DRAFT Cleanup Work Plan

Pullman Yard 225 Rogers Street, Atlanta, DeKalb County, Georgia

March 29, 2019

Prepared for: City of Atlanta EPA Cooperative Agreement BF-00D59517-0





DRAFT Cleanup Work Plan

Prepared for: City of Atlanta

68 Mitchell Street SW

Atlanta, Georgia 30303

EPA Cooperative Agreement BF-00D59517-0



Project Name: DRAFT Cleanup Work Plan

Pullman Yard

225 Rogers Street

Atlanta, DeKalb County, Georgia

Submission Date: March 29, 2019

Table of Contents

1	Introduction			1	
2	Back	ground		2	
	2.1 Site Description		2		
	2.2	2.2 Site History			
	2.3	2.3 Building Descriptions			
3	Previous Assessment Activities			5	
	3.1 Hazardous Materials Survey dated June 8, 2017			5	
	3.2	Hazard	Hazardous Materials Survey Addendum 1, September 28, 2017		
	3.3	3 Hazardous Material Survey Amendment 2, dated May 1, 2018			
	3.4	.4 Summary and Data Gaps			
4	Cleanup Objectives / Applicable Regulations			9	
	4.1			9	
		4.1.1	Exposure Analysis	9	
	4.2	·		9	
		4.2.1	Asbestos and Lead-Based Paint	9	
		4.2.2	Asbestos Laws and Regulations	10	
		4.2.3	Lead-Based Paint Laws and Regulations	10	
	4.3 Historic Preservation		11		
	4.4 Davis-Bacon Act		12		
5	Cleanup Activities			13	
	5.1	5.1 Asbestos Abatement		13	
		5.1.1	Definitions	13	
		5.1.2	Pre-Abatement Activities	14	
		5.1.3	Abatement Activities	15	
		5.1.4	Post-Abatement Activities	21	
		5.1.5	Decontamination Plan	21	
		5.1.6	Negative Pressure System	21	
		5.1.7	Clearance	21	
		5.1.8	Disposal	21	
	5.2			21	
		5.2.1	Definitions	21	
		5.2.2	Pre-Abatement Activities	22	
		5.2.3	Abatement Activities	22	
		5.2.4	Post-Abatement Activities	23	
		5.2.5	Decontamination Plan	23	
		5.2.6	Clearance	23	
		5.2.7	Disposal	24	
6	Sche	dule and	Phasing	25	
7	References			26	

Figures

Figure 1 Site Location Map Figure 2 Building Layout Map

Appendices

Appendix A Site Survey

Appendix B Excerpts from United Consulting's Hazardous Material Surveys

1 Introduction

This draft Cleanup Work Plan has been prepared for the former Pullman Yard facility located at 225 Rogers Street, Atlanta, DeKalb County, Georgia. The site, further referred to as the "Subject Site" or "Subject Property", is known as the Pullman Yard facility and consists of one parcel totaling approximately 26.84 acres. The parcel ID # is 15 211 03 059. A site survey is included as **Appendix A**.

On-site improvements of the property include 12 buildings ranging from approximately 1,312 to 70,656 square feet. The subject site is currently vacant. According to DeKalb County Tax records, the subject site is currently owned by Atomic Entertainment Development, LLC (Atomic). The subject site is located within the Southeast Atlanta, Georgia Topographic Quadrangle of the US Geological Survey (USGS) 7.5-minute series map as shown in **Figure 1.**

Multiple environmental investigations, including asbestos, lead-based paint, soil, and groundwater assessments, have occurred on the Subject Site as early as 2006. The information obtained during these assessments was utilized to guide site activities associated with the evaluation of environmental impairment and liabilities associated with the property due to contamination by hazardous substances, controlled substances, or petroleum products on or near the site.

The City of Atlanta obtained a Brownfields Assessment Grant from the U.S. Environmental Protection Agency (EPA, Grant No. BF-00D59517-0) in May 2017. This grant is funding the development of this and other documents. This draft Cleanup Work Plan has been prepared to document the asbestos and lead-based paint (LBP) abatement activities planned to facilitate building repurposing.

