clevis Pin w/ Cotter Pins                  | AB-11-S     | 131070/001       | 1    |
| 9        | Pedestal Clevis Pin w/ Cotter Pins                        | AB-12-S     | 131069/001       | 1    |
| 10       | Rocker Arm Hinge Yoke                                     | AB-75       | 131113/001       | 1    |
| 11       | Pedestal Locking Nut/Fill Cap Hold-Down Screw Locking Nut | AB-75-C     | 22926/001        | 2    |
| 12       | Rocker Arm Acorn Nut (5/8"-11)                            | AB-8-AN     | 134687/002       | 1    |
| 13       | Rocker Arm Hinge Yoke Adjusting Nut                       | AB-75-E     | 131094/001       | 1    |
| 14       | Connecting Link w/ Cotter Pins                            | AB-10       | 131133/001       | 1    |
| 15       | Abrasive Control Lever                                    | AB-9        | 73500/001        | 1    |
| 15A      | Abrasive Control Lever Washers                            |             | FBA              | 1    |
| 16       | Wheel Cotter Pin  | AB-33-C     | 72804/001        | 4    |
| 17       | Wheel Washer  | AB-33-W     | 72803/001        | 2    |
| 18       | Wheel   | HE-31-2     | 133734/001       | 2    |
| 19       | Air Inlet Body Gasket                                     | AB-1-G      | 131228/001       | 1    |
| 20       | 1/2" Air Inlet Nozzle                                     | AB-1-NHD    | 131125/001       | 1    |
| 21       | Air Inlet Body  | ABHD-1      | 73478/001        | 1    |
| 22       | Air Inlet Body Lug  | AB-47       | 131231/001       | 2    |
| 23       | Air Inlet Body Lug Bolts (2)                              | AB-47-B     | 23879/005        | 1    |
| 24       | 1" x 4" TOE Nipple  |             | 131353/001       | 1    |
| 25       | 1" Elbow  | AB-61-T     | 131867/001       | 1    |
| 26       | 1" x 3" Nipple  | AB-61-S     | 131861/001       | 1    |
| 27       | 1" x 3/4" Bushing   | AB-61-A     | 131860/001       | 1    |
| 28       | 3/4" 90 Degree Street Elbow                               |             | 131847/001       | 1    |
| 29       | 3/4" x 4" Nipple  | HC-30-N     | 131392/001       | 1    |
| 30       | 3/4" Blow-Off Valve (red handle)                          | AB-61-C     | 70239/001        | 1    |
| 31       | 3/4" Close Nipple   | RC-23       | 131859/001       | 1    |
| 32       | Blow-Off Restrictor                                       | AB-61-R     | 68967/001        | 1    |
| 33       | Fill Cap Assembly   | A-60-1      | 73600/001        | 1    |
| 33A      | Bolt  | AB-60-A     | 70241/001        | 1    |
| 33B      | Fill Cap handle w/ Safety Lock                            | AB-60-H1    | 72812/001        | 1    |
| 33C      | Button Bleeder  | BB-1S       | 69953/001        | 1    |
| 33D      | Fill Cap Plate  | A-60-D1     | 131034/001       | 1    |
| 33E      | CNG Gasket  |             | 72627/001        | 1    |
| 33F      | Fill Cap Body   | AB-60-B1    | 131030/001       | 1    |
| 33G      | Rubber Fill Cap Gasket                                    | A-13-4 1/4  | 73603/001        | 1    |
| 33H      | Inner Nut   | AB-60-E     | 28578/001        | 1    |
| 33J      | Gasket Retainer Plate                                     | A-60-R1     | 131097/001       | 1    |
| 33K      | Outer Nut   | AB-60-F     | 77078/001        | 1    |
| 34       | Fill Funnel   | SB-15-4 1/4 | 133837/001       | 1    |
| 35       | Vibrator Mounting Bolts, Washers, Lock Washers & Nuts     |             | FBA              | 2    |
| 36       | Vibrator  |             | 133811/002       | 1    |
| 37       | 1/4" 90 Degree Street Elbow                               | RC-16       | 73813/001        |      |

| Item No. | Description                                     | Part No.  | Stock No.  | Qty. |
|----------|---|-----------|------------|------|
| 38       | Pinch Valve Plate                               |           | 134611/001 | 1    |
| 39       | Pinch Valve Mounting Bolts (2)                  |           | FBA        | 1    |
| 40       | Pinch Valve Mounting Lock Washers (2)           |           | FBA        | 1    |
| 41       | KF Series Coupling Gasket                       | KFG       | 131148/001 | 1    |
| 42       | Elbow Adapter Bolts (2)                         | KF-17-B   | 23858/001  | 1    |
| 43       | Elbow Adapter, w/ Gasket                        | KF-17     | 80790/001  | 1    |
| 44       | Elbow Adapter Flat Gasket                       | KF-17-G   | 131149/001 | 1    |
| 45       | Short Blast Hose Assembly (P.V. Hose)           |           | 72634/007  | 1    |
| 45A      | KF Series Coupling Gasket                       | KFG       | 131148/001 | 2    |
| 45B      | Hose Coupling w/ Screws                         | KF-3      | 80836/001  | 1    |
| 45C      | 3/4" Blast Hose, Uncoupled (1.5 ft.)            |           | 72634/001  | 1    |
| 46       | Pinch Valve                                     |           | 74290/001  | 1    |
| 46A      | Pinch Valve Safety Cover (complete with screws) |           | 134720/001 | 1    |
| 47       | 1/4" Close Nipple                               |           | 77094/001  | 1    |
| 48       | Button Bleeder                                  | BB-1S     | 69953/001  | 1    |
| 49       | Brass Bushing                                   | DRC-3-B   | 73815/001  | 1    |
| 50       | 1/4" Tee  | RC-19     | 131865/001 | 1    |
| 51       | 3/8" x 52" Air Hose Assembly (Pinch Valve)      |           | 134798/002 | 1    |
| 52       | Pneumatic Control Box                           |           | 133303/500 | 1    |
| 52A      | Control Box Mounting Nuts & Lock Washers (4)    |           | FBA        | 1    |
| 53       | 3/8" x 23" Air Hose Assembly (Vibrator)         |           | 134798/003 | 1    |
| 54       | 3/8" x 25" Air Hose Assembly (Air Inlet)        |           | 134798/001 | 1    |
| 55       | Air Inlet Assembly                              |           | 133019/002 | 1    |
| 55A      | Gauge   | SB-30-G   | 134366/001 | 1    |
| 55B      | 1-1/4" x 1/4" Bushing                           | AB-30-IC  | 131868/001 | 1    |
| 55C      | 1-1/4" Tee                                      | AB-30-IT  | 131856/001 | 1    |
| 55D      | 1-1/4" Close Nipple                             |           | 131598/001 | 2    |
| 55E      | 1-1/4" Regulator                                |           | 132055/002 | 1    |
| 55F      | Gauge   |           | 70238/001  | 1    |
| 55G      | 1/4" 90 Degree Street Elbow                     | RC-16     | 73813/001  | 1    |
| 55H      | U-Bolts w/ Nuts                                 |           | 131461/001 | 2    |
| 55J      | 1-1/4" x 5" Nipple                              | AB-30-N   | 131462/001 | 1    |
| 55K      | 1-1/4" Ball Valve                               | V-99      | 70240/001  | 1    |
| 55L      | 1-1/4" Check Valve                              |           | 133040/001 | 1    |
| 55M      | 1-1/4" x 1" Bushing                             |           | 131837/001 | 2    |
| 55N      | 1" Hose Assembly                                | A-30-PR-1 | 133673/001 | 1    |
| 55P      | 1-1/4" x 3" Nipple                              |           | 131858/001 | 1    |
| 55Q      | 1-1/4" Elbow                                    |           | 131855/001 | 1    |
| 55R      | 1 " Crowfoot (male)                             | AM-12     | 73167/001  | 1    |
| 55S      | Crowfoot Gasket                                 | AMG-2     | 73850/001  | 1    |
| 56       | Hose Adapter                                    | RC-18     | 72828/001  | 1    |
| 57       | Dual Line Activator Valve Assembly              | DR-3-1    | 83619/001  | 1    |
| 57A      | Activator Valve Body                            | DR-3-1A   | 83615/001  | 1    |
| 57B      | Activator Lever                                 | SDR-3B    | 83616/001  | 1    |
| 57C      | Hex Head Bolt                                   | SDR-3F    | 78963/001  | 1    |
| 57D      | Hex Head Nut                                    | SDR-3G    | 78968/001  | 1    |
| 57E      | Seat Disc                                       | SDR-3E    | 82617/001  | 1    |
| 57F      | Spring  | SDR-3D    | 84067/001  | 1    |
| 57G      | Safety Stop                                     | SDR-3H    | 83618/001  | 1    |
| 57H      | Spring  | SDR-3S    | 84098/001  | 1    |
| 57J      | Hose Clamps                                     | RCAV-5    | 72834/001  | 2    |
| 57K      | 1/8" Hose Adapter                               | DRC-3-A   | 131609/001 | 2    |
| 57L      | Round Head Screw                                | SDR-3J    | 27030/001  | 1    |
| 58       | Dual Line Remote Control Hose                   | DRC-3-50  | 72770/001  | 1    |



# Getting Started

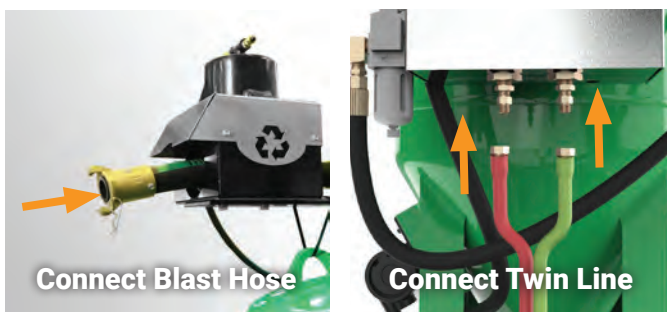
## A NOTE TO BLASTER

Before blasting, it is recommended that user reads through the entirety of this manual for proper operating procedures and important maintenance instructions.

Always inspect machine, nozzles, hoses, and couplings prior to blasting.

## STEP 1. Connecting blast hose and twin line

Connect the blast hose to the pinch hose at the top of the blast pot and insert the safety pin. Connect compressor air hose to the air inlet and insert safety pin. The twin line for your deadman controller must also be connected to the control box on the back of the machine; red to red, green to green.



## STEP 2. Filling the blast pot with abrasive

The DB225® is designed to hold:

- 10 gallons of clean water
- 100 lbs of abrasive (~40/70 mesh size)
- 14 oz of Rust Inhibitor



Remove the fill cap by pulling the paddle up and turning the cap counter-clockwise. Place the fill funnel in the opening and pour in clean water. Then, pour in the amount of abrasive that you need. If you are planning to use Rust Inhibitor, add it to the blast pot now. Once complete, remove the funnel and replace the fill cap. Everything will mix together during the blasting process.

**Note:** Your machine will use any type of abrasive or cleaning medium that sinks in water and is not water soluble.

## STEP 3. Power up your compressor

Please refer to your compressor manufacturer's manual for operating instructions.

Before you start blasting, you will need to pressurize the machine. Make sure the abrasive lever is unlocked, then close the blow down valve, and open the air inlet valve. When the machine pressurizes, you will see the abrasive lever on the blast pot pop up.

**Note:** Open air inlet valve slowly to avoid sending large amounts of compressed air into the machine too quickly. This will cause unnecessary wear on the system.

**Note:** A valve is in the open position when it is aligned with the fixture that it controls.

**Note:** The air inlet valve and blow down valve will always be in opposite positions of each other.



## STEP 4. Start Blasting

- Make any necessary adjustments to abrasive lever by rotating the rocking arm adjusting screw.
- Adjust the operating pressure with the valve behind the lower gauge.
- Wear appropriate PPE gear.
- To activate blast hose, push the safety button in with your thumb and slowly start pressing the handle of the deadman controller.

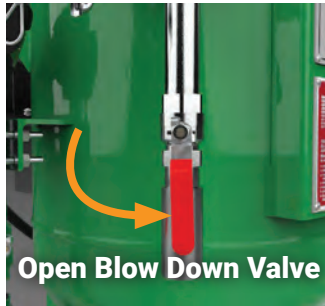


**Note:** For best results, try different blast patterns and angles to find the best work flow.

### STEP 5. Shutting Down

While the compressor is running, close the air inlet valve and open the blow down valve to release the pressure.

Let the blast pot fully depressurize before turning off the compressor.



**Note:** If you turn the compressor off first, the pressure in the pot will backflow air, water, and media into other parts of the system, causing them to fail.



# Maintaining your Blast Pot

## CONTROL BOX MAINTENANCE

The control box has its own pressure regulator. This is already set properly from the factory, and should not be tampered with. If it gets changed, make sure to readjust it to 90 PSI.

## CONTROL BOX VALVE (LOCATED NEAR IN CONTROL BOX)

It is time to service your control box valve when the shutoff time is longer than usual or the valve is not actuating properly.

To service the control box valve (located in the control box), follow these steps:

1. Depressurize the machine.
2. Label each endcap left or right.
3. Remove the 2 (two) screws and set endcaps aside.
4. Remove piston.
5. Lightly lubricate piston with supplied grease or install new piston.
6. Install or replace any damaged gaskets or O-rings.
7. Re-install both endcaps.

## PRESSURE REGULATOR

You should occasionally lubricate the threads on this knob with a lubricant such as lithium grease.

## FILTER REGULATOR

You will find the filter regulator on the left side of control box. The filtered moisture and debris will collect at the bottom where it is vented through the screw. Leave the screw cracked open so it can let the moisture out continuously.

## CONSUMPTION CHART

No damage to the machine will occur by leaving water and media inside of it. However, due to the organics in the media, a foul smell can occur when left stagnant for longer than 24 hours. For this reason, when the machine will not be in use for an extended period of time, it is recommended that you remove water and media from machine either by blasting it out or by removing the bottom flange, air inlet jet, and gasket, and allow it to drain.

Blast pots do not need to be completely filled to operate. If maximum blast time is not needed, fill blast pot according to required blast time.

|                | Blast Time | Water   | Abrasive | Rust Inhibitor |
|----------------|------------|---------|----------|----------------|
| <b>DB150®</b>  | ~15 min    | 5 gal   | 50 lbs   | 7 oz           |
| <b>DB225®</b>  | ~30 min    | 10 gal  | 100 lbs  | 14 oz          |
| <b>DB500®</b>  | ~60 min    | 20 gal  | 200 lbs  | 28 oz          |
| <b>DB800®</b>  | ~90 min    | 30 gal  | 300 lbs  | 42 oz          |
| <b>DB1500®</b> | ~2-3 hours | 75 gal  | 750 lbs  | 105 oz         |
| <b>DB3000®</b> | ~4-6 hours | 150 gal | 1500 lbs | 71.5 gal       |

## FLUSHING BLAST POT OUT

Regularly flushing the pot avoids buildup on inside walls, which could inhibit the system. Once a month or so, you should rinse the pot out:

1. Fully depressurize machine.
2. Remove 2 bolts and 2 air inlet body lugs from bottom of machine.
3. Remove air inlet jet and gasket.
4. Push casting and air hose out of the way.
5. Flush out inside of equipment with water.
6. Once finished, replace the gasket, inlet jet, and lugs and bolts.

## BLASTING WEAR PARTS

Certain parts wear faster than others and will require regular maintenance and inspection depending on the method of blasting you are using as well as the abrasive you are blasting with. These items should be inspected for damage or wear, and replaced an average of 400 hours if dry-blasting, or 2000 hours if wet-blasting.

**Wear items include but are not limited to:**

- Hardened Elbow Insert
- Hardened Air Inlet Jet
- Hardened Pipe
- Flat Backed Pinch Hose Coupling
- Inlet Jet Gasket
- Elbow Insert Gasket
- Elbow Cap Gasket
- Nozzle

## PINCH HOSE MAINTENANCE GUIDE

Rotate the pinch hose every 10-15 hours of blasting. Perform a visual and physical inspection to insure integrity. Look and feel for signs of wear, softness, or bulges. Completely replace pinch hose before it fails at about 40 hours of use, or after being rotated 4 times.

**The pinch hose can be rotated and positioned in 4 ways:**

1. Starting position
2. Rotate hose 180°
3. Flip hose around
4. Rotate hose 180° again



## TO REMOVE BRASS COUPLINGS FROM OLD HOSE:

1. Lock hose in vice and remove screw using a phillips head screwdriver or drill.
2. Unscrew the brass coupling from hose turning counter-clockwise. You may need a bar or rod to do this.

## TO ATTACH BRASS COUPLINGS TO NEW PINCH HOSE:

1. Wrap the end of the hose in several layers of friction tape, slightly beyond the point the brass will cover.
2. Place coupling over friction tape and hose, screwing clockwise until hose end pushes against inside brass ridge of coupling. You may need a bar or rod to get it tight.
3. Wrap screws with Teflon tape and screw into designated holes until tight.

# Troubleshooting

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## **MEDIA BUILD UP INSIDE POT - ADJUSTING VIBRATOR VALVE**

On the left side of your control box, a small brass petcock valve controls the vibrator speed. This vibrator valve must be open during blasting. Adjust it so that you feel maximum vibration at the head of the machine. This will insure that all of the media gets “shaken” to the bottom of the tank.

Over time, you could experience abrasive buildup inside the pot which actually changes the harmonics of the pot. If the system is not feeding right, adjust the valve by turning it towards the off position to slow the vibrator down, allowing the pot to rattle more.

## **ABRASIVE NOT FLOWING CORRECTLY - Assuming proper Installation, air pressure, and abrasive.**

**Check media quality.** Your machine is made to run with clean, high quality abrasive or media. Dirt will get muddy and clay will harden.

## **NOTHING IS COMING OUT OF THE NOZZLE**

The blast nozzle may become clogged with debris or blast media. If this occurs, put the machine in the blowdown position, then remove the nozzle and inspect for a rock or other foreign material.

## **PINCH VALVE NOT OPENING OR CLOSING**

1. Put the machine in the blowdown position.
2. Does the pressure gauge on the bottom left side of the control box read 80?
3. Are all fittings tightly secured to the deadman and the back of the box?
4. Is air bleeding out of the deadman?

### **IF YES**

1. Unscrew the green hose from the control box.
2. Depress the deadman and verify air is coming out of the green hose.

### **If air is coming out of green hose:**

1. Remove control box front panel and follow instructions for cleaning the control box valve.
2. Check that the O-Rings on the piston are not torn. If torn, order a repair kit. This part number is located on control box back panel.

### **IF YES**

1. Remove red hose from deadman to verify if air is coming out of it.
2. If no air is coming out, unscrew the red hose from control box and verify air coming out of it.
3. Remedy: Air line needs to be blown out to clean debris in line, and check to see if seat disk is worn.

Please call the manufacturer directly with any additional maintenance questions.

**1-800-727-5707 | [support@dustlessblasting.com](mailto:support@dustlessblasting.com)**

# Containment, Masking, and Blast Pattern Adjustments

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## CONTAINMENT

To capture the blasting byproducts use heavy plastic or a tarp. Lay out your plastic and weigh the corners down, placing your project in the center. You can sweep up media or use simple curtains or barriers.

## MASKING

Mask off any glass, chrome, rubber seals, wiring, electrical, or moving mechanical parts and anything else that looks delicate or like it shouldn't have water and grit inside it. Tape works the best for protecting small parts and pieces.

## BLAST PATTERN ADJUSTMENTS

It is important to use the proper nozzle to achieve the best blasting results. Nozzle size is based on air compressor size.

### NOZZLE KNOWLEDGE

#### SLV Nozzle

- Wide blast pattern
- All purpose nozzle

#### ST Nozzle

- Straight bore nozzle
- Tight blast pattern
- Detailed precision nozzle

#### Fan Nozzle

- Spreads blast pattern out to cover a rectangular area
- Perfect for brush blasting
- Low impact compared to other nozzles

#### XL Performance Nozzle

- Increases abrasive particle velocity
- Allows for increased standoff distance while improving production and efficiency

## CLEANUP

Depending the amount of media used, plastic may be too heavy to move all at once. Cut it into sections and roll it up, or let the water evaporate to sweep or vacuum.

# Switching from Wet Blasting to Dry Blasting

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## BLAST WET, DRY, OR WITH SODA (AIR DRYER AND COOLER REQUIRED)

To prepare your machine for dry blasting:

1. Blast all media and water out of machine.
2. Remove fill cap.
3. Turn on air dryer and cooler.
4. Open air inlet valve halfway and let air circulate through machine for 5-7 min or until completely dry.
5. Put fill cap back on machine and pressurize tank.
6. Run air through the machine just like you were blasting for 2-3 min.
7. Shine light in machine to be sure all moisture is gone from the bottom.
8. If no moisture, fill with 1 bag of dry abrasive. Fill the remainder of the way.