Further, cleanup activities will be funded in part through a loan via the City of Atlanta's U.S. EPA Brownfields Revolving Loan Fund (RLF, Grant No. BF-95445109-0). Public notice will be given in accordance with the requirements of the RLF application process and this document will be available for public review and comment prior to implementation.

This work document herein will be conduced in conjunction with an EPA approved Site-Specific Quality Assurance Project Plan (SSQAPP). The SSQAPP outlines the participants involved and their roles in the cleanup, cleanup activities to be conducted, data quality objectives, sampling design, analytical sampling methodologies, and quality control/quality assurance (QA/QC) requirements.

Please note that this draft Cleanup Work Plan shall not be considered to be a formal asbestos and/or LBP abatement design.

"The remainder of this page intentionally left blank."

March 2019 Cardno

2 Background

2.1 Site Description

The site consists of one parcel totaling approximately 26.84 acres that are classified in county records as "E1 – Public Property." On-site improvements of the property include 12 buildings ranging from approximately 1,312 to 70,656 square feet. Majority of the buildings are developed with a concrete foundation, with large sections utilized as warehouses containing metal sheeting walls and ceilings. The west and north portions are paved and gravel driveways/parking areas. A railroad once traversed the western portion of the site. The remaining portion of the site is undeveloped wooded land.

2.2 Site History

The subject site has a long industrial history, primarily associated with its connection to the railroad. The earliest historical records indicate the property was originally was identified as the "Kirkwood Facility" in 1904, a division of a chemical and fertilizer company named N. P. Pratt Laboratory, later referred to as the Pratt Engineering and Machinery Company. This facility reportedly tested newly-constructed chemical process equipment. In 1922, the property transferred to the Chemical Engineering & Foundry Company and the United States Cast Iron & Foundry Company, continuing to manufacture chemical processing equipment.

In 1926, the property transferred to the Pullman Company, a manufacturer of passenger railcars. During this time, several large rail yards and a traveling train bridge for transporting cars were developed. In 1955 Pullman Company transferred the property to the Second American Iron and Metal Company, a metal manufacturing business. In 1965, the property again transferred to the Southern Iron and Equipment Company, another railcar manufacturing firm. The facility continued to manufacturer railcars and equipment until the 1980s.

In 1990, the property transferred to the Georgia Building Authority for the eventual use as a tourist railway into downtown Atlanta. In the early 1990s, this rail line was decommissioned and the facility was abandoned. Outside of the removal of a few buildings for the development of a pedestrian trail, the property has remained untouched until it was purchased by Atomic Entertainment Development, LLC on June 13, 2017.

2.3 Building Descriptions

The Subject Site supports 12 buildings developed between the 1900s and 1950s, ranging between approximately 1,312 to 70,656 square feet. The following is a brief description of each building. The building numbering and nomenclature is based on prior environmental reports for simplicity. A copy of the Building Layout Map is included as **Figure 2**.

Building 1 – Machine Shop

The machine shop was developed around 1904, and consists of metal and brick walls, concrete flooring, and metal corrugated roof panels. The building footprint is approximately 18,000 square feet, with approximately 17,000 square feet of roofing.

Building 2 – Foundry

The foundry was developed around 1904, and consists of metal and brick walls, concrete flooring, and metal corrugated roof panels. The building footprint is approximately 34,250 square feet, with approximately 37,400 square feet of roofing.

Building 3 - Connector Building

The machine shop was developed around 1904, and consists of metal and brick walls, concrete flooring, and metal corrugated roof panels. This building connects Buildings 1 and 2, and is similar in design. The building footprint is approximately 8,400 square feet, with approximately 9,200 square feet of roofing.

Building 4 - Blacksmith Building

The blacksmith building was developed around 1904, and consists of metal and brick walls, concrete flooring, and metal corrugated roof panels. This building is located east of the connector building, and is similar in design to the foundry and machine shop. The building footprint is approximately 1,600 square feet, with approximately 3,800 square feet of roofing.