**Note:** Using media such as plastic bead, walnut shell, corn cob, or soda requires dry blasting.

# Storing Machine

---

## STORING MACHINE

If leaving unit for extended period of time, you should blast the water and media out of machine OR:

1. Fully depressurize machine.
2. Remove 2 bolts from bottom flange of machine.
3. Remove 2 lugs from bottom flange.
4. Push casting and air hose out of the way.
5. Remove air inlet jet and gasket.
7. Flush out inside of equipment with water.

Once media and water are out of machine, reverse procedure:

1. Put gasket on air inlet jet.
2. Insert air inlet jet and gasket.
3. Put casting up to bottom of machine.
4. Use lugs and bolts to secure casting.

## STORING MACHINE IN WINTER

If storing your machine for the winter months, it is advised to take the following precautions to prevent damage from freezing.

- Open all of the ball valves on your unit to prevent moisture from freezing and expanding in the valve.

**Note:** If wet blasting in the winter time, consider the following:

- At 32°F add rubbing alcohol to the water tank at roughly a 1:100 gallon ratio.  
More alcohol can be added if necessary, up to 1:20 ratio.
- Tent around the pot, pump and moisture separator and place a heater inside to keep warm.
- Empty tank and blow out hoses.

# Choosing Blast Pressure

## BLAST PRESSURE

Different materials and coatings call for different pressures or blasting distances. Thick metal can handle a lot of pressure, while sheet metal could be dented by using too much pressure. Simple paint may come off nicely with the nozzle far away, while tough undercoating may come off better with the nozzle closer.

The distance you hold the blast nozzle from the material affects the harshness and speed of the blast and changes the "blast pattern" size. If you hold the nozzle too far away, the blast pattern will be big, but the coating will come off too slowly. If you hold the nozzle too close, the coating will come off quickly, but the blast pattern will be small. With a tiny blast pattern you'll have to move your arms a lot more to cover some area, which is inefficient. The best thing is to find a nice balance between blast pattern size and removal speed.

## ADJUSTING BLAST PRESSURE

The Dustless Blasting® system allows you to easily change the blast pressure by turning one simple knob. The higher the pressure is, the higher your productivity. Obviously lower pressures are more gentle on whatever substrate you're blasting. If you need to blast on softer material or very thin metal, lowering the pressure is a good idea to prevent damage.

A clockwise rotation of the pressure regulator knob will increase the pressure, while a counter clockwise rotation will lower pressure. If you try to lower the pressure while the blast tank is pressurized, you'll need to either have someone blast simultaneously, or just open the blowdown valve slightly to release some of that pressure.

## COMMON GUIDELINES

### Marine

On thick steel like ship hulls, you can operate at about 150 PSI. Fiberglass requires a lower pressure — about 70 PSI — with a larger standoff distance.

### Automotive

For most automotive uses, 120 PSI is ideal. Find a balance between blast pattern size, and speed.  
For thick aluminum like a large trailer, you can blast at up to 150 PSI.

### Graffiti Removal

For removing graffiti from a brick wall, use about 100 PSI so you don't etch the brick. The graffiti will still come off quickly at this low pressure.

Here is a chart of some suggested blast pressures:

|                | Fiberglass Boats | Brick     | Metal (Auto) | Aluminum     | Steel     |
|----------------|------------------|-----------|--------------|--------------|-----------|
| Blast Pressure | 70 PSI           | 100 PSI   | 100-120 PSI  | 120-150 PSI  | 150 PSI   |
| Blast Distance | 18-24 in.        | 18-24 in. | 12-14 in.    | 12-20 in.    | 10-14 in. |
| Blast Pattern  | Large            | Large     | Medium       | Medium-Large | Medium    |

*\*The closer the nozzle is to the blast surface, the smaller the blast pattern.*

# Choosing Abrasive

## WHAT IS ABRASIVE?

Abrasive (also called media) is mixed with water inside the blast tank. When blasting, you propel this mixture towards a surface at high speed, to remove paint, rust, and other coatings.

## TYPES OF ABRASIVE

Dustless Blasting® allows you to use a wide variety of abrasives, either wet or dry. For wet blasting, any abrasive that sinks in water and is not water soluble can be used. However, abrasives that are dirty or have a very inconsistent particle size can cause problems, such as sputtering or clogging of the machine.

We largely recommend crushed recycled bottle glass, because it's clean, inexpensive, environmentally friendly, and suited for a wide variety of jobs. Sometimes different abrasives are available simply based on geography.

A common question we get is "Can I use play sand?" The answer is NO. Play sand is not an industrial product, so it's not controlled and graded the way abrasives are. It won't behave predictably in your equipment, and you could wind up in loads of legal trouble, from the EPA to local municipalities. Most bags of play sand are explicitly marked "Not to be used for sandblasting".

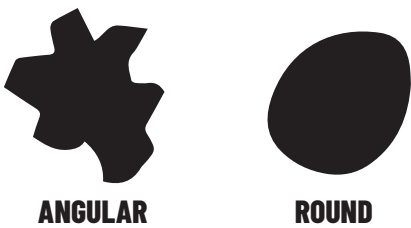
## ABRASIVE SHAPE

Basically, there are two different shapes: angular which has sharp edges, and round with no edges.

**Angular** abrasive has sharp edges which will cut into the substrate, leaving an anchor profile for the new finish to stick to. Examples of angular shaped media would be crushed glass, slags and garnet abrasives to name a few.

**Round** media is used mainly for cleaning or stripping while leaving the surface smooth. It will not rough up the surface or leave an anchor profile. Examples of round media would be glass beads, sugar sand and plastic pellets.

An anchor profile is a fancy way of describing the rough surface created during the blasting process. These peaks and valleys are usually measured in mils (1/1000 of an inch). One of the main causes of premature coating failure is an insufficient anchor profile. Its a good idea to understand from the customer what he/she expects when you are done. Some people prefer an anchor profile, while others will want a smoother surface.



For example, if you are stripping a car to be repainted, you'll probably want to leave an anchor profile for the new paint to adhere to. If you are simply cleaning calcium deposits from a pool – which will not be repainted – leaving a profile is unnecessary.

## ABRASIVE SIZE

Most abrasive is measured with mesh size. During production, it gets shaken through various screens. These screens might have as little as 20 holes per square inch, or as many as 100. This means that 40/70 glass fits through the 40–70 holes per square inch screens. 20/40 glass is coarser than 40/70, and 60/100 glass is finer.

|        | Looks Like |
|--------|------------|
| 20/40  |            |
| 40/70  |            |
| 60/100 |            |

A common misconception is that the coarser glass will help you get through a job faster. It is true that 20/40 glass is slightly more aggressive than 40/70. However, because it's so coarse, you're only getting half as many particles of glass in the same size bag. You'll end up using twice as many bags to get the job done, which is not only expensive, but inefficient! It's a much better idea to increase abrasive density if you want to complete the job faster.

## **ABRASIVE DENSITY**

Understanding the weight or bulk density of the media you are using will also help decide which is best for the process. The heavier the media, the more impact it has on the surface you are blasting. Imagine a golf ball and a ping pong ball. They are the same shape and size, but the golf ball is more dense. If you threw them at someone, the golf ball would hurt a lot more.

Crushed glass has a bulk density of 75-80 lbs per cubic foot— while garnet weighs around 145 lbs per cubic foot. So, the two abrasives at the same mesh size and blast pressure will have different results. A 40/70 crushed glass will be more “gentle” on the surface than the same mesh size of garnet at the same blast pressure.

The harder and heavier the abrasive is, the rougher the profile will be. Using larger, more coarse abrasives will decrease the run time in your machine. For example, if you are blasting with 40/70 crushed glass and decide to use a larger mesh size of 20/40 you will notice a decrease in run time. If both bags of abrasive are 50 lbs, there are fewer particles in the 20/40 mesh size bag than the 40/70. A larger mesh size will be more aggressive so it will have more of an impact to the surface you are blasting.

## **ABRASIVE HARDNESS**

Generally, the harder the particle, the deeper the profile it will impart. Softer abrasives, like organic materials and plastics, are good for removing dirt, oil, grease and paint without removing any of the substrate or creating a profile.

## **ADJUSTING ABRASIVE SUPPLY**

You will need to adjust media flow from time to time, when you are using different types of media or when you are switching between wet and dry blasting.

When wet blasting, start with outlet pipe 1/2 inch above locked position, and adjust in 1/16 inch increments until media runs out before water. Coarser media will require a higher outlet pipe setting.

When dry blasting, start with outlet pipe 3/8 inch above locked position and adjust in 1/16 inch increments until you reach the desired productivity to use ratio. Setting will be closer to 1/8 inch for fine media and up to 3/4 inch for coarse media.



## COMPARISON CHART

Understanding the impact of different abrasives will help in deciding the best media for the job. The following chart will explain the characteristics of various media types.

|                          | Description  | Speed       | Surface Profile         | Surface Removal | Hardness    | Bulk Density            |
|--------------------------|--|-------------|-------------------------|-----------------|-------------|-------------------------|
| <b>Aluminum Oxide</b>    | Sharp, long lasting media for fast etching & profiling                           | Fast        | High Etch               | Yes             | 8 - 9       | 110 lbs/ft <sup>3</sup> |
| <b>Crushed Glass</b>     | Silica-Free, 100% recycled glass; efficient; economical stripping                | Fast        | Medium-High Etch        | Slight          | 5 - 6       | 100 lbs/ft <sup>3</sup> |
| <b>Glass Beads</b>       | Round, soda-lime glass produces bright, satin finish; minimizes stress on part   | Medium Fast | No Etch<br>Satin Finish | Slight          | 5 - 6       | 95 lbs/ft <sup>3</sup>  |
| <b>Silicon Carbide</b>   | Very hard, aggressive cutting media; ideal for stone, glass, and hard surfaces   | Very Fast   | Very High Etch          | Yes             | 9 - 9.5     | 90 lbs/ft <sup>3</sup>  |
| <b>Plastic Abrasives</b> | Soft media designed for automotive & aerospace applications                      | Medium      | No Etch<br>Stripping    | Slight          | 3 - 4       | 50 lbs/ft <sup>3</sup>  |
| <b>Steel Shot</b>        | Carbon Steel, round spheres designed for polishing and peening                   | Medium      | No Etch                 | No              | 40 - 51 HRC | 230 lbs/ft <sup>3</sup> |
| <b>Steel Grit</b>        | Angular, carbon steel for fast stripping & aggressive cleaning                   | Medium Fast | High Etch               | Moderate        | 40 - 65 HRC | 260 lbs/ft <sup>3</sup> |
| <b>Corn Cob</b>          | Organic, soft media ideal for soft surfaces such as wood                         | Slow        | No Etch                 | No              | 4 - 4.5     | 40 lbs/ft <sup>3</sup>  |
| <b>Walnut Shells</b>     | Angular, organic grit for mildly aggressive stripping without damage to surface  | Medium Slow | Low Etch                | Very Slight     | 4.5 - 5     | 50 lbs/ft <sup>3</sup>  |
| <b>Blast Sand</b>        | Angular, sharp edges that cut into substrate and leave an anchor profile         | Medium Fast | High Etch               | Yes             | 7           | 100 lbs/ft <sup>3</sup> |
| <b>Sugar Sand</b>        | Round media used for cleaning and stripping surface                              | Medium Fast | High Etch               | Yes             | 6 - 7       | 100 lbs/ft <sup>3</sup> |
| <b>Garnet</b>            | Angular hard abrasive commonly used in place of silica sand                      | Very Fast   | Very High Etch          | Yes             | 7.5 - 8.5   | 85 lbs/ft <sup>3</sup>  |
| <b>Soda Bicarbonate</b>  | Medium-sized abrasive used to blast smooth and strip surfaced                    | Slow        | No Etch                 | No              | 2.5         | 61 lbs/ft <sup>3</sup>  |
| <b>Coal Slag</b>         | Angular by-product of coal; used for removal of coatings from steel and concrete | Medium Fast | High Etch               | Yes             | 6 - 7       | 85 lbs/ft <sup>3</sup>  |

# RESOURCES

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TRAINING | SAFETY | REPLACEMENT PARTS

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**For assistance with servicing your machine, visit:**

[service.DustlessBlasting.com](https://service.DustlessBlasting.com)

**For replacement parts and accessories, visit:**

[store.DustlessBlasting.com](https://store.DustlessBlasting.com)

**For training resources, visit:**

[support.DustlessBlasting.com](https://support.DustlessBlasting.com)

**To submit a ticket or to find safety data sheets, business guides,  
authorization certificates, and warranty information, visit**

[www.DustlessBlasting.com/support](https://www.DustlessBlasting.com/support)



Toll Free: 1-800-727-5707  
International: 1-713-869-2227  
[www.DustlessBlasting.com](http://www.DustlessBlasting.com)



## **GE Vo Toys Building A and B Demolition Project**

### **Appendix A: Decontamination Plan**

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## **I Introduction & Statement of Purpose**

The purpose of this document is to outline the procedures for proper containment of debris on the project site, work zone containment and personnel decontamination during interior work, and decontamination of equipment and tools used during the project that contact impacted site media. All decontamination activities will be managed in accordance with Technical Specification Section 01 71 13 - Mobilization/Demobilization; Section 01 71 00 - Waste Movement, Transportation, and Disposition; and the DDMP. It is Brandenburg's intentions to perform decontamination activities to the interior of Building A and B, to limit any exposures to the outside. For continuities sake, both a decontamination method for interior and exterior activities is included in this document.

## **II Containment of debris on the project site**

### **A. Debris Generated During Interior Demolition**

Debris generated during interior demolition will be stored in the on-site staging area with appropriate containment system (see Attachment A) or properly equipped roll off container.

Smaller quantity waste streams (i.e., universal waste) will be stored on-site, in Building A, until volumes necessitate disposal or waste stream removal is complete. Small quantity debris will be packaged and labeled in accordance with waste stream profile and Project RAD prior to removal from work zone.

Larger quantity waste streams (i.e., wood flooring of different contaminant levels) will be placed directly into appropriately labeled and equipped roll off boxes, properly lined in accordance with the waste stream profile and Project RAD. Brandenburg has requested that the roll off boxes provided for disposal be equipped with self-contained roof ribs and tarping system. A debris pan on a telescoping forklift will be loaded inside the work zone, and then emptied directly into roll off box.

During all interior demolition activities, no contaminated materials will make contact outside of the work zone.

### **B. Debris Generated During Superstructure Demolition**

All debris generated during superstructure demolition will be live loaded into triaxle or roll off containers.

- When necessary, equipment loading trucks will employ smooth buckets to maintain the integrity of the first floor HDPE liner
- Dust suppression methods will be applied as necessary to control any fugitive emissions
- During and after daily load out work areas outside of work zone will be swept clean

## **III Work Zone Containment and Personnel Decontamination during Interior Work**

### **A. Work Zone Containment**

1. Interior removal areas and entrance/exit to will be demarcated by red tape and warning signs
2. Exterior wall openings will be maintained as closed

**B. Personnel Decontamination**

1. Personnel decontamination units will be constructed at the exit to the work area
  - a. Decontamination containment unit will be constructed with a 2"x4" frame and one layer of seamless 6-mil poly sheeting (see Attachment B) that will be fixed to outside of frame by construction staple every 24"
  - b. Workers will employ a mercury recovery vacuum (see Attachment C) to remove any visible contamination
  - c. Workers will remove and clean/dispose outer rubber boots
    - i. Outer boots to be cleaned by mercury recovery vacuum
  - d. Workers will remove disposable PPE directly into lined waste container for disposal
  - e. Hand wash station consisting of hygienic wipes will be made available at exit of decontamination containment
    - i. Waste container will be available in decontamination area for collection of all refuse

**IV Equipment Decontamination Procedure**

**A. Interior Decontamination**

Procedure for equipment and tools ready for removal from work area, including moving to separate work areas:

1. Area will be demarcated with red tape, with specific entrance and exit identified
  - a. Location of decontamination area to be determined at time of need, but located between the work zone and the clean zone (i.e., Stairwell/building entrance or window, depending on access needs)
2. A hygienic floor of 6-mil poly will be placed
3. A decontamination containment unit will be constructed with a 2"x4" frame and one layer of seamless 6-mil poly sheeting that will be fixed to outside of frame by construction staple every 24"
  - a. A second layer of 6-mil reinforced poly will be used for any equipment that is wheeled
4. Equipment, tools, and decontamination unit will be vacuumed off using a mercury recovery vacuum
5. Equipment and tools that have passed initial decontamination will be moved directly to clean area of project work site for demobilization
  - a. Prior to removal of any piece of equipment or tool it will be screened by the Engineer for the presence of mercury in accordance with Appendix G: Mercury Scanning Guidelines, of the Project RAD
  - b. If sampling results find further decontamination is required, equipment and tools will be decontaminated further as describe in Appendix H: Decontamination Guidelines, of the Project RAD
  - c. If wet methods are needed for decontamination, water will be collected with a mercury recovery vacuum

## **B. Exterior Decontamination**

Procedure for equipment and tools ready for removal from work area:

1. An appropriate sized, satellite, Snap Up decontamination unit will be placed outside of the building
2. A hygienic floor of 6-mil poly will be placed inside building for a staging area to remove equipment and tools to satellite decontamination unit
3. Equipment and tools will be secured to poly spill containment pallets and transported from the work zone to the satellite decontamination unit
4. Equipment, tools, and decontamination unit will be vacuumed off using a mercury recovery vacuum
5. Equipment and tools that have passed initial decontamination will be moved directly to clean area of project work site for demobilization
  - a. Prior to removal of any piece of equipment or tool it will be screened by the Engineer for the presence of mercury in accordance with Appendix G: Mercury Scanning Guidelines, of the Project RAD
  - b. If sampling results find further decontamination is required, equipment and tools will be decontaminated further as describe in Appendix H: Decontamination Guidelines, of the Project RAD
  - c. If wet methods are needed for decontamination, water will be collected with a mercury recovery vacuum

## **V Disposal**

Materials from decontamination will be segregated and packaged in DOT approved containers in accordance with disposal site requirements (to be provided to Brandenburg) and in accordance with the project RAD.

Brandenburg Industrial Service Company  
2217 Spillman Drive  
Bethlehem, Pennsylvania 18015-1982  
Phone (610) 691-1800  
FAX (610) 691-4200

Brandenburg®  
[www.Brandenburg.com](http://www.Brandenburg.com)

## **VI Attachments**



Brandenburg Industrial Service Company  
2217 Spillman Drive  
Bethlehem, Pennsylvania 18015-1982  
Phone (610) 691-1800  
FAX (610) 691-4200

Brandenburg®  
[www.Brandenburg.com](http://www.Brandenburg.com)

A. Snap Up Containment



# STINGER SNAP-UP BERM™

**THE WORLDWIDE LEADER IN LARGE, AGGRESSIVE AND IMMEDIATE SPILL RESPONSE.**

The ENPAC® Stinger Berm™ leads the industry with its wide range of sizes and capacities for large-scale spill containment. Stinger Berms feature excellent rip, tear, and puncture resistance for the most demanding application or terrain. Ground Pad and TracMat™ provide additional protection.

- Easy to assemble snap-up design permits immediate response
- Compact storage and transport
- Air-lance tested containment welds for maximum product performance
- Lap joint welds for maximum strength
- Individual serial numbers
- CAD designed and cut components
- Fuel/chemical resistant containment area
- Custom sizes and special materials available
- Cold rated to -30° F/-34° C
- Available in Arctic Grade
- Now available in a 2' L-Bracket sidewall!



Easy set up and take down.  
Custom sizes and special materials available.