Building 5 - North Saw-Tooth

The north saw-tooth building was developed around 1927, and consists of metal and brick walls, concrete flooring, and metal corrugated roof panels. The building name stems from its saw-tooth designed roof, and the building is located east of the machine shop. The building footprint is approximately 13,800 square feet, with approximately 12,000 square feet of roofing.

Building 6 - South Saw-Tooth

The south saw-tooth building was developed around 1927, and consists of metal and brick walls, concrete flooring, and metal corrugated roof panels. The building name stems from its saw-tooth designed roof, and the building is located south of the foundry and is connected by a former rail transfer table. The building footprint is approximately 17,400 square feet, with approximately 20,350 square feet of roofing.

Building 7 - Small Brick Building

The small brick building was developed around 1927, and consists of brick walls and concrete flooring. The roof has been dilapidated, and only steel beams remain of the roof. This building is located on the northwest corner of the Subject Site. The building footprint is approximately 1,200 square feet.

Building 8 – Brick Infill

The small brick building was developed around 1927, and consists of brick walls and concrete flooring. The roof has been dilapidated, and only steel beams remain of the roof. This building is located on the northwest corner of the Subject Site. The building footprint is approximately 1,200 square feet, with approximately 2,100 square feet of roofing.

Building 10 - Large Metal Prefab

The small brick building was developed in the 1950s, and consists of brick walls and metal walls, concrete flooring, and a metal roof. This building was added to the west of the connector building and the foundry. The building footprint is approximately 23,500 square feet, with approximately 20,300 square feet of roofing.

Building 11 - Small Block and Metal Building

The small block and metal building was developed in the 1950s, and consists of its namesake, block concrete masonry units (CMU), brick, and metal with concrete flooring and a metal roof. This building is located on the northwest portion of the Subject Site. The building footprint is approximately 1,780 square feet.

Building 12 - Brick and Metal Building

The small block and metal building was developed in the 1950s, and consists of its namesake, brick and metal with concrete flooring and a metal roof. This building is located southwest of the other buildings on the western portion of the Subject Site. The building and roofing footprint is approximately 10,200 square feet.

Building 13 - Metal Infill Building

The metal infill building was developed in the 1950s, and consists of its namesake, brick and metal with concrete flooring and a metal roof. This building is located between Buildings 2, 3, and 4. The building and roofing footprint is approximately 3,000 square feet.

"The remainder of this page intentionally left blank."

3 Previous Assessment Activities

Numerous investigations, including Phase I and II ESAs, soil and groundwater investigations, Georgia Environmental Protection Division (EPD) corrective action plans and release notifications, and other assessments have been completed on the Subject Site since 2006. As the purpose of this document is to outline the cleanup work associated with the abatement of hazardous building materials, this section only summarizes the previous hazardous material assessment work completed to date upon which corrective action is based.

3.1 Hazardous Materials Survey dated June 8, 2017

United Consulting (United) conducted a limited asbestos, lead-based paint, and hazardous materials survey in June 2017 on all 12 buildings. United collected 39 bulk samples for asbestos containing materials, XRF analysis of 115 painted surfaces for lead-based paint identification, and identified several areas with mercury-vapor light bulbs, fluorescent light tubes, light ballasts, pad-mounted transformers, and several unlabeled 55-gallon drums. United identified the following:

- Four painted surfaces were identified as containing lead-based paint
- Eight building materials were identified as asbestos containing materials, including floor tile, floor mastic, and pipe insulation
- 139 unlabeled light ballasts and hundreds of different light tubes

United recommended that the identified materials be addressed in accordance with local, state, and federal regulations prior to disturbance during renovation or demolition. It should be noted that this report has building numbers and nomenclature that are not consistent with the most recent sampling report.