## STINGER SNAP-UP BERMS™

| Part #         | Dimensions L x W x H ft. (m)     | Weight lb. (kg) | Spill Cap. gal. (L) |
|----------------|----------------------------------|-----------------|---------------------|
| 4801-BK-SU     | 4 x 4 x 8" (1.2 x 1.2 x 20 cm)   | 11 (5)          | 80 (302)            |
| 4802-BK-SU     | 4 x 4 x 1 (1.2 x 1.2 x 30 cm)    | 18 (11.4)       | 119 (451)           |
| 4803-BK-SU     | 4 x 6 x 8" (1.2 x 1.8 x 20 cm)   | 25 (8)          | 119 (451)           |
| 4804-BK-SU     | 4 x 6 x 1 (1.2 x 1.8 x 30 cm)    | 28 (13)         | 179 (678)           |
| 4805-BK-SU     | 4 x 8 x 8" (1.2 x 2.4 x 20 cm)   | 21 (9.5)        | 159 (602)           |
| 48-5101-BK-SU  | 5 x 10 x 1 (1.5 x 3 x 30 cm)     | 45 (20)         | 374 (1,416)         |
| 4806-BK-SU     | 6 x 6 x 1 (1.8 x 1.8 x 30 cm)    | 37 (16.3)       | 269 (1,018)         |
| 4807-BK-SU     | 8 x 8 x 8" (2.4 x 2.4 x 20 cm)   | 35 (16)         | 319 (1,207)         |
| 4810-BK-SU     | 10 x 10 x 1 (3.1 x 3.1 x 30 cm)  | 60 (27.3)       | 748 (2,831)         |
| 4812-BK-SU     | 12 x 12 x 1 (3.7 x 3.7 x 30 cm)  | 80 (36.3)       | 1,077 (4,077)       |
| 4816-BK-SU     | 16 x 16 x 1 (4.9 x 4.9 x 30 cm)  | 113 (51)        | 1,914 (7,245)       |
| 4820-BK-SU     | 10 x 26 x 1 (3.1 x 7.9 x 30 cm)  | 122 (55)        | 1,944 (7,359)       |
| 48-10401-BK-SU | 10 x 40 x 1 (3 x 12.2 x 30 cm)   | 150 (68)        | 2,992 (11,326)      |
| 48-10451-BK-SU | 10 x 45 x 1 (3 x 13.7 x 30 cm)   | 155 (70)        | 3,366 (12,742)      |
| 48-12201-BK-SU | 12 x 20 x 1 (3.7 x 6 x 30 cm)    | 130 (58)        | 1,795 (6,795)       |
| 4826-BK-SU     | 12 X 26 X 1 (3.7 X 7.9 X 30 cm)  | 140 (63)        | 2,334 (8,835)       |
| 4836-BK-SU     | 12 x 36 x 1 (3.7 x 11 x 30 cm)   | 165 (74.8)      | 3,231 (12,230)      |
| 48-12501-BK-SU | 12 x 50 x 1 (3.7 x 15.2 x 30 cm) | 250 (113)       | 4,488 (16,989)      |
| 4850-BK-SU     | 15 x 50 x 1 (4.6 x 15.2 x 30 cm) | 268 (121)       | 5,610 (21,236)      |
| 4854-BK-SU     | 14 x 54 x 1 (4.3 x 16.5 x 30 cm) | 252 (114.5)     | 5,654 (21,402)      |
| 4860-BK-SU     | 12 x 60 x 1 (3.7 x 18.3 x 30 cm) | 285 (129)       | 5,385 (20,384)      |
| 4866-BK-SU     | 14 x 66 x 1 (4.3 x 20.1 x 30 cm) | 337 (153)       | 6,911 (26,160)      |
| 4885-BK-SU     | 14 x 85 x 1 (4.3 x 25.9 x 30 cm) | 500 (227)       | 8,901 (33,693)      |
| 48-20401-BK-SU | 20 x 40 x 1 (6 x 12.2 x 30 cm)   | 280 (127)       | 5,984 (22,652)      |
| 48-20601-BK-SU | 20 x 60 x 1 (6 x 18.3 x 30 cm)   | 600 (272)       | 8,976 (33,979)      |
| 48-25401-BK-SU | 25 x 40 x 1 (7.6 x 12.2 x 30 cm) | 310 (140)       | 7,480 (28,314)      |

Regulations: EPA 40 CFR 264.175, SPCC, NPDES

## STINGER L-BRACKET BERMS™

| Part #         | Dimensions L x W x H ft. (m)    | Weight lb. (kg) | Spill Cap. gal. (L) |
|----------------|---------------------------------|-----------------|---------------------|
| 48-10102-SU-SS | 10 x 10 x 2 (3 x 3 x 61 cm)     | 180 (81)        | 1,496 (5,663)       |
| 48-15152-SU-SS | 15 x 15 x 2 (4.6 x 4.6 x 61 cm) | 220 (99)        | 3,366 (12,742)      |
| 48-20202-SU-SS | 20 x 20 x 2 (6.1 x 6.1 x 61 cm) | 380 (172)       | 5,984 (22,652)      |

Regulations: EPA 40 CFR 264.175, SPCC, NPDES

\*Image not shown.

1-800-936-7229

21

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Bethlehem, Pennsylvania 18015-1982  
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B. 6-mil poly

# **APCO EXTRUDERS, INC.**

**180 NATIONAL RD.**

**EDISON, NJ. 08817**

**SPEC SHEET FOR FIRE RETARDANT-**

**PN# 200-CFFR620**

SIZE: 20 ft. x 100 ft.

GAUGE: 6 MIL

COLOR: NATURAL WHITE

MATERIALS: HIGH IMPACT LOW DENSITY POLYETHYLENE

CERTIFICATION: ALL POLYETHYLENE SHEETING MANUFACTURED FOR USE IN AGRICULTURAL , & CONSTRUCTION APPLICATIONS ARE MANUFACTURED TO MEET THE MINIMUM PHYSICAL PROPERTY REQUIREMENTS BY, ASTM STANDARDS: D4397, E154-88. WITH REFERENCE & INCLUDING , ASTM: C168, D828, E84, E96, & E241.

MATERIAL SAFETY DATA SHEETS ON OUR RESINS ARE AVAILABLE UPON REQUEST.

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C. Nikro Mercury Recovery Vacuum

# NIKRO

## MERCURY RECOVERY VACUUMS



*For A Safer Environment*



## MERCURY RECOVERY VACUUM

These **NIKRO** Mercury Vacuums are ideal for collecting both liquid mercury and mercury contaminated particulate matter, and returning clean air to the environment.

Each vacuum system features a liquid mercury separator (that allows the operator to collect and separate the mercury in a removable, seal-able collection jar), a disposable collection filter bag, a 99.97% @ 0.3 micron HEPA (High Efficiency Particulate Air) Filter and a high capacity activated carbon filter.

Extremely portable, each unit comes complete with a dolly cart assembly.

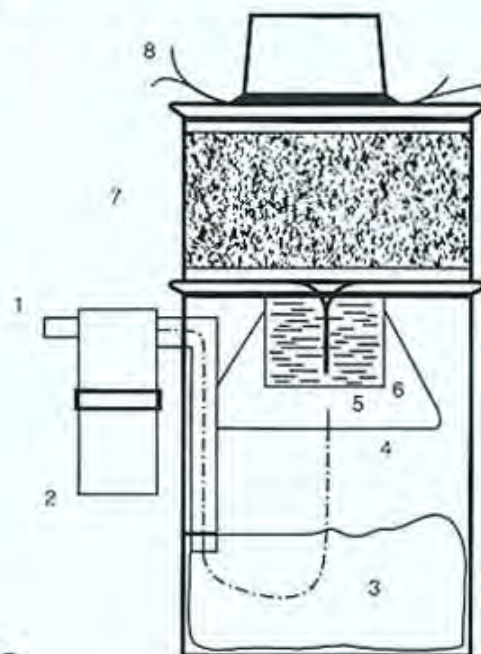
The **NIKRO** Mercury Vacuums are ideal for recovering mercury in labs, hospitals, emergency clean-up, and any other areas where the possibility of mercury contamination exists.

**NIKRO** offers four mercury vacuums to choose from, a 15 gallon stainless steel vacuum, 15 gallon painted steel, and a 15 gallon polyethylene for larger collection, or a 6 gallon stainless steel unit ideal for smaller spills.

When it comes to cleaning the air... TURN TO **NIKRO** FOR A SAFER ENVIRONMENT.

### OPERATION

- 1) Liquid mercury and mercury contaminated particulate enters the liquid mercury separator.
- 2) In the liquid mercury separator the liquid mercury is separated and collected in a removable jar.
- 3) The first stage of filtration is a disposable collection filter bag. Here is where dry contaminated particulate is collected.
- 4) The second stage filter is a non-clinging dacron filter bag.
- 5) The next stage of filtration is the micro impact filter designed to protect and extend the life of the HEPA Filter.
- 6) A 99.97% @ 0.3 micron HEPA Filter removes fine particulate from the air stream.
- 7) A high capacity activated carbon filter module, designed to trap mercury vapor.
- 8) Clean air is exhausted to the environment.



### SPECIFICATIONS

| MODEL #     | TANK SIZE | TANK TYPE       | CHARCOAL BED | AIR FLOW | STATIC LIFT | VOLTS/ AMP | TOOL KIT |
|-------------|-----------|-----------------|--------------|----------|-------------|------------|----------|
| MV00688-SS  | 6gal.     | Stainless Steel | 20lbs.       | 95       | 88"         | 115/8*     | 6pc      |
| MV15110-PLY | 15gal.    | Polyethylene    | 32lbs.       | 115      | 110"        | 115/13*    | 6pc      |
| MV15110-PTD | 15gal.    | Painted Steel   | 32lbs.       | 115      | 110"        | 115/13*    | 6pc      |
| MV15110-SS  | 15gal.    | Stainless Steel | 32lbs.       | 115      | 110"        | 115/13*    | 6pc      |

\*220V Optional

**Weight**

57.2 kg

## Technical Information

### Certifications, Approvals and Ratings

UN31HA1/Y

### Disclaimers

#### Flammables Notice

If using this product with flammable liquids, please consider the regulations that apply to storage and handling of flammable liquids and the safety of this application, specifically flammable vapors, static discharge and heat sources. For further assistance, please call Technical Services.



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## Appendix B

### Asbestos Abatement Plan

---



290 Elwood Davis Road, Suite 340  
Liverpool, New York 13088  
Phone 315.453.9009  
Fax 315.453.9010  
www.anchorqea.com

## SUBMITTAL REVIEW TRANSMITTAL

### CONTRACTOR INFORMATION:

NAME: Glenn Milarczyk  
Brandenburg Industrial Service  
COMPANY: Company  
ADDRESS 2217 Spillman Drive  
Bethlehem, Pennsylvania 18015

### PROJECT INFORMATION:

Buildings A and B Removal Action –  
PROJECT NAME: Vo- Toys Site  
PROJECT NO.: 160469-02.13  
SUBJECT: Asbestos Abatement Plan  
SUBMITTAL NO.: P-028213-001-E  
DATE: 3/11/2021

Subcontractor/Supplier:

### Check:

☐ Original Submittal ☒ Re-submittal ☐ Other

| Item No. | Specification Reference | Description | Other |
|----------|-------------------------|-------------|-------|
|          |                         |             |       |
|          |                         |             |       |

### Review action:

☐ R – Reviewed ☐ J – Rejected ☐ I – For Your Information  
☒ N – Reviewed and Noted ☐ S - Resubmit

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications and does not relieve the contractor from compliance with contract requirements. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

### Comments:

1. Refer to attached document for comments.

By: Margaret A. Camacho President Date: 3/11/2021  
Cc: \_\_\_\_\_

# Brandenburg®

Transmittal No P-028213-001-E

Date 3/9/2021

Attn Doug Musser

Project Name GE Vo Toys

Project CD MA0852

Document No. Preliminary Asbestos Abatement Plan

Revision No. \_\_\_\_\_

Reference \_\_\_\_\_

Subject:

Transmitted For:

Sent Via:

Action Taken:

|          |  |
|----------|--|
| Plans    |  |
| Approval |  |
| Email    | <a href="mailto:dmusser@anchorgea.com">dmusser@anchorgea.com</a> |
|          |  |

| ITEM | SUBMITTAL       | REV. | COPIES | DATE     | DESCRIPTION  |
|------|-----------------|------|--------|----------|--------------|
|      | AA Plan A and B |      | 1      | 3/9/2021 | for approval |
|      |                 |      |        |          |              |
|      |                 |      |        |          |              |
|      |                 |      |        |          |              |
|      |                 |      |        |          |              |
|      |                 |      |        |          |              |

Signed: Glenn Milarczyk

Comments: \_\_\_\_\_  
\_\_\_\_\_

CC: [mcarrillo-sheridan@anchorgea.com](mailto:mcarrillo-sheridan@anchorgea.com); MA0852 job file

## Brandenburg Industrial

### Service Company

2625 South Loomis Street Chicago, IL 60608-5414 Ph (312) 326-5800 Fax (312) 326-5055  
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Phone (630) 956-7200 800 Town & Country Blvd Ste 500 Houston, TX 77024-3916 Ph (832) 431-3287 Fax (800) 849-1589  
Fax (630) 956-7222

## **GE Vo Toys Building A & B Demolition Project**

### **Asbestos Removal Plan – BLDGS A & B**

**REV 1 - 03/05/2021**

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## **I Introduction & Statement of Purpose**

The purpose of this document is to outline the means and methods Brandenburg intends to employ for removal of asbestos containing materials at the GE Vo Toys Buildings A & B project. All means and methods shall be in compliance with the Occupational Safety and Health Administrations' Revised Standards for Asbestos in Construction 29 CFR 1926.1101, National Emission Standards for Hazardous Air Pollutants 40 CFR 61.145, applicable New Jersey state regulations, as well as Brandenburg policies.

Brandenburg considers regulatory compliance and a proactive approach to worker safety to be a fundamental component of executing a successful work operation. The proceeding sections of this document will address all aspects of regulatory compliance and safe abatement work practices.

Please note that all employees will be encouraged to assess each work plan and propose improvements or changes that they believe would assist in execution of the project in a safer and more efficient manner. Proposed changes will be evaluated by Brandenburg's management personnel and submitted as amendments or clarifications as needed. If changes are made to an approved plan, all site employees will be re-trained on the changes as required.

## **II Pre-ACM Removal Activities**

Prior to commencement of abatement activities, Brandenburg will ensure the following tasks have been completed.

### **A. Utility Disconnects**

Brandenburg will ensure that any live utilities entering the buildings have been de-energized and disconnected as needed. The Brandenburg site team in collaboration with the onsite customer representatives will walk down the various work areas in an effort to ensure that all utilities have been identified, disconnected and air gapped as required.

### **B. Universal and Misc. Waste Removal**

Similar to utility disconnects, Brandenburg will ensure that any universal and miscellaneous wastes that are within the structures have been removed (as needed) prior to commencement of ACM removal activities.

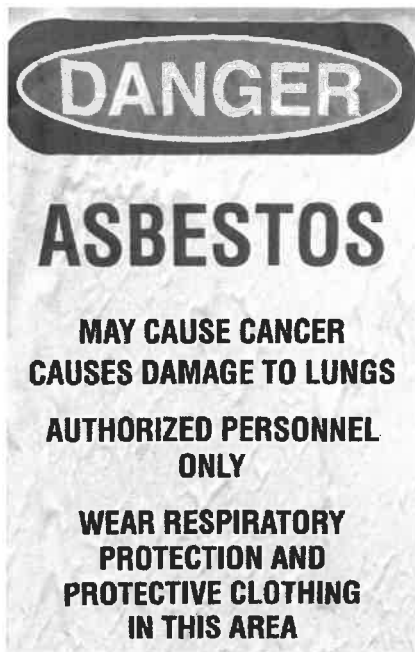
### **C. Asbestos Project Notification Submittal**

Notifications, as well as the required fees 10 working days prior to the start of ACM work. A notification will be submitted for each structure. An example notification for Building B is included as Attachment A.

Anchor QEA Note: An example notification for Building A was not included. Provide to Anchor QEA prior to submission.

### **D. Demarcation and Regulated Work Areas**

Brandenburg will ensure that all Class I and II asbestos work will be conducted within regulated work areas and access to the regulated area shall be limited to authorized and properly licensed personnel only. Additionally, warning signs that demarcate the regulated areas will be displayed at each location where a regulated area is being established. Please refer to figure 1 for an example of a warning sign. In addition, red Danger – Asbestos barrier tape will be used to delineate area boundaries. Brandenburg will also display the required NJ Department of Labor (NJ DOL) contractor and license number information at the jobsite entrance or job trailer.



*Figure 1. ACM Regulated Area Warning Sign*

**E. Decontamination Unit**

A self-contained decontamination trailer will be staged adjacent to but remote from the regulated work areas at the ground level alley between Buildings A & C. The decontamination trailer will be in conformance with part (j) of 29 CFR 1926.1101. The unit will be stocked with supplies, including extra protective suits, respirator cartridges, soap/shampoo, towels and waste bags. Hot and cold running water will be established, and a filtration system for shower water will be set up. Workers will follow remote decontamination procedures when entering and exiting the established regulated areas and proceeding to the decon unit during breaks, lunch, and at the end of the workday. Remote decontamination procedures are as follows.

When workers leave the regulated area, they will enter the designated airlock/wash area at the regulated work zone perimeter, the outer suit will be cleaned by utilizing a HEPA vacuum, worker will remove the outer suit and place it in a properly labeled asbestos waste bag, workers will leave their inner suit and respirator on. Workers will then proceed from the work zone to the remote decontamination unit where they will finish the decon process by showering. Workers will then exit the decon unit through the clean room.

**F. Personal Protective Equipment**

Brandenburg will ensure the use of protective clothing, such as Tyvek coveralls, head coverings, gloves, foot coverings and any other required PPE for all employees performing abatement activities. The designated competent personnel will examine work suits periodically to ensure there aren't any rips or tears that may have occurred during the execution of abatement activities. Each individual employee will also be required to examine their PPE (including suits) to ensure they meet expected standards. Brandenburg will also ensure that appropriate respiratory protection will be used for all ACM abatement activities.

In addition to disposable coveralls and proper respiratory protection, workers will also be required to wear hard hats, safety glasses, metatarsal boots and work gloves appropriate for the task being performed as per Brandenburg policy.

**G. Exposure Assessments and Respiratory Selection**

Personal air monitoring will be conducted by Brandenburg Safety Manager(s) in coordination with field personnel to determine worker exposure to airborne fiber concentrations and to document fiber levels are being effectively controlled. Brandenburg will perform both 30 minute (Short Term Excursion Limit) and full shift 8hr TWA (Permissible Exposure Limit) sampling required by OSHA throughout the duration of the project. Air monitoring results will be used, in conjunction with negative exposure assessments from previous similar abatement projects to determine the proper level of worker respiratory protection. Once samples have been collected, they will be sent to EMSL Analytical in Cinnaminson, NJ to be analyzed.

Brandenburg will ensure that all personnel engaged in asbestos abatement activities follow the applicable guidelines identified within the Project Specific Health and Safety Plan and Brandenburg Standard Operating Procedures. Instances where respiratory protection will be required (but not limited to) are as follows

- All Class I work.
- All Class II work where ACM is not removed in a "substantially intact state".
- All Class II work which is not performed using wet methods.
- During any work where exposure occurs above the PEL or excursion limit.

**H. Engineering Controls and Prohibited Work Practices**

Brandenburg personnel will utilize wet methods and HEPA vacuums as needed for asbestos removal activities. Water usage will be kept to the minimum necessary to perform the ACM removal work. Brandenburg will also ensure that prompt clean up and disposal of generated asbestos waste is carried out. Additionally, local exhaust ventilation equipped with HEPA filters will also be installed for the enclosed regulated areas where removal will take place.

The following work practices are prohibited during asbestos removal activities:

- High speed abrasive disc saws not equipped with point of cut ventilator or used in an enclosure with HEPA filtered exhaust air.
- Compressed air unless used in conjunction with an enclosed ventilation system designed to capture any emissions that are created during removal activities.
- Dry sweeping, shoveling or other dry clean-up of ACM dust and/or debris
- Rotation of employees in order to reduce each employees' exposure levels.

**I. Communication**

Brandenburg will conduct daily safety meetings at which planned work activities are discussed and potential safety issues related to the activities are addressed. Additionally, two way radios may be utilized as needed for communication purposes.

**J. Selective Demolition**

Certain asbestos abatement activities may require removal of select interior features to facilitate the safe and effective removal of ACM within the structure. If these materials can be removed prior to abatement commencing, they will be handled as C&D material and placed in the appropriate waste container onsite, or stockpiled in a designated area. If items cannot be removed without disturbing the associated ACM, they will be removed once abatement activities commence and the materials handled as non friable ACM.

**K. Competent Personnel and their Responsibilities**

Brandenburg's ACM competent person is as follows:

Michael Masiello      General Superintendent

Competent personnel job responsibilities are as follows:

- Set up procedures to control access and egress from the enclosure
- Ensure that workers wear PPE and utilize respiratory protection as required
- Ensure that employees set up and remove engineering controls, use proper work practices and PPE in compliance with all requirements
- Ensure that workers use hygiene facilities and observe the decontamination procedures specified
- Ensure that engineering controls are functioning properly and employees are using proper work practices
- Ensure that notification requirements are met at the federal, state and local level
- Perform daily inspections of negative pressure enclosures and document in daily log

**L. Schedule**

Brandenburg proposes to remove all ACM from the interior of Buildings A & B prior to any environmental cleaning or flooring removal commencing. Windows and roofs of the structures will be left in place until immediately before demolition to control air movement and keep the interior as weather tight as possible for the interior work. Further detail regarding ACM removal and associated durations can be found in the project schedule.

**III ACM Removal Activities**

**A. Scope of Work**

Brandenburg will remove the various types of ACM as identified in GE VO Toys Site – Buildings A & B NESHAP Compliant Pre Demolition Inspection performed on February 10, 2020 by ATC Group Services. Summary of the confirmed asbestos containing materials with associated quantities can be found in Section 4.0 of the ATC report. The summary table is included as Attachment B of this plan.



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**B. Manpower / Equipment**

All Brandenburg personnel involved in asbestos abatement activities will have obtained required training to execute the assigned work tasks, and will possess the appropriate and current State of New Jersey asbestos license.

**C. General Removal Procedures and Engineering Controls**

All work will be supervised by Brandenburg's competent personnel. Critical barriers will be placed over all openings as necessary, with a double layer of 6mm polyethylene where negative pressure enclosures (NPE) are being established. Impermeable drop cloths or plastic sheeting secured by duct tape will be utilized as needed. The negative pressure enclosure area will be ventilated to move contaminated air away from the breathing zone of employees toward a negative air filtration device equipped with HEPA filters. The established negative pressure enclosures will at a minimum provide four air changes per hour. Negative air unit exhausts will be vented to the interior of the site whenever possible during Bldgs. A & B work. Brandenburg personnel will constantly be vigilant for any breaches or leaks to the negative pressure enclosure. An airlock will be erected at the entrance to the NPE for workers to clean and remove their outer suit prior to proceeding outside to the remote decontamination unit.

**D. Emergency Response Procedures**

If ACM is disturbed outside of a regulated area or negative pressure enclosure, work in that area will cease while properly trained and licensed workers clean up all materials disturbed. A regulated area will be established and workers will utilize HEPA vacuums and wet methods to clean the area. Once the area has been cleaned, workers will properly abate the remaining ACM material as per procedures outlined in this document.

**E. ACM Removal**

**a. Negative Pressure Enclosure**

Each negative pressure enclosure will be built according to regulatory requirements. Each containment will at a minimum include a bag out area and a decontamination area.

- Floor tile and mastic in Building A – Containments 1, 2 & 3
- ACM Cloth Wire Wrap in 1<sup>st</sup> floor bathroom of Bldg A – Containment 2

All ACM material within negative pressure enclosures will be removed utilizing wet methods. Material will be stripped utilizing manual methods and will be placed into double six mil asbestos bags and transported to the bag-out area for placement into six mil double lined dumpsters (for final disposal at approved landfill). See attached Building A first and second floor drawings showing locations of containments, negative air machine locations, and associated personnel/waste decontamination facilities.

b. Window Caulking and Glazing – Exterior

- 94 Units Bldg. A – 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> Floors
- 17 Units Bldg. B – 1<sup>st</sup> & 3<sup>rd</sup> Floors

Windows will be removed immediately prior to demolition of Buildings A & B commencing to keep the building as weather tight as possible for the environmental phases of work. Brandenburg will establish a regulated perimeter barricade and then place polyethylene sheeting on the surface immediately beneath windows to be removed. The window glazing will be adequately wetted prior to removal. The window frames will be pulled from the window structure utilizing appropriate equipment and/or tools. Once each frame is removed, the frame along with the removed window and glazing will be wrapped in six mil poly and placed in a lined roll-off box for offsite disposal. Upon completion of removal activities, the polyethylene sheeting will be picked up and placed in the lined roll-off for disposal as ACM. HEPA vacuums will also be utilized as necessary to collect any caulking or glazing that may have previously fallen from the windows. Areas adjacent to the windows will be manually scraped as necessary to remove any remaining ACM caulk adhered to the brick exterior.

c. Thermal System Insulation and Cloth Cable Wrap

- 8 LF of TSI and associated debris in the 3<sup>rd</sup> floor W bathroom of Bldg A
- 17 LF of Cloth Wrap in the 1<sup>st</sup> floor bathroom and cellar of Bldg A
- Potential ACM Pipe Insulation in cellar vaults

A regulated area will be established with ACM warning signs and red barrier tape in the third floor west bathroom in Building A. Workers will first clean any debris on the floor around the pipe chase by wetting and bagging any loose material. Workers will then wrap the entire length of asbestos insulated piping in 2 layers of 6 millimeter polyethylene sheeting. The pipe will then be cut above and below the wrapped area and the entire section will be moved to ground level and placed in a six mil lined dumpster for disposal. Once the pipe has been removed, the pipe chase between the third and second floor will be sealed as part of Containment 2 construction.

The 9 LF of cloth cable wrap located in the first floor bathroom of Building A will be abated within Containment 3 in conjunction with the floor tile and mastic removal.

The 8 LF of cloth covered cable in the east cellar vault will be wrapped in six mil poly and the cable will be cut and removed intact. Wrapped material will be placed in the six mil lined dumpster for disposal.

Any pipe insulation discovered during the vault cloth cable wrap removal will be handled by either cut and wrap or glovebagging depending on quantity and ease of access.

- 50 SF of TSI debris on 2<sup>nd</sup> floor of Building B

A regulated area will be established on the second floor west side of Building B utilizing red barrier tape and ACM warning signs. Workers will suit up and enter the regulated area where they will wet and bag all loose material on the floor. HEPA vacuums will be available for cleaning as well. All wetted materials will be placed in labeled six mil bags for disposal and the floor will receive a final wet cleaning prior to final inspection.

d. Transite components, ACM Wall Panels and Elevator Brake Pads

- 18 SF Transite components in Elevator Machine Rm & Cooling Tower Bldg A
- 180 SF exterior east wall of east walkway between Bldgs A & B
- 2 SF Presumed transite ACM in storage room Bldg B

Workers will place a layer of 6 mil polyethylene sheeting beneath the transite removal area to catch any loose debris. Workers will then wet the material and remove the transite by unbolting or torch cutting the structure the transite is attached to, removing the transite intact. Additional information regarding Hot Work procedures and policies can be found in Brandenburg's GE Vo Toys Site Specific Safety Plan. The material will be re-wetted and wrapped in six mil poly or placed in a six mil bag if small. The removed material will be labeled and placed into a lined roll off container for disposal.

For the exterior wall panels on the third floor walkway E between Buildings A & B, a regulated work area will be established at ground level with red barricade tape and ACM warning signs. Workers in a manlift will access the outside, while workers on the inside will remove the bolts holding the panels to the structure. Once the panels are loose, workers in the manlift outside will lower panels to ground level where they will be wetted and wrapped in six mil poly for disposal.

During elevator car removal, Brandenburg will access and remove the elevator brake pads intact by unbolting from the car.

e. Pipe Flange gaskets, HVAC Glue & Caulk

- 20 SF Pipe Flange Gaskets – Cellar Vault Building A
- 68 SF HVAC Glue and Caulk on Ducts – Roof of Building A

Pipe flanges will be removed intact by cutting on either side of the flange and removing the pipe and flange as one piece. Flanges will be wrapped in six mil poly or placed in labeled bags and will then be placed in a lined dumpster for disposal.

HVAC glue and caulk will be left in place and the duct will be removed without disturbing the ACM material. Drop cloths will be placed under the duct prior to work commencing. The duct will be cut into manageable sections, wrapped in six mil poly, and lowered to ground level where it will be placed in a lined dumpster for disposal.

f. Roofing Materials

- 3010 SF Roof Flashing – Building A
- 4100 SF Roof/Wall Membrane – Building A
- 4850 SF ACM Tar on Surfaces – Building A
- 21000 SF Roof Membrane – Building B
- 16 SF Roof Flashing – Building B

Brandenburg will remove the roofing, flashing and associated tar material from the buildings utilizing workers on the roof of the structure removing the material with various hand and power tools. If necessary, structural inspections by a licensed engineer will be performed prior to workers accessing the roof.

Where necessary, a fall protection system will be installed prior to any roof removal work commencing. Brandenburg's Health and Safety representative in conjunction with Brandenburg's ACM superintendent will determine the best fall protection system for the task. Brandenburg's written fall protection program, as well as the site specific health and safety plan will be followed. Workers will access the roof via stairwells to access doors at roof level. In locations where a parapet wall is present and meets the requirements of the OSHA fall protection standard for height, it will be utilized in lieu of a fall protection system.

Anchor QEA Note: If during operation, visual emissions are observed, the operation will be halted until corrective action is completed (e.g., HEPA vacuum).

Workers will remove the roofing material utilizing various hand tools, including but not limited to scrapers, hatchets, hammers, pry bars and knives. Additionally, a powered rotating blade roof cutter with appropriate point of cutting water spray may be used to help facilitate roof removal. A water spray system, whether through hoses run to the roof or by self contained low pressure spray units directly on the roof, will be employed to keep the roof material thoroughly wet during removal activities. HEPA vacuums will be available to clean up small debris as work progresses.

A six mil lined hopper on the rough terrain forklift will be utilized to lower the material from roof height to ground level where certified personnel will transfer the material to six mil double lined dumpsters. Material will be continually misted with water to ensure fugitive emissions are controlled. A regulated area will be established around the roll off box and only authorized and trained personnel will be allowed entry.

**Brandenburg® Industrial Service Company**

2217 Spillman Drive  
Bethlehem, Pennsylvania 18015-1982  
Phone (610) 691-1800  
FAX (610) 691-4200

**Brandenburg®**

[www.Brandenburg.com](http://www.Brandenburg.com)

**F. Final Clearance**

Subsequent to removal of all asbestos containing materials and completion of wash down/encapsulation of a given area, Brandenburg asbestos supervisor(s) will perform a final visual inspection. Upon completion of the final visual inspection by Brandenburg personnel, a 3<sup>rd</sup> party independent inspector will verify complete removal of all ACM material for quality assurance purposes. The independent 3<sup>rd</sup> party inspector will perform final visual and air clearance samples for negative pressure enclosure areas via PCM sampling, and final visual inspection for areas not within a negative pressure enclosure. Samples will be sent to an accredited lab and analyzed for results. Once analysis has been performed, the independent 3<sup>rd</sup> party inspector will provide a clearance letter verifying and confirming clearance of asbestos from within the area.

**G. Previously Unknown Asbestos Containing Material**

If during the course of work activities Brandenburg discovers any suspect asbestos containing material not previously identified within the scope of work, work will cease in that area and the material in question will be brought to the attention of the project oversight committee. Samples of the material will be taken as necessary to determine whether the material is asbestos containing. Once a determination has been made, Brandenburg will amend this plan to reflect the new material and the procedures to safely abate it.

**IV Reference Drawings****Buildings A**

- **Roof**
- **Third Floor**
- **Second Floor**
- **First Floor**

**Building B**

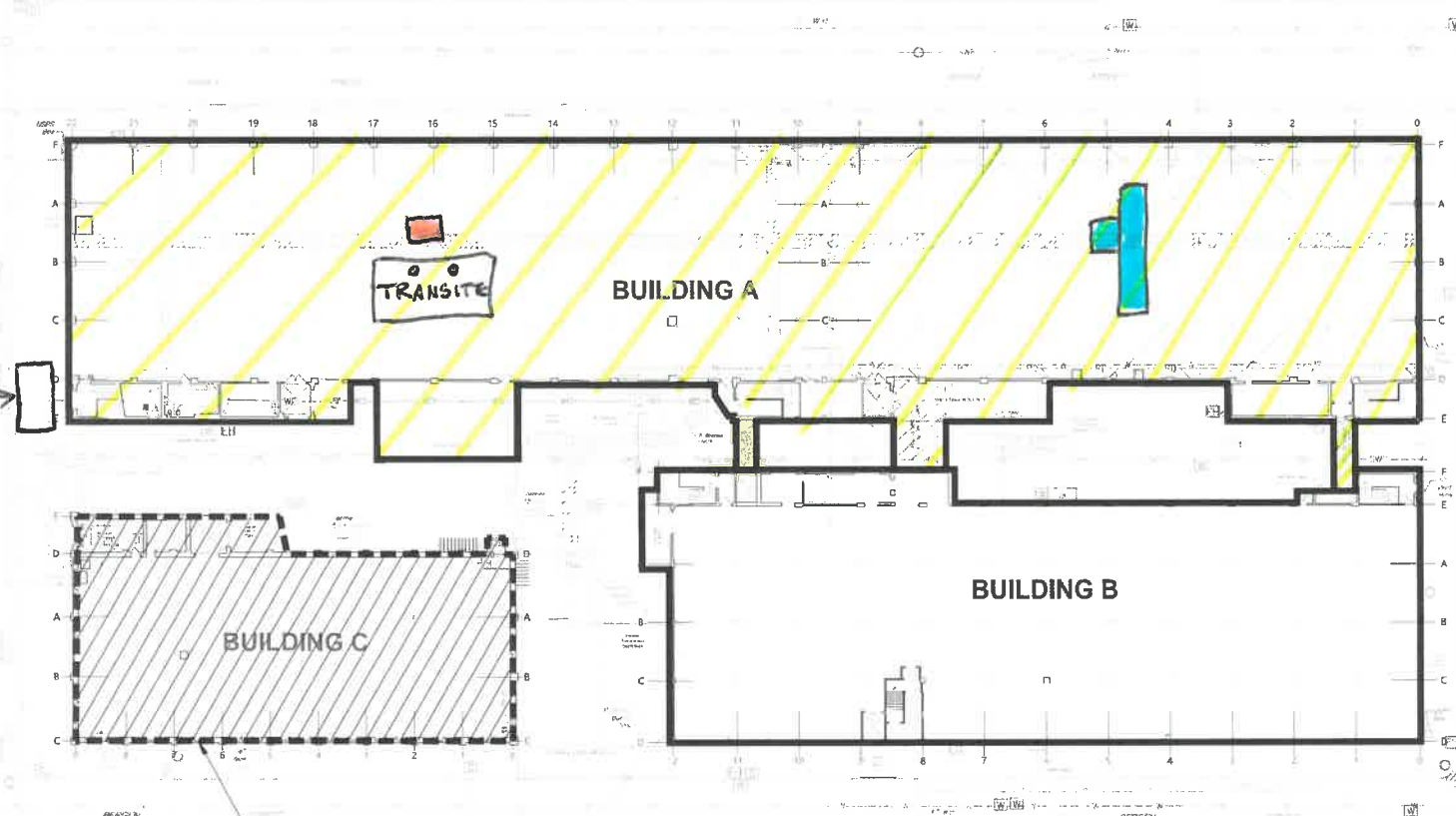
- **Roof**
- **Third Floor**
- **Second Floor**
- **First Floor**

**Citation Declaration****Project Designer Certification****Brandenburg Respiratory Protection Program**



ROOF REGULATED AREA A BLDG

DECON



- NOTES:
1. THE CONCRETE SLAB AT THE BOTTOM OF THE ELEVATOR SHAFTS SHALL BE REMOVED AND STAGED FOR SUBSEQUENT CHARACTERIZATION BY THE ENGINEER. THE REMOVED CONCRETE SHALL BE STOCKPILED SEPARATELY, FOLLOWING CHARACTERIZATION, THE CONCRETE SHALL BE SENT FOR OFF-SITE TRANSPORTATION AND DISPOSAL BASED ON CHARACTERIZATION RESULTS.
  2. AREAS OF SURFACE COVER OUTSIDE THE BUILDING FOOTPRINTS TO REMAIN (E.G. CONCRETE, ASPHALT AND GRAVEL), ROOF DECK AND COLUMNS ASSOCIATED WITH THE COVERED CONCRETE SLAB AREA SOUTH OF BUILDING A GRID D7 TO BE REMOVED WHILE AT-GRADE SLAB IS TO REMAIN.

LEGEND

- BUILDINGS, SLABS AND SUBSURFACE FEATURES TO BE DEMOLISHED
- BUILDING C SLAB AND SUBSURFACE FEATURES TO BE DEMOLISHED

BUILDING C SUPERSTRUCTURE TO BE DEMOLISHED BY OTHERS

SCALE IN FEET  
0 20 40  
NORTH

NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.

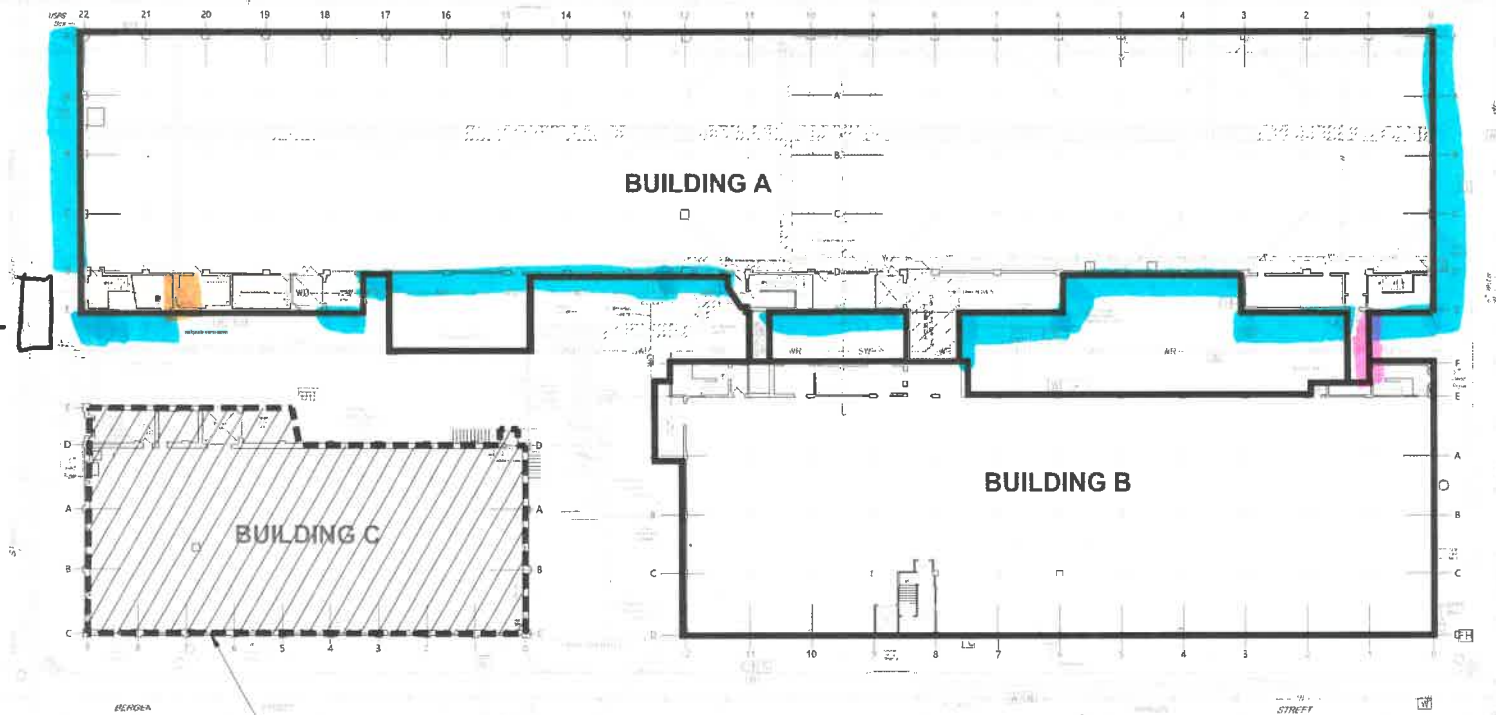
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| PREPARED BY<br><br>ANCHOR QEA, LLC<br>290 ELWOOD DAVIS ROAD<br>SUITE 340<br>LIVERPOOL, NEW YORK 13088<br>PHONE: (315) 453-9009 | ANCHOR QEA, LLC<br>NEW JERSEY ENGINEERING<br>CERTIFICATE OF AUTHORIZATION<br>NUMBER 246A28261100<br>Professional Engineer's Name<br>MARGARET A. CARRELO-SHERIDAN, P.E.<br>Professional Engineer's No.<br>038657<br>Date<br>NEW JERSEY |  | REVISIONS |      | DESIGNED BY: T. NOLAN<br>DRAWN BY: B. PETRE<br>CHECKED BY: D. MUSSER<br>APPROVED BY: M. CARRELO-SHERIDAN<br>SCALE: AS NOTED<br>DATE: XXX.XX.2020 | BUILDINGS A AND B REMOVAL ACTION DESIGN<br>VO-TOYS SITE<br>HUDSON COUNTY HARRISON, NEW JERSEY<br><br>EXISTING CONDITIONS BLOCK 156 AND<br>DEMOLITION PLAN | 4<br>SHEET # 4 OF 31 |
|  |   |  | REV       | DATE |  |   |                      |

- HVAC DUCT CAULK
- HVAC HANGER TAB GLUE

# BUILDING A THIRD FLOOR

DECON



## NOTES:

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## LEGEND

- BUILDINGS, SLABS AND SUBSURFACE FEATURES TO BE DEMOLISHED
- BUILDING C SLAB AND SUBSURFACE FEATURES TO BE DEMOLISHED

0 20 40  
SCALE IN FEET



NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.