3.2 Hazardous Materials Survey Addendum 1, September 28, 2017

United performed additional sampling for asbestos containing materials at the Pullman Yard in September 2018. United collected 19 additional bulk samples from the on-site building's roof tops. The following materials were identified as asbestos containing:

- Roof sealant
- Roof flashing
- Roof felt or paper

United recommended that the identified materials be addressed in accordance with local, state, and federal regulations prior to disturbance during renovation or demolition.

3.3 Hazardous Material Survey Amendment 2, dated May 1, 2018

United consulting completed an additional limited asbestos and lead-based paint survey on the on-site structures in April 2018. Lead-based paint was inspected through the use of an X-Ray Fluorescent (XRF), real-time instrument. The primary purpose of this document was to compile all prior sampling data, identify any data gaps, and develop a data package with an overview diagram showing locations of impacted materials.

This report generally serves as the basis of this draft Cleanup Work Plan as it outlines building-specific locations of all identified ACM and LBP. This report also clearly defined the building numbers and nomenclature, which is depicted in **Figure 3**. In summary, the following materials were found in each building:

Building 1 - Machine Shop

- Asbestos
 - Roof sealant (flashing along edge of sealant)
- Lead-based paint
 - o Steel columns
 - Yellow rails
 - o Steel hoist arms
 - Wood window jambs and frames
 - Walling

Building 2 - Foundry

- Asbestos
 - Roofing felt/paper
- Lead-based paint
 - o Metal vertical beams

Building 3, 4, 8, & 13 - Connector, Blacksmith, Brick Infill, and Metal Infill Buildings

- Asbestos
 - o Roofing system (roof felt, tar, paper, and flashing of various buildings)
 - Floor tile
 - Asbestos pipe wrap
- Lead-based paint
 - White walling
 - o Yellow walling
 - Hand rails
 - Green walling in closet

Building 5 - North Saw-Tooth

- Asbestos
 - Roofing felt/paper
 - o Roof mastic
 - Window caulking
- Lead-based paint

- Steel columns and cross beams
- White paint in corner office

Building 6 - South Saw-Tooth

- Asbestos
 - o Roof paper and sealant
 - o Window caulking
 - o Furnace Insulation / Gaskets
- Lead-based paint
 - Yellow steel columns and beams

Building 7 - Small Brick Building

- Asbestos
 - o Fire door
- Lead-based paint
 - o Cross beams

Building 10 - Large Metal Prefab

- Asbestos
 - o Interior pipe wrap
 - Exterior pipe insulation (metal jacket)
- Lead-based paint
 - Yellow hand rails
 - o Hoists
 - o Posts/corners at entrance corners

Building 11 - Small Block and Metal Building

- Asbestos
 - o Roof mastic / sealant where roof meets building

Building 12 - Brick and Metal Building

- Asbestos
 - o Roof sealant
 - Lower roof asphalt
- Lead-based paint
 - o Steel beams, vertical and horizontal, in lower sections

A copy of this report is included within **Appendix B.**

3.4 Summary and Data Gaps

Regarding the previous hazardous material surveys by United, Cardno identified the following additional concerns and/or data gaps:

- United identified painted surfaces above the EPA and US Housing and Urban Development (HUD) Guidelines, Chapter 7, 1997 Revision which identified lead-based paint as containing equal to or exceeding one milligram per square centimeter (1.0 mg/cm2) or 0.5% by weight. Numerous samples were identified by United that contained lead below this reporting limit but above the detection concentration. There are OSHA regulations and requirements which should be taken into consideration during any renovation and demolition activities that may disturb any concentration of lead containing building materials or paint.
- There is potential for unidentified asbestos and/or lead-based paint to be discovered which would need to be addressed prior to its disturbance during removal activities. However, for the purpose of this report, it is anticipated that no additional design phase investigation is necessary. Additional testing may be required during cleanup if conditions warrant. However, the level of characterization completed to date appear sufficient to provide basis for the completion of this report and the analysis of alternatives documented herein.
- Although additional testing of painted components is not necessarily needed, the extent of
 painted components to be impacted and the future use of the areas should be considered so
 as to minimize the quantity of lead contaminated paint to be removed and to identify alternative
 methods to address lead paint hazards for certain portions of the Subject Site.