**DRAFT - NOT FOR CONSTRUCTION - PRIVILEGED AND CONFIDENTIAL - ATTORNEY WORK PRODUCT**

| <p>PREPARED BY</p> | <p>ANCHOR QEA, LLC<br/>290 ELWOOD DAVIS ROAD<br/>SUITE 340<br/>LIVERPOOL, NEW YORK 13088<br/>PHONE: (315) 453-9009</p> | <p>ANCHOR QEA, LLC<br/>NEW JERSEY ENGINEERING<br/>CERTIFICATE OF AUTHORIZATION<br/>NUMBER 24GA28261100<br/>Professional Engineer's Name<br/><b>MARGARET A. CARULLO-SHERIDAN, P.E.</b><br/>Professional Engineer's No.<br/>0330667<br/>Date<br/>NEW JERSEY<br/>Date Signed<br/>MONTH, DAY YEAR</p> |       | <table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | REV | DATE | BY | APP'D | DESCRIPTION |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | <p>DESIGNED BY: T. MOWAT<br/>DRAWN BY: S. PETRE<br/>CHECKED BY: D. MUSSER<br/>APPROVED BY: M. CARULLO-SHERIDAN<br/>SCALE: AS NOTED<br/>DATE: 09/05/2022</p> | <p><b>BUILDINGS A AND B REMOVAL ACTION DESIGN</b><br/><b>VO-TOYS SITE</b><br/><b>HUDSON COUNTY HARRISON, NEW JERSEY</b></p> <p><b>EXISTING CONDITIONS BLOCK 156 AND DEMOLITION PLAN</b></p> | <p><b>4</b></p> <p>SHEET # 4 OF 31</p> |
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ACM WINDOW REGULATED AREA



ACM PIPE INSULATION REGULATED AREA

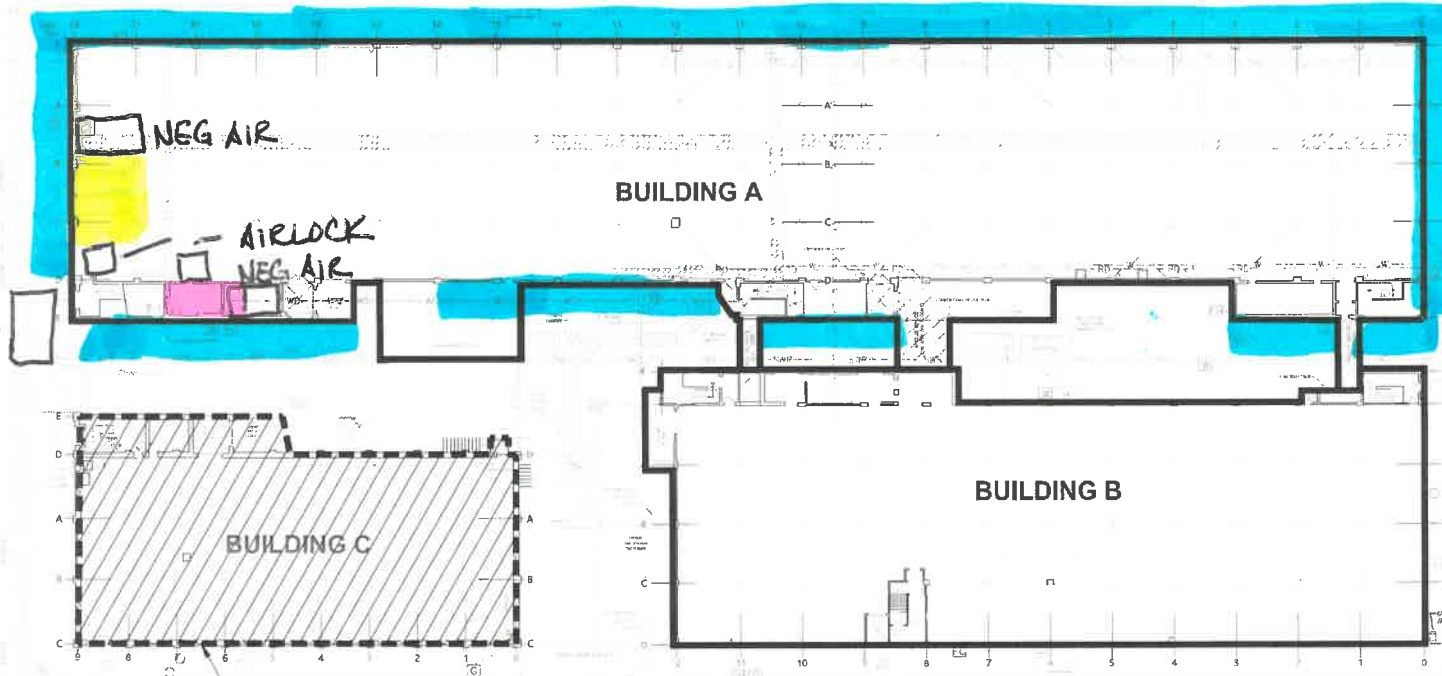


TRANSITE REGULATED AREA



# BUILDING A SECOND FLOOR

DECON



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BUILDING C SUPERSTRUCTURE TO BE DEMOLISHED BY OTHERS

## LEGEND

- BUILDINGS, SLABS AND SUBSURFACE FEATURES TO BE DEMOLISHED
- BUILDING C SLAB AND SUBSURFACE FEATURES TO BE DEMOLISHED


0 20 40  
SCALE IN FEET



ONE INCH = 40 FEET  
AT FULL SIZE IF NOT ONE INCH SCALE ACCORDING

NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.

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| PREPARED BY |      | ANCHOR QEA, LLC<br>290 ELWOOD DAVIS ROAD<br>SUITE 340<br>LIVERPOOL, NEW YORK 13068<br>PHONE: (315) 453-9009 |       | ANCHOR QEA, LLC<br>NEW JERSEY ENGINEERING<br>CERTIFICATE OF AUTHORIZATION<br>NUMBER 246A28261100<br>Professional Engineer's Name<br>MARGARET A. CARRELLO-SHERIDAN, P.E.<br>Professional Engineer's No.<br>039667<br>Date<br>NEW JERSEY |  |  |  | <table><tr><th>REV</th><th>DATE</th><th>BY</th><th>APP'D</th><th>DESCRIPTION</th></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table> |  | REV | DATE | BY | APP'D | DESCRIPTION |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | DESIGNED BY: T. HOWAK<br>DRAWN BY: B. PETRE<br>CHECKED BY: D. MUSSER<br>APPROVED BY: M. CARRELLO-SHERIDAN<br>SCALE: AS NOTED<br>DATE: 2005.05.2020 |  | BUILDINGS A AND B REMOVAL ACTION DESIGN<br>VO-TOYS SITE<br>HUDSON COUNTY HARRISON, NEW JERSEY<br><br>EXISTING CONDITIONS BLOCK 156 AND<br>DEMOLITION PLAN |  | SHEET # 4 OF 31 |  |
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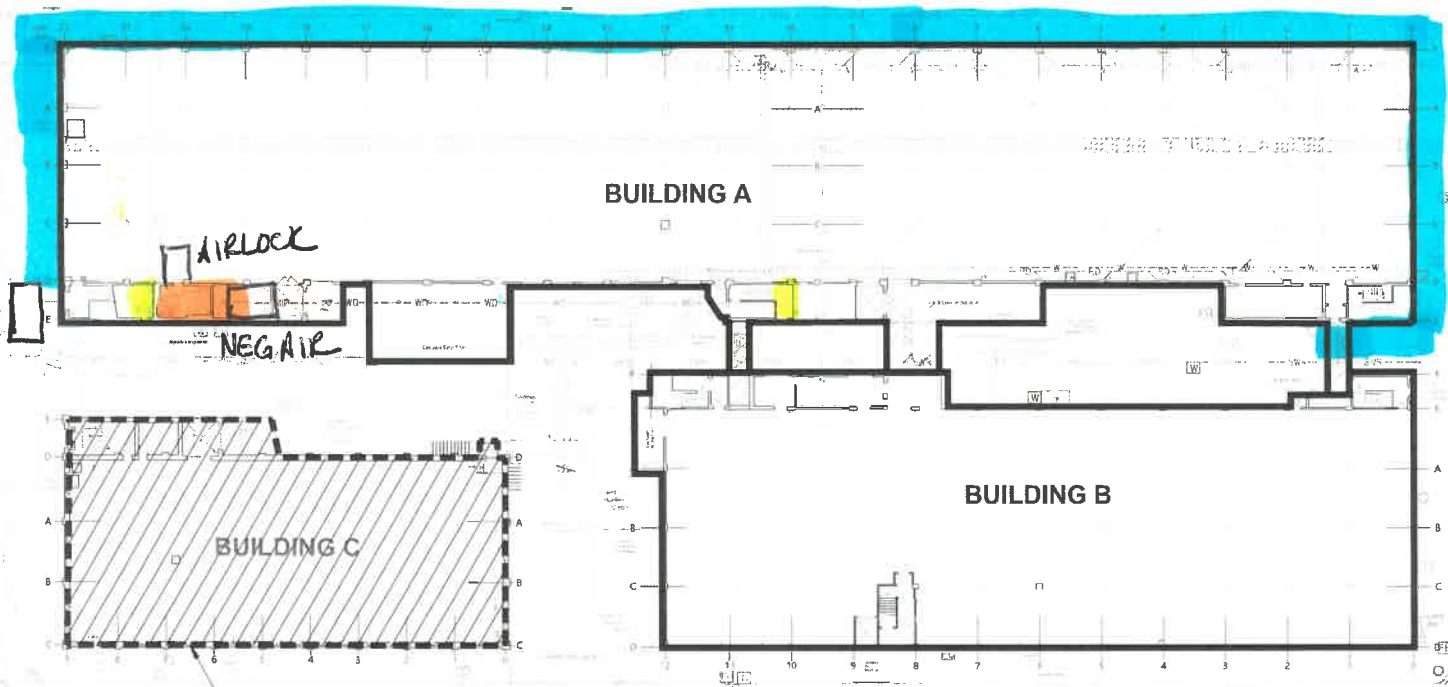
- ACM WINDOW REGULATED AREA
- ACM FLOOR TILE CONTAINMENT 1

- ACM FLOOR TILE CONTAINMENT 2



# BUILDING A FIRST FLOOR

DECON



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BUILDING C SUPERSTRUCTURE TO BE DEMOLISHED BY OTHERS

## LEGEND

- BUILDINGS, SLABS AND SUBSURFACE FEATURES TO BE DEMOLISHED
- BUILDING C SLAB AND SUBSURFACE FEATURES TO BE DEMOLISHED

SCALE IN FEET  
0 20 40



NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.

**DRAFT - NOT FOR CONSTRUCTION - PRIVILEGED AND CONFIDENTIAL - ATTORNEY WORK PRODUCT**

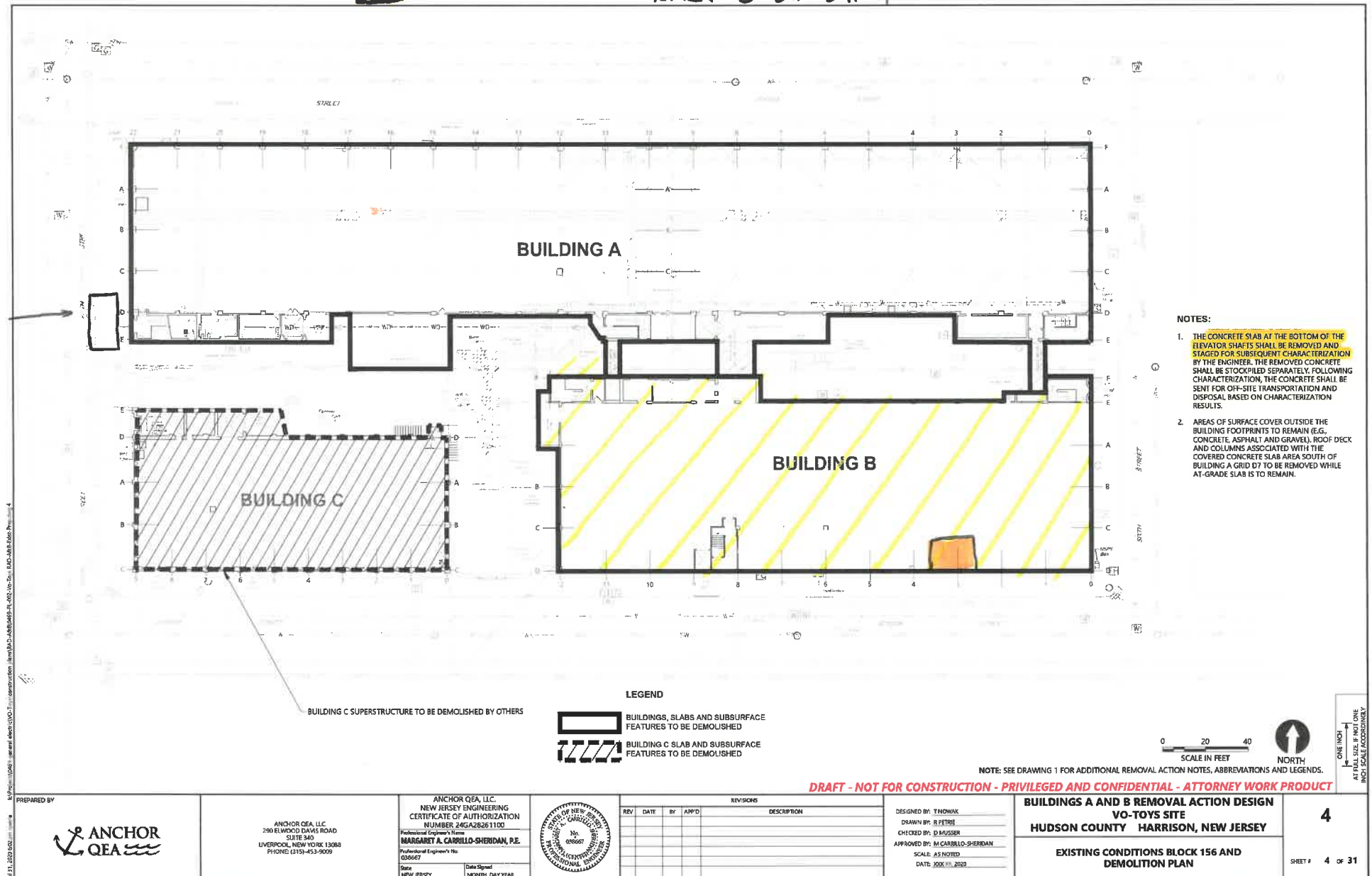
| <p>PREPARED BY</p> <p>ANCHOR QEA, LLC<br/>290 ELWOOD DAVIS ROAD<br/>SUITE 340<br/>LIVERPOOL, NEW YORK 13088<br/>PHONE: (315)-453-9009</p> | <p>ANCHOR QEA, LLC<br/>NEW JERSEY ENGINEERING<br/>CERTIFICATE OF AUTHORIZATION<br/>NUMBER 24GA28251100<br/>Professional Engineer's Name<br/><b>MARGARET A. CARRILLO-SHERIDAN, P.E.</b><br/>Professional Engineer's No.<br/>033657<br/>State<br/>NEW JERSEY</p> |    | <table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APPD</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | REV         | DATE | BY | APPD | DESCRIPTION |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | <p>DESIGNED BY: T. NOLAN<br/>DRAWN BY: B. PETRE<br/>CHECKED BY: D. MUISER<br/>APPROVED BY: M. CARRILLO-SHERIDAN<br/>SCALE: AS NOTED<br/>DATE: XXX.XX.XX</p> | <p><b>BUILDINGS A AND B REMOVAL ACTION DESIGN</b><br/><b>VO-TOYS SITE</b><br/><b>HUDSON COUNTY HARRISON, NEW JERSEY</b></p> <p><b>EXISTING CONDITIONS BLOCK 156 AND</b><br/><b>DEMOLITION PLAN</b></p> | <p><b>4</b></p> <p>SHEET # 4 of 31</p> |
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- ACM WINDOW REGULATED AREA
- ACM CELLAR VAULT

- ACM FLOOR TILE + MASTIC CONTAINMENT 3

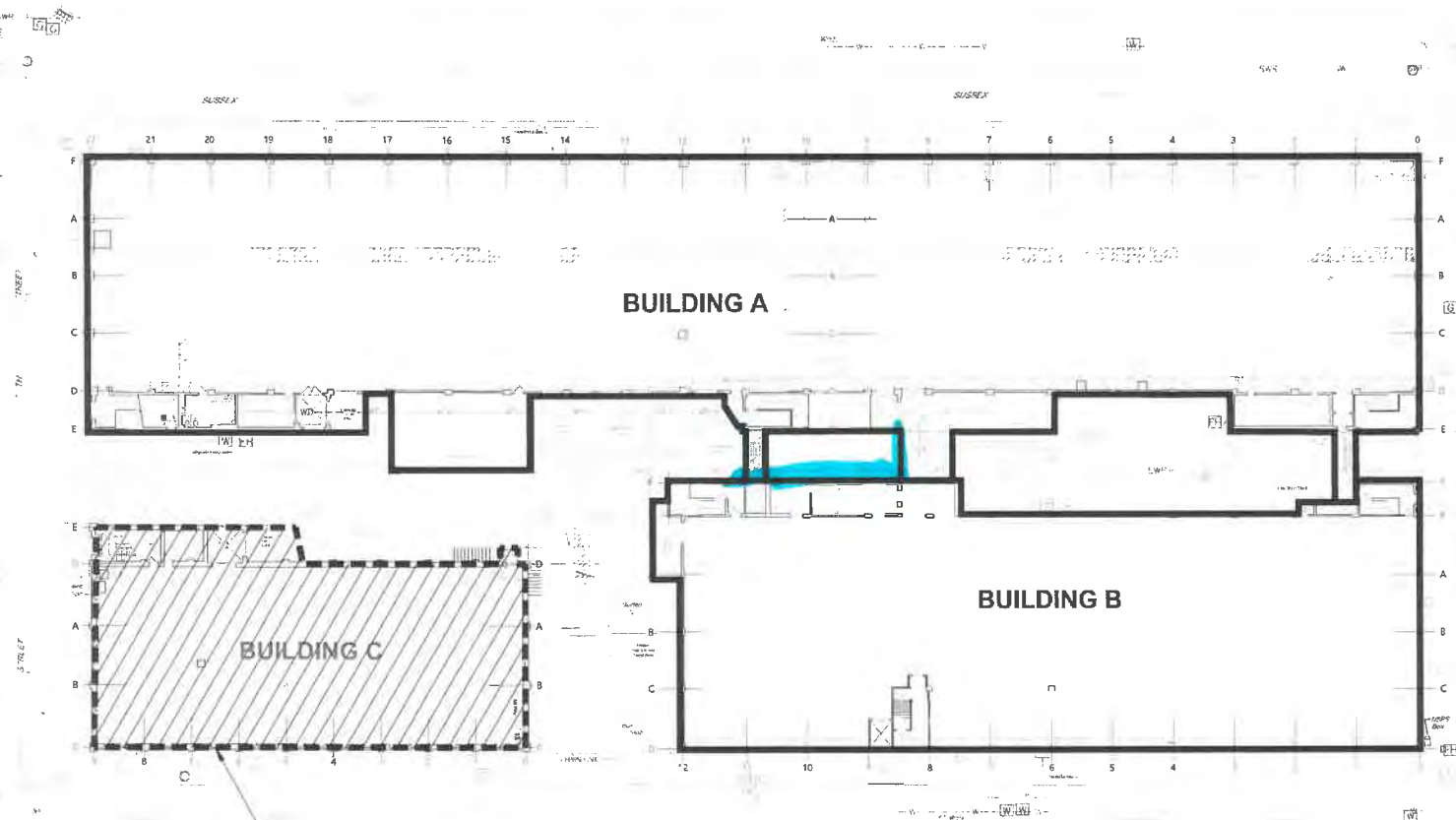
# ROOF REGULATED AREA B BUILDING

DECON



 TRANSITE

# BUILDING B THIRD FLOOR



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- BUILDING C SLAB AND SUBSURFACE FEATURES TO BE DEMOLISHED


BUILDING C SUPERSTRUCTURE TO BE DEMOLISHED BY OTHERS

SCALE IN FEET  
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NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.