"The remainder of this page intentionally left blank."

March 2019 Cardno 8

4 Cleanup Objectives / Applicable Regulations

4.1 Cleanup Objectives

The primary objective of the hazardous material abatement is to limit the impact to human health and the environment by abating identified ACM and LBP in accordance with applicable local, state, and federal regulations in advance of and to facility renovation activities.

4.1.1 Exposure Analysis

In order for possible contaminants of concern to do harm to public health or the environment, they must occupy a point of exposure accessible to the population at risk. Compounds to which populations are not currently, nor in the future likely to be exposed via complete exposure pathways do not constitute a probable condition of elevated risk.

The four potential receptor populations evaluated are:

- Atomic employees who access the building;
- Residents persons who reside near the property;
- Construction workers during the potential redevelopment; and
- Future patrons and/or residences of the end use development.

For each of the potential receptors being considered, the applicable exposure pathway of concern is direct contact with asbestos and lead is via incidental ingestion, dermal contact, and/or inhalation of particulates. As a result, applicable exposure pathways are related primarily to ingestion and inhalation, or dermal contact to hazardous materials.

4.2 Cleanup Standards

4.2.1 <u>Asbestos and Lead-Based Paint</u>

Though cancer risk from exposure to asbestos is most appropriately viewed as a chronic concern, short-term standards have been established by OSHA's permissible exposure limits (PEL) to limit exposures to workers in the workplace. There are two types of short-term limits, as follows:

- Excursion Limit (EL) 1.0 fibers per cubic centimeter (f/cc), analyzed by Phase Contract Microscopy (PCM)
- 8-Hr Time weighted average (TWA) 0.1 f/cc, analyzed by PCM

For LBP, the OSHA limits lead exposure to workers in the workplace with the following standard:

 8-Hr TWA – no greater than 50 micrograms per cubic meter (μg/m³); PEL is reduced when an employee is exposed to lead for more than 8 hours in any work day with the equation PEL = 400/hours worked.

EPA Asbestos Hazard Emergency Response Act (AHERA) regulations (40 CFR 763) require aggressive clearance sampling after asbestos abatement activities. Leaf blowers and fans are used to disturb the interior air and air samples are collected according to the standard methods set forth in Appendix A of Subpart E of 40 CFR Part 763. The clearance criteria as set forth in this regulation are:

PCM clearance: 0.01 f/cc

• Transition Electron Microscopy (TEM) clearance: 70 structures per square millimeter (structures/mm²)

Although AHERA regulations apply to abatement in schools, the same standards are generally used for all abatement projects.

HUD Guidelines for Evaluation and Control of Lead-Based Paint Hazards Chapter 15 Clearance provide the following clearance criteria for lead-based paint abatement:

- 40 micrograms of lead in dust per square foot on floors;
- 250 micrograms of lead in dust per square foot on interior window sills; and
- 400 micrograms of lead in dust per square foot in window troughs.

Georgia EPD further established the following clearance criteria for lead-based paint abatement:

• 800 micrograms of lead in dust per square foot on exterior concrete.

4.2.2 <u>Asbestos Laws and Regulations</u>

Asbestos is regulated by the AHERA, the Toxic Substances Control Act (TSCA), the Clean Air Act (CAA), and Georgia Environmental Rule 391-3-14 and Official Code of Georgia Annotated §12-12-1. Further, to protect asbestos abatement workers all asbestos abatement work must be performed in accordance with Occupational Safety and Health Administration (OSHA) asbestos regulations as promulgated in Title 29 of the Code of Federal Regulations (29CFR), Section 1926.1101.

The following work practices should be followed whenever demolition/renovation activities involving asbestos-containing materials occur:

- Prepare abatement specifications in by an EPA accredited Asbestos Project Designer.
- Notify the Georgia EPD of intention to demolish/renovate by the required notification form;
- Removal of all asbestos-containing materials from facility being demolished or renovated before any disruptive activity begins by a Georgia licensed Asbestos Contractor;
- Handle and dispose of all asbestos-containing materials in an approved manner (USEPA, 2006a; Asbestos/NESHAP Regulated Asbestos-Containing Materials Guidance);
- Monitor asbestos abatement activities by an EPA accredited Asbestos Project Supervisor; and
- Perform air clearance testing upon completion of asbestos-containing materials abatement.