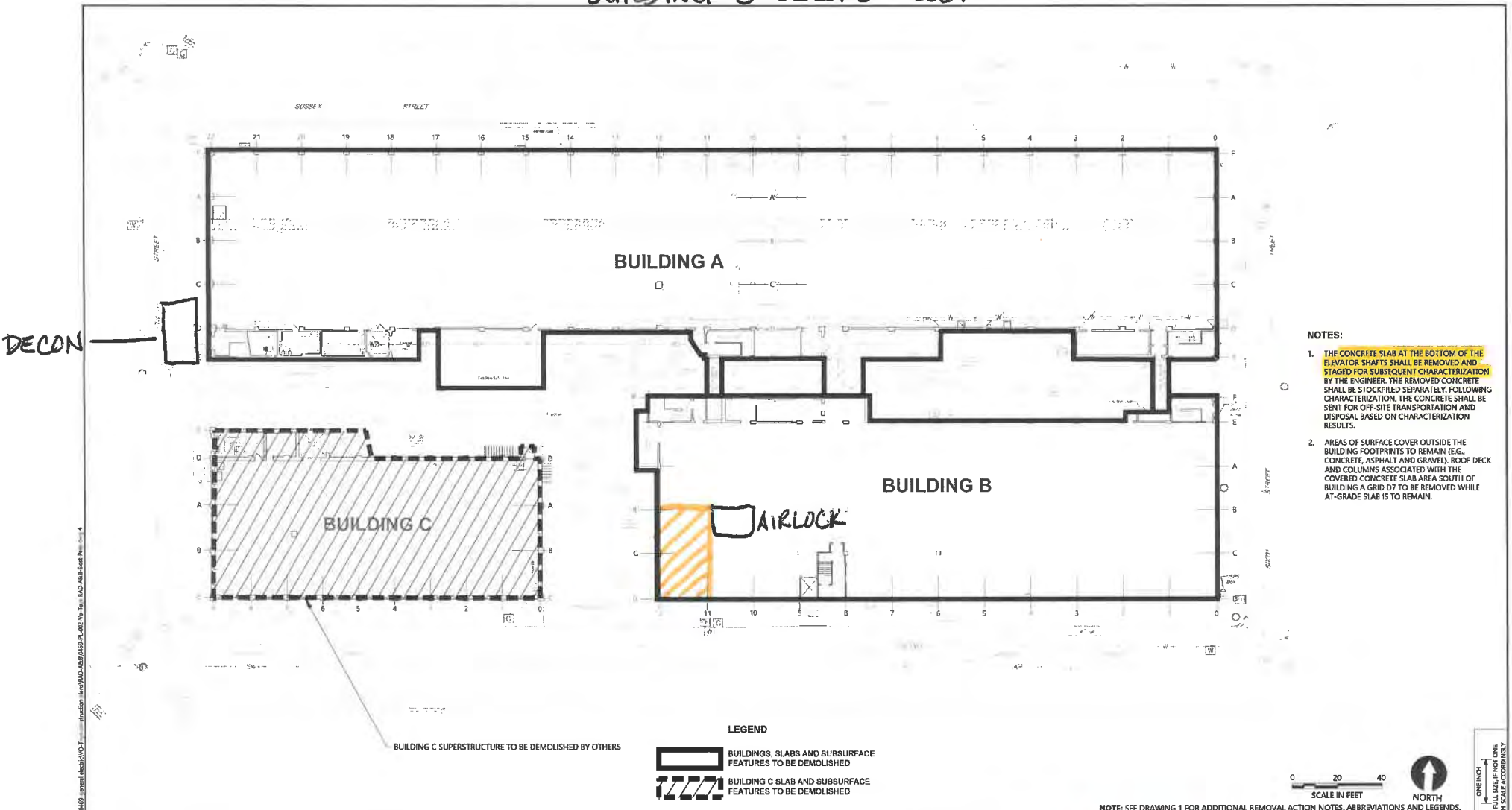
**DRAFT - NOT FOR CONSTRUCTION - PRIVILEGED AND CONFIDENTIAL - ATTORNEY WORK PRODUCT**

| <p>PREPARED BY</p>  | <p>ANCHOR QEA, LLC<br/>250 ELWOOD DAVIS ROAD<br/>SUITE 340<br/>LIVERPOOL, NEW YORK 13088<br/>PHONE: (315) 453-9009</p> | <p>ANCHOR QEA, LLC<br/>NEW JERSEY ENGINEERING<br/>CERTIFICATE OF AUTHORIZATION<br/>NUMBER 24GA28261100<br/>Professional Engineer's Name<br/><b>MARGARET A. CARRILLO-SHERIDAN, P.E.</b><br/>Professional Engineer's No.<br/>038667<br/>State<br/>NEW JERSEY<br/>Date Signed<br/>MONTH, DAY YEAR</p> |  | <table border="1"> <thead> <tr> <th colspan="5">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APPD</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | REVISIONS |  |  |  |  | REV | DATE | BY | APPD | DESCRIPTION |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | <p>DESIGNED BY: T. NOKIM<br/>DRAWN BY: R. PETRIE<br/>CHECKED BY: D. MAUSER<br/>APPROVED BY: M. CARRILLO-SHERIDAN<br/>SCALE: AS NOTED<br/>DATE: 300.11.2023</p> | <p><b>BUILDINGS A AND B REMOVAL ACTION DESIGN</b><br/><b>VO-TOYS SITE</b><br/><b>HUDSON COUNTY HARRISON, NEW JERSEY</b></p> <p><b>EXISTING CONDITIONS BLOCK 156 AND DEMOLITION PLAN</b></p> | <p><b>4</b></p> <p>SHEET # 4 of 31</p> |
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 ACM WINDOWS

# BUILDING B SECOND FLOOR

DECON



- NOTES:**
1. THE CONCRETE SLAB AT THE BOTTOM OF THE ELEVATOR SHAFTS SHALL BE REMOVED AND STAGED FOR SUBSEQUENT CHARACTERIZATION BY THE ENGINEER. THE REMOVED CONCRETE SHALL BE STOCKPILED SEPARATELY. FOLLOWING CHARACTERIZATION, THE CONCRETE SHALL BE SENT FOR OFF-SITE TRANSPORTATION AND DISPOSAL BASED ON CHARACTERIZATION RESULTS.
  2. AREAS OF SURFACE COVER OUTSIDE THE BUILDING FOOTPRINTS TO REMAIN (E.G., CONCRETE, ASPHALT AND GRAVEL), ROOF DECK AND COLUMNS ASSOCIATED WITH THE COVERED CONCRETE SLAB AREA SOUTH OF BUILDING A GRID D7 TO BE REMOVED WHILE AT-GRADE SLAB IS TO REMAIN.

## LEGEND

- BUILDINGS, SLABS AND SUBSURFACE FEATURES TO BE DEMOLISHED
- BUILDING C SLAB AND SUBSURFACE FEATURES TO BE DEMOLISHED

NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.



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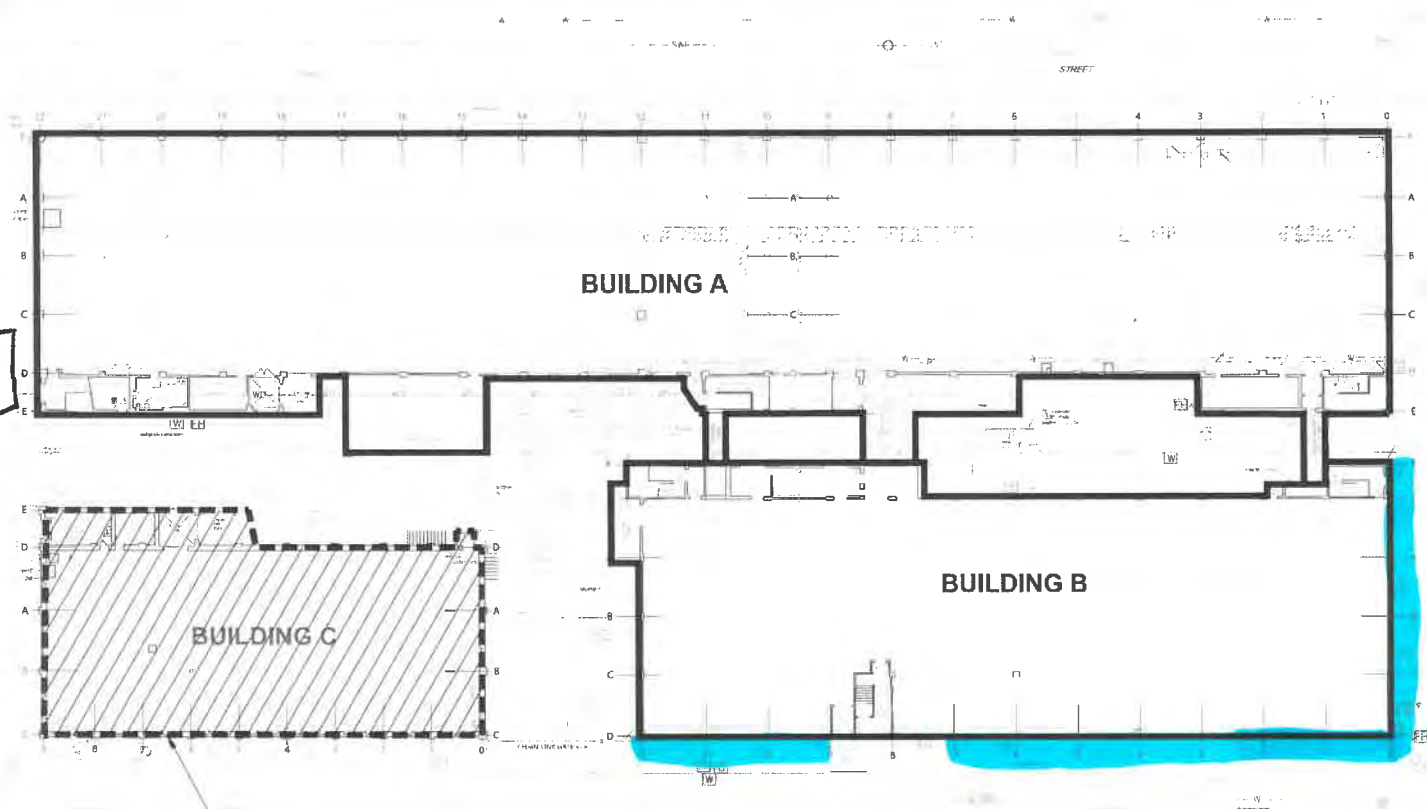
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| <b>PREPARED BY</b><br> | <b>ANCHOR QEA, LLC</b><br>250 ELWOOD DAVIS ROAD<br>SUITE 340<br>LIVERPOOL, NEW YORK 13088<br>PHONE: (315)-453-9009 | <b>ANCHOR QEA, LLC</b><br>NEW JERSEY ENGINEERING<br>CERTIFICATE OF AUTHORIZATION<br>NUMBER 24GA28261100<br><b>MARGARET A. CARRELL-SHERIDAN, P.E.</b><br>Professional Engineer's No. 038667<br>State: NEW JERSEY |  | <b>REVISIONS</b>               |  | DESIGNED BY: T. MONAK<br>DRAWN BY: R. PETRE<br>CHECKED BY: D. MUSSER<br>APPROVED BY: M. CARRELL-SHERIDAN<br>SCALE: AS NOTED<br>DATE: 2003.10.2020 | <b>BUILDINGS A AND B REMOVAL ACTION DESIGN</b><br><b>VO-TOYS SITE</b><br><b>HUDSON COUNTY HARRISON, NEW JERSEY</b><br><br><b>EXISTING CONDITIONS BLOCK 156 AND DEMOLITION PLAN</b> | <b>4</b><br>SHEET # 4 of 31 |
|                        |  |   |  | REV. DATE BY APP'D DESCRIPTION |  |   |  |                             |

PIPE DEBRIS REGULATED AREA



# BUILDING B FIRST FLOOR

DECON



- NOTES:**
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BUILDING C SUPERSTRUCTURE TO BE DEMOLISHED BY OTHERS

**LEGEND**

BUILDINGS, SLABS AND SUBSURFACE FEATURES TO BE DEMOLISHED

BUILDING C SLAB AND SUBSURFACE FEATURES TO BE DEMOLISHED

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NOTE: SEE DRAWING 1 FOR ADDITIONAL REMOVAL ACTION NOTES, ABBREVIATIONS AND LEGENDS.

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| <b>EXISTING CONDITIONS BLOCK 156 AND DEMOLITION PLAN</b> | SHEET # 4 of 31  |   |  |   |     |      |    |       |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |          |

ACM WINDOW REGULATED AREA

## Asbestos Abatement Related Citations - Last Five Years

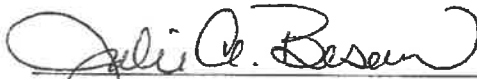
Brandenburg has not incurred any penalties through non-compliance with ACM abatement Project specifications including liquidated damages, overruns in scheduled time limitations and resolutions.

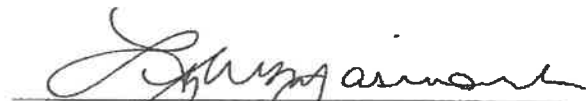
There have been no situations in which an ACM abatement-related contract has been terminated including projects, dates and reasons for termination.

In the past five years, Brandenburg has not received notices of intent to initiate enforcement or settlement agreements related to ACM abatement such as: Notice of Violation, Notice of Intent to Enforce violation, or Consent Agreements that have resulted in a citation.

There are no ACM-related legal proceedings/claims in which Contractor (or employees scheduled to participate in this Project) have participated or are currently involved.

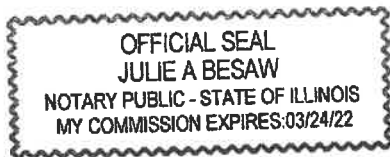
Signed this 12th day of January, 2021.

  
Notary Public – Julie A. Besaw

  
Secretary/Treasurer – Lynn M. Jasinowski

My Commission Expires: March 24, 2022

SEAL





# ENVIRONMENTAL COMPLIANCE MANAGEMENT CORPORATION

P.O. BOX 86 CHITTENANGO, NEW YORK 13037 PHONE: (315) 687-9435

**Stephen Carne**

*has attended and successfully completed a course for:*

**Asbestos Project Designer Refresher**

Length of Course: **8 Hours**

Course Location: **Chittenango, New York**

Student I.D. # **2327**

Date of Course Completion: **10/19/2020**

Social Security # **000005237**

Expiration Date: **10/19/2021**

Exam Grade: **92%**

Exam Date: **10/19/2020**

*Executive Director*

The official record of successful completion is the DOH 2832 Certificate of Completion of Asbestos Safety Training  
The person receiving this certificate has completed the requisite training for asbestos accreditation under the Toxic Substance Control Act (TSCA) Title II

| Title                  | Date       | Reference | Area   |
|------------------------|------------|-----------|--------|
| Respiratory Protection | 03/15/2019 | 2.01      | Safety |

**1. Summary**

When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this procedure. A respirator shall be provided to each employee when such equipment is necessary to protect the health of such employee.

**2. Scope**

All applicable Brandenburg personnel and work sites will be outlined within this procedure as required.

**3. Definitions**

- 3.1 IDLH – *Immediately Dangerous to Life and Health* – An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.
- 3.2 NIOSH - *National Institute for Occupational Safety and Health*.
- 3.3 QLFT – *Qualitative Fit Test* – A pass / fail fit test used to assess the adequacy of respirator fit that relies on the individual's response to the test agent. This may include the use of iso-amyl acetate, bitrex, saccharin solution, or irritant smoke.
- 3.4 QNFT – *Quantitative Fit Test* – An assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.
- 3.5 SCBA -- *Self Contained Breathing Apparatus* – Atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.
- 3.6 Air-Purifying Respirator – A respirator with an air purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.
- 3.7 PAPR - *Powered Air-Purifying Respirator* – An air purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.
- 3.8 Negative Pressure Respirator – A respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.
- 3.9 Positive Pressure Respirator – A respirator in which the pressure inside the respirator facepiece exceeds the ambient air pressure outside the respirator.
- 3.10 Fit Factor – A quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

**4. Responsibility**

Responsibility of personnel will be outlined within this procedure as required.

**5. Methods**

- 5.1 Respiratory Protection Program-General



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**5.1.1 Program Administrator**

The program administrator(s) will be responsible for development and implementation of Brandenburg's Respiratory Protection Program. The designated Program Administrators are Brandenburg Environmental Health & Safety (EHS) Managers. The Program Administrator(s) will oversee the Respiratory Protection Program and conduct the required evaluations of program effectiveness. The program shall be updated as necessary to reflect those changes in the workplace conditions that affect respirator use.

**5.1.2 Atmosphere Evaluation Respirator Selection**

Formal hazard assessments can be located in the Engineering Survey, the site-specific Health and Safety Plans (HASP) or Task Safety Analyses (TSA). Depending on the project or task, work activities will be monitored for respiratory hazards. Considerations include the potential toxicity of the contaminant(s), the routes of entry of the hazardous material, and any physiological effects. A respirator will be provided that is adequate to protect the health of the employee and ensure compliance with other OSHA regulatory requirements. Additional exposure guidelines can be referenced in the American Conference of Governmental Industrial Hygienists (ACGIH) booklet of the Threshold Limit Values (TLV's), and NIOSH Chemical Guides.

The selection of respirators will be based on the physical, chemical, and physiological properties of the air contaminant(s) and on a reasonable estimate of employee exposures. The quality of the fit and the nature of the work being done also affect the choice of respirators.

Brandenburg will evaluate respiratory hazards in the workplace, identify relevant workplace and user factors, and base respirator selection on these factors. Each EHS Manager will determine the type of respirator to be used. In all cases, the respirator chosen will be a NIOSH certified respirator. The respirator shall be used in compliance with the conditions of its certification. If the exposure cannot be identified or reasonably estimated, the atmosphere will be considered IDLH.

**5.1.2.1 Respirators for IDLH atmospheres include the following:**

5.1.2.1.1 A full facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or

5.1.2.1.2 A combination full facepiece, pressure demand, supplied-air respirator with auxiliary self-contained air supply.

**5.1.2.2 Respirator selection for non-IDLH atmospheres shall be performed as follows:**

The respirator selected shall be appropriate for the chemical state and physical form of the contaminant. For protection against gases and vapors, the employee will be provided with an air purifying respirator that is equipped with an end of service life indicator (ESLI) or a change schedule for canisters and cartridges that

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will ensure that canisters and cartridges are changed before the end of their service life.

For protection against particulates, the employee will wear an atmosphere-supplying respirator; or an air purifying respirator equipped with a filter certified by NIOSH as a high efficiency particulate air (HEPA) filter (eg., P100 filter).

#### 5.1.3 Medical Surveillance Program

The Brandenburg designated Physician or Licensed Health Care Provider (PLHCP) will administer the medical evaluation questionnaire and determine the employee's ability to use a respirator.

All employees who are part of the Respiratory Protection Program will undergo a medical evaluation to determine the employee's ability to use a respirator. This medical evaluation will be performed before the employee is fit tested or required to use the respirator in the workplace. Medical evaluations will be performed in strict accordance with the Brandenburg Medical Surveillance Policy (1.12).

#### 5.1.4 Fit Testing

Employees in the Respiratory Protection Program must successfully complete a fit test prior to being allowed to use a respirator in the workplace. The fit test will be performed with the same make, model, style, and size of respirator that he/she will use. The fit test may be a qualitative fit test (QLFT) or quantitative fit test (QNFT). A QLFT will be performed if a fit factor of 100 or less is required. If a fit factor of greater than 100 is required, a QNFT will be performed.

5.1.4.1 The employee will be fit tested prior to initial respirator use, whenever a different respirator facepiece is used, and at least annually thereafter.

5.1.4.2 Additional fit tests will be performed whenever the employee reports or Brandenburg management makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to: facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

5.1.4.3 If, after passing a fit test, the employee subsequently notifies Brandenburg that the fit of the respirator is unacceptable, the employee will be allowed to select a different respirator facepiece and be retested.

5.1.4.4 Fit testing of tight fitting atmosphere-supplying respirators and tight-fitting powered air purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation that is used for respiratory protection.

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## 5.1.5 Use of Respirators

5.1.5.1 The employee is required to perform a user seal check each time he/she puts on the respirator as detailed in the fit test section of this document.

5.1.5.2 Employees will not be allowed to wear respirators when the following conditions exist:

5.1.5.2.1 Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function;

5.1.5.2.2 Any condition that interferes with the face to facepiece seal or valve function; or

5.1.5.2.3 If an employee wears corrective glasses or goggles or other personal protective equipment, this equipment shall be worn so that it does not interfere with the seal of the facepiece to the face of the user.

5.1.6 Employees must leave the respirator use area when the following conditions occur:

5.1.6.1 To wash their faces and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use,

5.1.6.2 If employees detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the face piece, the respirator will be replaced or repaired before the employee will be allowed to return to the work area,

5.1.6.3 To replace the respirator or the filter, cartridge, or canister elements

## 5.2 IDLH Atmospheres

Brandenburg will use all reasonable engineering controls (i.e. ventilation) to ensure that employees do not have to work in IDLH atmospheres. However, should the situation arise where the atmosphere cannot be changed from IDLH, the following conditions will be met:

5.2.1 At least one person or worker will be located outside of the IDLH Atmosphere.

5.2.2 Visual, voice or signal line communication will be maintained between the employees in the IDLH atmosphere and the person(s) outside the IDLH atmosphere.

5.2.3 The person(s) located outside the IDLH atmosphere will be trained and equipped to provide effective emergency rescue.

5.2.4 The employer or designee is notified before the person(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue.

5.2.5 The designated employee, once notified, will provide necessary assistance to the situation.

5.2.6 Person(s) located outside of the IDLH atmosphere will be equipped with and qualified to use: positive pressure SCBAs or supplied air respirator with auxiliary SCBA and appropriate retrieval equipment for removing the employee(s) who enter hazardous atmospheres or other equivalent means for rescue where retrieval equipment is not required.

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### 5.3 Maintenance and Care

- 5.3.1 Cleaning. Each employee is required to clean and disinfect his respirator using procedures recommended by the respirator manufacturer or an equally effective method. Each employee will be trained to properly care for his respirator during training. Respirators will be cleaned as often as necessary to be maintained in a sanitary condition.

Daily cleaning will involve the use of manufacturer recommended wipes.

Additional cleaning, per manufacturer's recommendations, requires the employee to:

- 5.3.1.1 Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.
- 5.3.1.2 Wash components in warm water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
- 5.3.1.3 Rinse components thoroughly in clean, warm, preferably running water. Drain excess water.
- 5.3.1.4 When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
  - 1. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 deg. C or,
  - 2. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and or potassium iodide/199cc of 45% alcohol) to one liter of water at 43 deg. C or,
  - 3 Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.
- 5.3.1.5 Rinse components thoroughly in clean, warm, preferably running water. Drain excess water.
- 5.3.1.6 Components should be hand-dried with a clean lint free cloth or air dried.
- 5.3.1.7 Reassemble facepiece, replacing filters, cartridges, and canister where necessary.
- 5.3.1.8 Test the respirator to ensure that all components work properly.
- 5.3.2 Storage. Respirators will be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture and damaging chemicals, and will be packed or stored to prevent deformation of the face piece and exhalation valve. They will also be stored in accordance with manufacturer's recommendations. When required, emergency respirators will be kept accessible to the work area.

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- 5.3.3 Inspection. Employees will inspect respirators before each use and during cleaning. The inspections will include: a check of respirator function, tightness of connections, and the condition of various parts including but not limited to, the face piece, head straps, valves, connecting tube, cartridges, canisters filters and a check of elastomeric parts for pliability and signs of deterioration. Respirator inspection shall include:
- 5.3.3.1 Cleanliness of facepiece and internal parts such as valves, nose cups, etc.
  - 5.3.3.2 Rips, tears, stiffening or other signs of aging to all o-rings, gaskets, diaphragm valves, or the face piece itself.
  - 5.3.3.3 Breaks, cuts, frays, tears or loss of elasticity of the head straps or hair net.
  - 5.3.3.4 Missing hardware.
  - 5.3.3.5 Scratched, nicked, or scraped face piece lens. If so, determine if they impair vision.
  - 5.3.3.6 All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturers' recommendations, and shall be checked for proper function before and after use.

#### 5.4 Repairs

Should any respirator fail an inspection or otherwise found to be defective, it will be removed from service, and either discarded, repaired or adjusted as follows:

- 5.4.1 Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH approved parts designed for the respirator;
- 5.4.2 Respirator repairs will be made in accordance with the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and
- 5.4.3 Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

#### 5.5 Training

All employees who are expected to use respirators will be trained prior to performing work with a respirator. The training will be documented on the Respirator Fit Form (SAF-07A or SAF-07B) and will cover the following subjects:

- 5.5.1 Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;
- 5.5.2 Limitation and capabilities of the respirator;
- 5.5.3 Effective use in emergency situations, including situations in which the respirator malfunctions;
- 5.5.4 Inspection, putting the respirator on, taking the respirator off and checking of the seals;

| Title                  |   | Date       | Reference | Area   |
|------------------------|---|------------|-----------|--------|
| Respiratory Protection |   | 03/15/2019 | 2.01      | Safety |
| 5.5.5                  | Maintenance and storage procedures;   |            |           |        |
| 5.5.6                  | How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and   |            |           |        |
| 5.5.7                  | Change-out procedures for cartridges or filters   |            |           |        |
| 5.6                    | Retraining will be administered annually, and when the following situations occur:  |            |           |        |
| 5.6.1                  | Changes in the workplace or the type of respirator which render previous training obsolete.   |            |           |        |
| 5.6.2                  | Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or  |            |           |        |
| 5.6.3                  | Any other situation arises in which retraining appears necessary to ensure safe respirator use.   |            |           |        |
| 5.7                    | Fit Test Procedures   |            |           |        |
| 5.7.1                  | The employee will be provided with a 3M respirator. If the 3M respirator is determined to provide insufficient protection or comfort, the employee will be allowed to choose from other various makes and models so that the respirator is acceptable to, and correctly fits, the user.   |            |           |        |
| 5.7.2                  | Prior to the selection process, the employee will be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror will be available to assist the subject in evaluating the fit and position of the respirator. Note: Brandenburg considers the training information exchanged during fit testing a review, and does not consider this formal training. |            |           |        |
| 5.7.3                  | The employee will be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.  |            |           |        |
| 5.7.4                  | The employee will be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.  |            |           |        |
| 5.7.5                  | The most comfortable mask is donned and worn at least five minutes to assess comfort. If the employee is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.  |            |           |        |
| 5.7.6                  | Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:  |            |           |        |
| 5.7.6.1                | Position the mask on the nose,  |            |           |        |
| 5.7.6.2                | Room for eye protection,  |            |           |        |
| 5.7.6.3                | Room to talk,   |            |           |        |
| 5.7.6.4                | Position of mask on face and cheeks,  |            |           |        |

| Title                  | Date       | Reference | Area   |
|------------------------|------------|-----------|--------|
| Respiratory Protection | 03/15/2019 | 2.01      | Safety |

5.7.7 The following criteria will be used to help determine the adequacy of the respirator fit:

5.7.7.1 Chin properly placed;

5.7.7.2 Adequate strap tension, not overly tightened;

5.7.7.3 Fit across nose bridge;

5.7.7.4 Respirator of proper size to span distance from nose to chin;

5.7.7.5 Tendency of respirator to slip;

5.7.7.6 Self-observation in mirror to evaluate fit and respirator position.

5.7.8 Employees shall conduct conventional negative and positive pressure fit checks. Before conducting the negative and positive checks, the employee will "seat" his/her mask by moving the head side to side and up and down, and taking a few deep breaths.

5.7.8.1 Negative pressure test

To perform this test, close off the inlet of the cartridges by covering them with the palms of the hands or by blocking the breathing tube with the palm so that air does not pass through. Inhale gently so that the facepiece collapses slightly onto the face and hold for 10 seconds. If the face piece remains slightly collapsed and no inward leakage is detected, the respirator is potentially tight enough. This test can be used only on respirators with tight fitting facepieces. After completing the negative pressure test, the positive pressure test shall be performed.

5.7.8.2 Positive pressure test

The check is similar to the negative pressure check except the palm of the hand should be placed over the exhalation valve and the employee should exhale gently into the facepiece. The fit is considered satisfactory if slight positive pressure can be built up inside the face piece without any evidence of outward leakage. The test is easy for respirators whose valve cover has a single small port that can be closed by the palm.

5.7.9 Brandenburg will not conduct a fit test if any of the following conditions exist:

5.7.9.1 Hair growth exists between the skin and the face piece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface.

5.7.9.2 If apparel appears to be interfering with a satisfactory fit.

5.7.9.3 If the employee exhibits difficulty in breathing during the tests, he shall be referred to our physician to determine whether the test subject can wear a respirator while performing his duties.

5.7.10 If the employee finds the fit of the respirator unacceptable, the employee will be given the opportunity to select a different respirator and be retested.

| Title                  | Date       | Reference | Area   |
|------------------------|------------|-----------|--------|
| Respiratory Protection | 03/15/2019 | 2.01      | Safety |

5.7.11 Prior to the fit test, the employee will be given a description of the fit test and the employee's responsibilities during the test procedure. The respirator will be worn at least 5 minutes before the start of the fit test.

5.7.12 The fit test shall be performed while the employee is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

## 5.7.13 Test Exercises

The following test exercises will be used during all fit testing methods, except for CNP quantitative fit testing protocol.

Normal breathing: In a normal standing position without talking, the subject shall breath normally.

Deep breathing: In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

Turning head side-to-side: Standing in place, the subject shall slowly turn his/her head from side to side between the extreme position on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.

Moving head up and down: Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (when looking toward the ceiling).

Talking: The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage (see below), count backward from 100, or recite a memorized poem or song.

### Rainbow Passage

When sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of long, round arch with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

Grimace: The test subject shall grimace by smiling or frowning.

Bending over: The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud-type QNFT units that prohibit bending at the waist.



| Title                  | Date       | Reference | Area   |
|------------------------|------------|-----------|--------|
| Respiratory Protection | 03/15/2019 | 2.01      | Safety |

And finally, normal breathing again: - same as above.

Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds

#### 5.7.14 Qualitative Fit Test (QLFT) Protocols

Qualitative fit testing shall be accomplished by using one of the following methods listed in 1910.134 Appendix A. These include the isoamyl acetate protocol, saccharin solution aerosol protocol, Bitrex™ solution aerosol test protocol, and irritant smoke (stannic chloride) protocol. Brandenburg shall ensure that persons administering the QLFT are able to prepare test solutions, calibrate equipment, perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order. Equipment shall be kept clean and well maintained so as to operate within the parameters for which it was designed. The individual test methods require the use of air purifying respirators equipped with the appropriate cartridge.

#### 5.7.15 Quantitative Fit Test (QNFT) Procedures

Quantitative fit testing shall be accomplished by using one of the methods listed in 1910.134 Appendix A. QNFT uses ambient aerosols as the test agent and appropriate instrumentations to quantify the respirator fit. A minimum fit factor pass level of at least 100 is necessary for a half-mask respirator and a minimum fit factor pass level of at least 500 is required for a full facepiece negative pressure respirator. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

Brandenburg shall ensure the persons administering the QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and ensure that test equipment is in proper working order. The operator shall also ensure the equipment is kept clean, and is maintained and calibrated according to the manufacturer's instructions so as to operate at the parameters for which it was designed.

### 5.8 Breathing Air - Quality and Use

Compressed breathing air used for respiration will have the following specifications:

5.8.1 Compressed breathing air will meet at least the requirement for Type 1 Grade D breathing air described in ANSI Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:

5.8.1.1 Oxygen content of 19.5-23.5%;

5.8.1.2 Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;

5.8.1.3 Carbon monoxide (CO) content of 10 ppm or less;

5.8.1.4 Carbon dioxide (CO<sub>2</sub>) of 1,000 ppm or less; and

5.8.1.5 Lack of noticeable odor

| Title                  | Date       | Reference | Area   |
|------------------------|------------|-----------|--------|
| Respiratory Protection | 03/15/2019 | 2.01      | Safety |

**5.8.2 Cylinders**

Cylinders used to supply breathing air to respirators will meet the following requirements:

5.8.2.1 Cylinders will be tested and maintained as prescribed in the Shipping Container Specification Regulations of the Department of Transportation (49 CFR part 173 and part 178);

5.8.2.2 Cylinders of purchased breathing air will have a certificate of analysis from the supplier that the breathing air meets the requirements for Type 1 – Grade D breathing air; and

5.8.2.3 The moisture content in the cylinder will not exceed a dew point of 50 deg. F. at 1 atmospheric pressure.

**5.8.3 Compressors**

Compressors used to supply breathing air to respirators are constructed and situated so as to:

5.8.3.1 Prevent entry of contaminated air into the air-supply system. Minimize moisture content so that the dew point at 1 atmosphere pressure is 10 degrees F below the ambient temperature;

5.8.3.2 Have suitable in-line air purifying sorbent beds and filters to further ensure breathing air quality. Sorbent beds and filters shall be maintained and replaced or refurbished periodically following the manufacturer's instructions.

5.8.3.3 Have a tag containing the most recent change date and the signature of the person authorized by the employer to perform the change. This tag will be placed at the compressor.

5.8.3.4 For compressors that are not oil lubricated, the employer shall ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.

5.8.3.5 For any oil lubricated compressors, a high-temperature or carbon monoxide alarm or both, will be utilized to ensure breathing air from exceeding 10 ppm.

5.8.3.6 All couplings on breathing air equipment will be incompatible with couplings used for non-breathing air equipment.

**5.9 Continuing Respirator Effectiveness:**

As part of the Brandenburg safety program, work area conditions and the degree of employee exposure or stress that may affect respirator effectiveness shall be monitored on a regular basis when there is a change in work area conditions or degree of employee exposure or stress. The Program Administrator is responsible to re-evaluate the continued effectiveness of the respirator when there is a change in work area conditions or degree of employee exposure or stress.

| Title                  | Date       | Reference | Area   |
|------------------------|------------|-----------|--------|
| Respiratory Protection | 03/15/2019 | 2.01      | Safety |

**5.10 Program Evaluation**

Brandenburg Program Administrators will conduct evaluations of the workplace to ensure that the written Respiratory Protection Program is being properly implemented, and to consult employees to ensure that they are using the respirators properly.

- 5.10.1 Employees will be consulted to assess their view on program effectiveness and to identify any problems. Any problems that are identified during this assessment will be promptly addressed and corrected. Factors to be assessed include:

5.10.1.1 Respirator fit,

5.10.1.2 Appropriate respirator selection for the hazards to which the employee is exposed,

5.10.1.3 Proper respirator use under the workplace conditions, and

5.10.1.4 Proper respirator maintenance

**6. Forms**

6.1 Respirator Fit Test Certification.Qualitative Form (SAF-07A)

6.2 Respirator Fit Test Certification.Quantitative Form (SAF-07B)

**7. Regulatory / Permit Requirements**

29 CFR 1910.134

**8. Record Keeping**

Recordkeeping requirements are identified on the Records Retention Form, unless an existing policy supersedes.

## Appendix C

### Water Management Plan

---



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Liverpool, New York 13088  
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Fax 315.453.9010  
www.anchorqea.com

## SUBMITTAL REVIEW TRANSMITTAL

### CONTRACTOR INFORMATION:

NAME: Glenn Milarczyk  
Brandenburg Industrial Service  
COMPANY: Company  
ADDRESS 2217 Spillman Drive  
Bethlehem, Pennsylvania 18015

### PROJECT INFORMATION:

Buildings A and B Removal Action –  
PROJECT NAME: Vo-Toys Site  
PROJECT NO.: 160469-02.13  
SUBJECT: Water Management Plan  
SUBMITTAL NO.: P-015723-002-B  
DATE: 02/05/2021

Subcontractor/Supplier:

### Check:

☐ Original Submittal ☒ Re-submittal ☐ Other

| Item No. | Specification Reference | Description | Other |
|----------|-------------------------|-------------|-------|
|          |                         |             |       |
|          |                         |             |       |

### Review action:

☐ R – Reviewed ☐ J – Rejected ☐ I – For Your Information  
☒ N – Reviewed and Noted ☐ S - Resubmit

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications and does not relieve the contractor from compliance with contract requirements. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

### Comments:

By: Margaret A. Cameron Sheridan Date: February 5, 2021  
Cc: \_\_\_\_\_

Transmittal No. P-015723-002-B

Date 2/03/2021

Attn Doug Musser

Project Name GE Vo Toys

Project CD MA0852

Document No. Preliminary Asbestos Abatement Plan

Revision No. \_\_\_\_\_

Reference \_\_\_\_\_

Subject:

Transmitted For:

Sent Via:

Action Taken:

|          |  |
|----------|--|
| Plans    |  |
| Approval |  |
| Email    | <a href="mailto:dmusser@anchorgea.com">dmusser@anchorgea.com</a> |
|          |  |

| ITEM | SUBMITTAL             | REV. | COPIES | DATE      | DESCRIPTION  |
|------|-----------------------|------|--------|-----------|--------------|
|      | Water Management Plan | 1    | 1      | 2/03/2021 | for approval |
|      |                       |      |        |           |              |
|      |                       |      |        |           |              |
|      |                       |      |        |           |              |
|      |                       |      |        |           |              |
|      |                       |      |        |           |              |

Signed: Glenn Milarczyk

Comments: \_\_\_\_\_

CC: [mcarrillo-sheridan@anchorgea.com](mailto:mcarrillo-sheridan@anchorgea.com); MA0852 job file

## Brandenburg Industrial

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Suite 104 200 East Big Beaver Rd Troy, MI 48083-1208 Ph (313) 382-2500 Fax (800) 849-1589

Elmhurst, IL 60126-1419 2217 Spillman Drive Bethlehem, PA 18015-1982 Ph (610) 691-1800 Fax (610) 691-4200

Phone (630) 956-7200 800 Town & Country Blvd Ste 500 Houston, TX 77024-3916 Ph (832) 431-3287 Fax (800) 849-1589

Fax (630) 956-7222

## **GE Vo Toys Building A and B Demolition**

### **Project Water Management Plan**

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Note: Section III  
should be titled  
Buildings A and  
B Contact  
Water  
Management

## I Introduction & Statement of Purpose

The purpose of this document is to outline the means and methods Brandenburg intends to employ to manage site storm water and Non-Hazardous contact water during the demolition of GE Vo Toys Building A & B as outlined in Project RAD Sections 01 57 23 and 02 82 13. This plan will identify the storm water management of the overall site water and more specifically the management of contact water to Building A & B during superstructure demolition.

## II Storm Water Management

### A. Site Storm Water Management

**INLET PROTECTION** - Prior to site work beginning, six (6) inlets identified on the contract drawing 3, sheet 3 of 31, included in the Building A & B RAD, will have inlet protection installed (see attached spec sheet A). Sediment debris collected by inlet protection will be properly containerized and provided to Project Engineer for sampling, profiling, and disposal. Inlets will be inspected periodically, as well as before and after each major storm event.

Note: As described in Specification 015713, the inlets shall be inspected once every seven calendar days.

### B. Building A & B Storm Water Management

Building A & B currently have numerous partially functioning roof drains directly connected to public storm sewer. Brandenburg will repair and/or maintain the roof drains during all interior and nonstructural demolition work to convey non contact water.

## III Building A & B Contact Water Management

### A. Dust Control

A combination of dust bosses and laborer(s) with water hoses are the primary methods for dust control during the superstructure demolition. Site conditions at time of superstructure demolition will determine which method is necessary to control dust properly and minimize contact water. The application of water for dust control will be manually controlled during all superstructure demolition; at no time will water be on and left to run without proper supervision.

### B. Liner System

**Beginning of Project** - Brandenburg will install an 1120N non-woven geotextile "cushion" (see attached spec sheet B) on the top of the first floor. The geotextile shall be installed utilizing laborers to roll out the material over the first floor slab. After installation of the geotextile, 3 layers of 6-mil reinforced poly will be placed to achieve a 15-mil barrier as described in the RAD. Each layer will be spray glued down to prevent movement of the liner.

Note that first floor does not have a fully intact slab and the geotextile and liner will need to be installed on the entire first floors of Buildings A and B



Prior to Demolition of Superstructure - Brandenburg shall install a 6"-12" layer of protective sand, gravel, or similar (with prior approval from Anchor) over the top of the HDPE liner to assist in the prevention of liner puncture during the removal activities. The protective layer shall be installed utilizing skid steers equipped with biter buckets. The material shall be placed starting closest to the building entrance and continue out from there until the entire liner over the first floor has been covered.

C. Sump Pit & Pump

Brandenburg shall install a lined sump into one (1) of the existing pits of each building first floor. Liquids generated during the removal action activities shall be directed toward the lined sump for collection. Construction of the sump pit with  $\frac{3}{4}$ " pump and hose will be as specified in contract drawing 3, sheet 29 of 31, included in the Building A&B RAD.

D. Decontamination Water

Decontamination water will be collected and then manually transferred to IBC for on site storage.

E. Dust Control Water

Water used for dust control and natural precipitation that enters the building will be treated as Contact Water, and collected as described in this plan and the RAD. Water that makes contact with the outside of the building, or anywhere else on site will be allowed to drain through area inlets.

F. Offsite Transportation and Final Disposal

Offsite Transportation provided by:

Clean Harbors Environmental Services, Inc.  
116 Skyline Drive  
South Plainfield, NJ 07080

Final Disposal Site:

Clean Water of New York  
3249 Richmond Terrace  
Staten Island, NY 10303

Brandenburg Industrial Service Company  
2217 Spillman Drive  
Bethlehem, Pennsylvania 18015-1982  
Phone (610) 691-1800  
FAX (610) 691-4200

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#### **IV Material Specifications**

Brandenburg Industrial Service Company  
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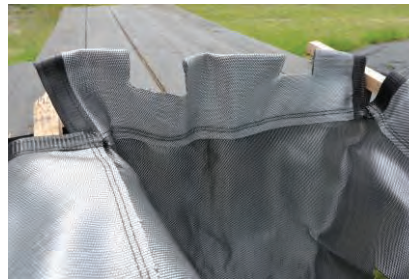
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A. Inlet Protection



## *The Grate Bag*

**The Grate Bag** traps sand, debris, and most silt particles before they enter the sump or pipes. Costly basin and pipe system cleaning is reduced. Best of all, **The Grate Bag** can be reused.



Note: Color of material may vary

| Property         | Test Method | Units     | MARV    |
|------------------|-------------|-----------|---------|
| Grab Tensile     | ASTM D4632  | lbs       | 255x275 |
| Grab Elongation  | ASTM D4632  | %         | 20x15   |
| Trapezoidal Tear | ASTM D4533  | lbs       | 40x50   |
| Puncture         | ASTM D4833  | lbs       | 135     |
| Mullen Burst     | ASTM D3786  | psi       | 420     |
| Permittivity     | ASTM D4491  | sec-1     | 1.5     |
| Water Flow       | ASTM D4491  | gpm/sq ft | 200     |
| AOS              | ASTM D4751  | U.S. Std  | 20      |
| UV Resistance    | ASTM D4355  | %/hrs     | 90/500  |

**The Grate Bag** is a Best Management Practice, which is normally used in conjunction with other BMP's to reduce the impact of sedimentation. Use of **The Grate Bag** as the sole BMP should be limited to those applications where sediment loading within the storm-runoff is minimal. Bags are constructed with tension cable as well as overflow holes that are placed one foot from bottom of bag. **The Grate Bag** is an excellent "final filter" in a well-designed and implemented erosion control system

*L & M Supply Co., Inc. P. O. Box 640 Willacoochee, GA 31650*  
*Direct Phone: 912-534-6071 - Toll Free: 800-948-7870 - Fax: 912-534-6254*  
*Website: [www.landmsupplyco.com](http://www.landmsupplyco.com)*

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FAX (610) 691-4200

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[www.Brandenburg.com](http://www.Brandenburg.com)

B. 1120N non-woven geotextile

# Mirafi<sup>®</sup> 1120N



Mirafi<sup>®</sup> 1120N is a needlepunched nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. Mirafi<sup>®</sup> 1120N is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.

TenCate Geosynthetics Americas Laboratories are accredited by a2La (The American Association for Laboratory Accreditation) and Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP).

| Mechanical Properties                    | Test Method | Unit  | Minimum Average Roll Value |            |
|--|-------------|---|----------------------------|------------|
|  |             |   | MD                         | CD         |
| Grab Tensile Strength                    | ASTM D4632  | lbs (N)   | 300 (1335)                 | 300 (1335) |
| Grab Tensile Elongation                  | ASTM D4632  | %   | 50                         | 50         |
| Trapezoid Tear Strength                  | ASTM D4533  | lbs (N)   | 115 (512)                  | 115 (512)  |
| CBR Puncture Strength                    | ASTM D6241  | lbs (N)   | 800 (3560)                 |            |
| Apparent Opening Size (AOS) <sup>1</sup> | ASTM D4751  | U.S. Sieve (mm)                                 | 100 (0.15)                 |            |
| Permittivity                             | ASTM D4491  | sec <sup>-1</sup>                               | 0.8                        |            |
| Flow Rate                                | ASTM D4491  | gal/min/ft <sup>2</sup> (l/min/m <sup>2</sup> ) | 65 (2648)                  |            |
| UV Resistance (at 500 hours)             | ASTM D4355  | % strength retained                             | 70                         |            |

<sup>1</sup> ASTM D4751: AOS is a Maximum Opening Diameter Value

| Physical Properties              | Unit                              | Typical Value <sup>2</sup> |
|----------------------------------|-----------------------------------|----------------------------|
| Roll Dimensions (width x length) | ft (m)                            | 15 x 300 (4.57 x 91.4)     |
| Roll Area                        | yd <sup>2</sup> (m <sup>2</sup> ) | 500 (418)                  |
| Estimated Roll Weight            | lb (kg)                           | 374 (170)                  |

<sup>2</sup> ASTM D4439 Standard Terminology for Geosynthetics: typical value, *n*—for geosynthetics, the mean value calculated from documented manufacturing quality control test results for a defined population obtained from one test method associated with on specific property.

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GAI-LAP-25-97



Testing Lab 1291.01 & 1291.02

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C. 6-mil Poly

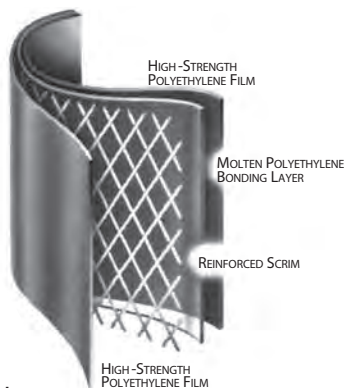
# DURA•SKRIM® 2 & 10HUV

Four-Layer Reinforced Extrusion Laminate

**RAVEN**  
ENGINEERED FILMS

## Product Description

DURA•SKRIM® 2 and 10HUV consist of two sheets of high-strength polyethylene film laminated together with a third layer of molten polyethylene. A heavy-duty scrim reinforcement placed between these plies greatly enhances tear-resistance and increases service life. DURA•SKRIM's heavy-duty diamond reinforcement responds to tears immediately by surrounding and stopping the tear.



## Product Use

DURA•SKRIM® 2 is used for temporary applications that require a lightweight yet highly tear-resistant film such as building enclosures and abatement applications.

DURA•SKRIM® 10HUV is used in applications that require good outdoor life and demand high puncture and tear strengths. The two outer layers of DURA•SKRIM® 10HUV contain high concentrations of UV inhibitors and thermal stabilizers to assure added outdoor life up to approximately one year.

## Size & Packaging

DURA•SKRIM® 2 stock sizes are 6, 8, 10, 12, 16, 20, 24, 32, 40 and 60 feet wide by 100 feet long.

DURA•SKRIM® 10HUV is available in a variety of widths and lengths up to 100,000 square foot panels.

All panels are accordion folded and tightly rolled on a heavy-duty core for ease of handling and time saving installation. Custom sizes are available.

# DURA•SKRIM®



Building Enclosure

## Product

## Part #

DURA•SKRIM 2 ..... R5CC

DURA•SKRIM 10HUV ..... R10CCU

## APPLICATIONS

|                            |                     |
|----------------------------|---------------------|
| Construction Enclosures    | Asbestos Abatements |
| Temporary Liners or Covers | Fumigation Covers   |
| Erosion Control            | Temporary Walls     |
| Shipping and Packaging     | Remediation Covers  |
| Temporary Erosion Control  |                     |



# DURA♦SKRIM® 2 & 10HUV

Four-Layer Reinforced Extrusion Laminate

| PROPERTIES                     | TEST METHOD             | DURA♦SKRIM 2                                      |   | DURA♦SKRIM 10HUV                                  |   |
|--------------------------------|-------------------------|---|---|---|---|
|                                |                         | Imperial  | Metric  | Imperial  | Metric  |
| APPEARANCE                     |                         | Colorless   |   | Colorless   |   |
| THICKNESS, NOMINAL             |                         | 6 mil   | 0.15 mm                                       | 10 mil  | 0.25 mm                                       |
| WEIGHT                         |                         | 18 lbs/MSF<br>2.6 oz./yd <sup>2</sup>             | 88 g/m <sup>2</sup>                           | 41 lbs/MSF<br>5.9 oz./yd <sup>2</sup>             | 200 g/m <sup>2</sup>                          |
| CONSTRUCTION                   |                         | Extrusion laminated with scrim reinforcement      |   |   |   |
| 1" TENSILE STRENGTH            | ASTM D7003              | 56 lbf/in   | 98 N/cm                                       | 60 lbf/in   | 105 N/cm                                      |
| ELONGATION AT FILM BREAK       | ASTM D7003              | 493 %   | 493 %   | 500 %   | 500 %   |
| GRAB TENSILE                   | ASTM D7004              | 63 lbf  | 280 N   | 80 lbf  | 356 N   |
| *TRAPEZOID TEAR                | ASTM D4533              | 38 lbf  | 169 N   | 55 lbf  | 245 N   |
| MULLEN BURST                   | ASTM D751               | 40 psi  | 276 kPa                                       | 90 psi  | 621 kPa                                       |
| WVTR                           | ASTM E96<br>Procedure B | 0.587<br>grains/(100in <sup>2</sup> -day)         | 0.591<br>g/(m <sup>2</sup> -day)              | 0.214<br>grains/(100in <sup>2</sup> -day)         | 0.215<br>g/(m <sup>2</sup> -day)              |
| PERM RATING                    | ASTM E96<br>Procedure B | 0.086 Perms<br>grains/(ft <sup>2</sup> -hr-in Hg) | 0.057 Perms<br>g/(24hr-m <sup>2</sup> -mm Hg) | 0.031 Perms<br>grains/(ft <sup>2</sup> -hr-in Hg) | 0.021 Perms<br>g/(24hr-m <sup>2</sup> -mm Hg) |
| MAXIMUM STATIC USE TEMPERATURE |                         | 180°F   | 82°C  | 180°F   | 82°C  |
| MINIMUM STATIC USE TEMPERATURE |                         | -70°F   | -57°C   | -70°F   | -57°C   |

\*Tests are an average of diagonal directions.

DURA♦SKRIM® 2 is a clear four-layer reinforced extrusion laminate. The outer layers consist of a clear high-strength polyethylene film. DURA♦SKRIM® 2 is reinforced with a heavy duty scrim laid in a diagonal pattern spaced 3/8" apart with an additional machine direction scrim every 9" across the width. The individual plies are laminated together with molten polyethylene.

## DURA♦SKRIM®

DURA♦SKRIM® 10HUV is a clear, four-layer reinforced extrusion laminate. The outer layers consist of a high strength polyethylene film with a high concentration of U.V. and thermal stabilizers. DURA♦SKRIM® 10HUV is reinforced with a minimum of a 1000 denier scrim laid in a diagonal pattern spaced 3/8" apart with an additional machine direction scrim every 3" across the width. The individual plies are laminated together with molten polyethylene.

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage. Limited Warranty available at [www.RavenEFD.com](http://www.RavenEFD.com)



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Scan QR Code to download current technical data sheets via the Raven website.

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D. Intermediate Bulk Container

## UN Rated Poly IBC (Intermediate Bulk Container)

DRM1142 330 gal., Composite Pallet, 39" x 47" x 53"

Eliminate the hassle of storing and moving up to six drums with just one of these FDA Compliant totes!

- Extrusion blow-molded HDPE tank is chemical resistant and specially shaped to completely discharge contents
- Galvanized square tube steel frame provides a strong, rust-resistant protective barrier
- Composite pallet is stronger than wood and lighter than steel; plastic corners resist breaking
- 4-way forklift entries on pallet let you stack units up to four high to save space
- Integrated 2" butterfly valve with outlet nozzle furnishes precise control for dispensing liquids
- 330 gallon capacity to handle bulk storage needs
- Made from FDA Compliant resins for containment of food and cosmetic products (must be cleaned prior to use)



### Specifications

|                      |  |
|----------------------|--|
| Style                | Composite Pallet   |
| Color                | White  |
| Dimensions           | 39" W x 47" L x 53" H  |
| Storage Capacity     | 330 gal.   |
| Containment Type     | IBC  |
| Drain                | 2" Dia. Drain  |
| Top Opening          | (1) 6" Screw Cap w/ 2" Threaded Insert   |
| Sold as              | 1 each   |
| Weight               | 126 lbs.   |
| Composition          | Frame - Galvanized Steel<br>Pallet - Steel & Polyethylene (HDPE)<br>Bottle - Polyethylene (HDPE) |
| UNSPSC               | 24112110   |
| Pigalog® Page Number | <u><a href="#">Page 316</a></u>  |

### Metric Equivalent

|                  |                                  |
|------------------|----------------------------------|
| Dimensions       | 99.1cm W x 119.4cm L x 134.6cm H |
| Storage Capacity | 1249.1 L                         |

**Weight**

57.2 kg

## Technical Information

### Certifications, Approvals and Ratings

UN31HA1/Y

### Disclaimers

#### Flammables Notice

If using this product with flammable liquids, please consider the regulations that apply to storage and handling of flammable liquids and the safety of this application, specifically flammable vapors, static discharge and heat sources. For further assistance, please call Technical Services.



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E. Snap up berm containment



# STINGER SNAP-UP BERM™

**THE WORLDWIDE LEADER IN LARGE, AGGRESSIVE AND IMMEDIATE SPILL RESPONSE.**

The ENPAC® Stinger Berm™ leads the industry with its wide range of sizes and capacities for large-scale spill containment. Stinger Berms feature excellent rip, tear, and puncture resistance for the most demanding application or terrain. Ground Pad and TracMat™ provide additional protection.

- Easy to assemble snap-up design permits immediate response
- Compact storage and transport
- Air-lance tested containment welds for maximum product performance
- Lap joint welds for maximum strength
- Individual serial numbers
- CAD designed and cut components
- Fuel/chemical resistant containment area
- Custom sizes and special materials available
- Cold rated to -30°F/-34°C
- Available in Arctic Grade
- Now available in a 2' L-Bracket sidewall!



Easy set up and take down.  
Custom sizes and special materials available.



## STINGER SNAP-UP BERMS™

| Part #         | Dimensions L x W x H ft. (m)     | Weight lb. (kg) | Spill Cap. gal. (L) |
|----------------|----------------------------------|-----------------|---------------------|
| 4801-BK-SU     | 4 x 4 x 8" (1.2 x 1.2 x 20 cm)   | 11 (5)          | 80 (302)            |
| 4802-BK-SU     | 4 x 4 x 1 (1.2 x 1.2 x 30 cm)    | 18 (11.4)       | 119 (451)           |
| 4803-BK-SU     | 4 x 6 x 8" (1.2 x 1.8 x 20 cm)   | 25 (8)          | 119 (451)           |
| 4804-BK-SU     | 4 x 6 x 1 (1.2 x 1.8 x 30 cm)    | 28 (13)         | 179 (678)           |
| 4805-BK-SU     | 4 x 8 x 8" (1.2 x 2.4 x 20 cm)   | 21 (9.5)        | 159 (602)           |
| 48-5101-BK-SU  | 5 x 10 x 1 (1.5 x 3 x 30 cm)     | 45 (20)         | 374 (1,416)         |
| 4806-BK-SU     | 6 x 6 x 1 (1.8 x 1.8 x 30 cm)    | 37 (16.3)       | 269 (1,018)         |
| 4807-BK-SU     | 8 x 8 x 8" (2.4 x 2.4 x 20 cm)   | 35 (16)         | 319 (1,207)         |
| 4810-BK-SU     | 10 x 10 x 1 (3.1 x 3.1 x 30 cm)  | 60 (27.3)       | 748 (2,831)         |
| 4812-BK-SU     | 12 x 12 x 1 (3.7 x 3.7 x 30 cm)  | 80 (36.3)       | 1,077 (4,077)       |
| 4816-BK-SU     | 16 x 16 x 1 (4.9 x 4.9 x 30 cm)  | 113 (51)        | 1,914 (7,245)       |
| 4820-BK-SU     | 10 x 26 x 1 (3.1 x 7.9 x 30 cm)  | 122 (55)        | 1,944 (7,359)       |
| 48-10401-BK-SU | 10 x 40 x 1 (3 x 12.2 x 30 cm)   | 150 (68)        | 2,992 (11,326)      |
| 48-10451-BK-SU | 10 x 45 x 1 (3 x 13.7 x 30 cm)   | 155 (70)        | 3,366 (12,742)      |
| 48-12201-BK-SU | 12 x 20 x 1 (3.7 x 6 x 30 cm)    | 130 (58)        | 1,795 (6,795)       |
| 4826-BK-SU     | 12 X 26 X 1 (3.7 X 7.9 X 30 cm)  | 140 (63)        | 2,334 (8,835)       |
| 4836-BK-SU     | 12 x 36 x 1 (3.7 x 11 x 30 cm)   | 165 (74.8)      | 3,231 (12,230)      |
| 48-12501-BK-SU | 12 x 50 x 1 (3.7 x 15.2 x 30 cm) | 250 (113)       | 4,488 (16,989)      |
| 4850-BK-SU     | 15 x 50 x 1 (4.6 x 15.2 x 30 cm) | 268 (121)       | 5,610 (21,236)      |
| 4854-BK-SU     | 14 x 54 x 1 (4.3 x 16.5 x 30 cm) | 252 (114.5)     | 5,654 (21,402)      |
| 4860-BK-SU     | 12 x 60 x 1 (3.7 x 18.3 x 30 cm) | 285 (129)       | 5,385 (20,384)      |
| 4866-BK-SU     | 14 x 66 x 1 (4.3 x 20.1 x 30 cm) | 337 (153)       | 6,911 (26,160)      |
| 4885-BK-SU     | 14 x 85 x 1 (4.3 x 25.9 x 30 cm) | 500 (227)       | 8,901 (33,693)      |
| 48-20401-BK-SU | 20 x 40 x 1 (6 x 12.2 x 30 cm)   | 280 (127)       | 5,984 (22,652)      |
| 48-20601-BK-SU | 20 x 60 x 1 (6 x 18.3 x 30 cm)   | 600 (272)       | 8,976 (33,979)      |
| 48-25401-BK-SU | 25 x 40 x 1 (7.6 x 12.2 x 30 cm) | 310 (140)       | 7,480 (28,314)      |

Regulations: EPA 40 CFR 264.175, SPCC, NPDES

## STINGER L-BRACKET BERMS™

| Part #         | Dimensions L x W x H ft. (m)    | Weight lb. (kg) | Spill Cap. gal. (L) |
|----------------|---------------------------------|-----------------|---------------------|
| 48-10102-SU-SS | 10 x 10 x 2 (3 x 3 x 61 cm)     | 180 (81)        | 1,496 (5,663)       |
| 48-15152-SU-SS | 15 x 15 x 2 (4.6 x 4.6 x 61 cm) | 220 (99)        | 3,366 (12,742)      |
| 48-20202-SU-SS | 20 x 20 x 2 (6.1 x 6.1 x 61 cm) | 380 (172)       | 5,984 (22,652)      |

Regulations: EPA 40 CFR 264.175, SPCC, NPDES

\*Image not shown.

1-800-936-7229

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## Appendix D

### Contractor's Health and Safety Plan

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## Appendix E

### Engineer's Health and Safety Plan

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## Appendix F

### Waste Transportation and Disposal Plan

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## Appendix G

### Supplemental October 2020 Mercury Vapor Suppressant Pilot Study

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**Table 1**  
**Mercury Vapor Suppressant Pilot Study - October 2020**

|                                |                         |                                       | Arsenic | Barium | Cadmium | Chromium | Lead | Mercury | Selenium | Silver |
|--------------------------------|-------------------------|---------------------------------------|---------|--------|---------|----------|------|---------|----------|--------|
| Sample ID                      | Pilot Study Application | Hazardous Waste Limit (40 CRF 261.24) | 5.0     | 100.0  | 1.0     | 5.0      | 5.0  | 0.2     | 1.0      | 5.0    |
|                                |                         | Units                                 | mg/L    | mg/L   | mg/L    | mg/L     | mg/L | mg/L    | mg/L     | mg/L   |
| Pre-Test Cinders - First Floor |                         |                                       |         |        |         |          |      |         |          |        |
| T1-B-3-A3-FL-W-2010151356-2-5  | Pre-Test #1             |                                       | 0.060J  | 0.279J | 0.021J  | ND       | ND   | 0.3975  | ND       | ND     |
| T1-B-3-A3-FL-W-2010151357-2-5  | Pre-Test #2             |                                       | 0.049J  | 0.300J | 0.026J  | ND       | ND   | 0.3976  | ND       | ND     |
| T1-B-3-A3-FL-W-2010151420-2-5  | Study #1                |                                       | ND      | 0.258J | ND      | ND       | ND   | 0.0006J | ND       | ND     |
| T1-B-3-A3-FL-W-2010151421-2-5  | Study #1                |                                       | ND      | 0.261J | ND      | ND       | ND   | 0.0008J | ND       | ND     |
| T1-B-3-A3-FL-W-2010151432-2-5  | Study #2                |                                       | ND      | 0.442J | ND      | ND       | ND   | 0.0095  | ND       | ND     |
| T1-B-3-A3-FL-W-2010151433-2-5  | Study #2                |                                       | 0.068J  | 0.345J | ND      | ND       | ND   | 0.0134  | 0.045J   | ND     |
| T1-B-3-A3-FL-W-2010151445-2-5  | Study #3                |                                       | 0.019J  | 0.338J | 0.011J  | ND       | ND   | 0.0734  | 0.065J   | ND     |
| T1-B-3-A3-FL-W-2010151446-2-5  | Study #3                |                                       | 0.023J  | 0.324J | ND      | ND       | ND   | 0.0161  | 0.064J   | ND     |
| T1-B-3-A3-FL-W-2010151455-2-5  | Study #4                |                                       | ND      | 0.321J | 0.044J  | ND       | ND   | 1.137   | ND       | 0.103  |
| T1-B-3-A3-FL-W-2010151456-2-5  | Study #4                |                                       | 0.029J  | 0.334J | 0.063J  | ND       | ND   | 1.221   | ND       | 0.115  |

## Table 1

### Mercury Vapor Suppressant Pilot Study - October 2020

#### Notes:

1. All samples were collected by Anchor QEA, LLC and analyzed by Alpha Analytical in Mansfield, Massachusetts for:
    - Inorganic constituents using USEPA SW-846 Methods 6010 and 7470/7471.
    - TCLP Parameters using Method 1311 for extraction:
      - Metals using USEPA Method series 7000.
  2. Sample ID setup: Tablet #-Building-Floor-Grid-Location-Matrix-Date and Time-Starting Depth(inches)-Ending Depth(inches)  
Example Sample ID: T2-A-3-D20-FL-C-1809170920-4.0-6.0
  3. TCLP results are given in mg/L.
  4. Samples greater than the TCLP hazardous waste limit of 0.2 mg/L for Mercury (40 CRF 261.24) are shaded gray and bolded.
- mg/L: milligrams per liter  
TCLP: Toxicity Characteristic Leaching Procedure  
ND - Non-detect  
J - estimated value. Value below quantitation limit but above the method detection limit.

## Appendix H

### Soil Management Plan

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## Appendix I

### Scrap Management Plan

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