4.2.3 <u>Lead-Based Paint Laws and Regulations</u>

Lead-based paint in pre-1978 housing and children-occupied buildings is regulated under the authority of the Toxic Substances and Control Act (TSCA; 15 U.S.C. 2601 et seq.) as amended by the Residential Lead-Based Paint Hazard Reduction Act of 1992, generally referred to as Title X (of The Housing and Community Act of 1992 - Public Law 102-550). Title X mandates the training, certification and licensing of lead-based paint abatement contractors, inspectors, risk assessors, and the training and certification of abatement workers and project designers. The Act also amended the Toxic Substances Control Act section 402 & 403. The provisions of Title X apply to residential buildings and child-occupied facilities.

It should be noted that these laws and regulations pertain to Target Housing or Child Occupied Facilities as defined by HUD. The on-site structures are not currently considered Target Housing or a Child Occupied Facility, but there is potential for the redevelopment to consist of residences or commercial facilities that would be considered child-occupied. As a good work practice and to limit lead exposure to workers, it is recommended that the identified lead-based paint be abated prior to renovation.

HUD and Georgia EPD rules established the following clearance procedures shall be conducted on all abatement projects by a certified inspector or lead risk assessor after appropriate cleaning has been completed.

- 40 micrograms of lead in dust per square foot on floors;
- 250 micrograms of lead in dust per square foot on interior window sills;
- 400 micrograms of lead in dust per square foot in window troughs; and
- 800 micrograms of lead in dust per square foot on exterior concrete

The Georgia EPD regulates and licenses lead paint consultants and workers under Environmental Rule 391-3-24 and OCGA 31-41-1 lead-containing debris must be handled in accordance with the USEPA Resource Conservation and Recovery Act (RCRA) Hazardous Waste Regulations (40 CFR Parts 260 through 274).

The Occupational Safety and Health Administration has published regulations regarding worker safety during activities involving lead-based paint abatement. The Construction Standards (29 CFR Part 1926) and the OSHA (29 CFR Part 1910) promulgate a permissible exposure limit for lead construction workers, including workers performing demolition, salvage, or renovation of lead-containing materials at sections 1926.62 and 1910.1025 as follows:

"The employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 μg/m³) averaged over an 8-hour period." (29 CFR 1926.62) Additional regulations under these chapters address other worker safety precautions such as respiratory protection programs, work practices, and medical monitoring. Lead-based paint debris (material containing or surfaced with lead-based-paint) from commercial buildings may be classified as hazardous waste if lead concentrations exceed the Toxicity Characteristic Rule (40 CFR 261.24, 40 CFR 262.11) concentration limit of 5.0 milligram per liter (mg/L) in sample extract prepared according to the Toxicity Characteristic Leaching Procedure, test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846.

As previously noted, there is lead identified in painted surfaces above the detection limit but below the reportable thresholds which were not identified as lead-based paint. Upon the abatement of all lead-based paint, there will continue to be lead containing building materials and painted surfaces that would still be regulated by OSHA.

4.3 Historic Preservation

According to records provided by Atomic, the on-site structures and railroad lines are considered historic and additional consideration is required when handling or renovating historic structures. Cardno was provided correspondence records between Atomic and the Georgia Department of Natural Resources Historic Preservation Division (HPD) and US Department of Interior National Park Service which outlined various requirements for renovating the on-site historic structures. Examples of requirements include the following:

- No building height adjustments with the installation of new roof insulation
- New gutters must be painted the same or darker color than existing buildings
- Structural and mechanical elements, such as secondary structures and cranes, must be retained to the maximum extent as possible.
- Approval to demolish Building 13

Cardno was also provided a 2018 Pratt Pullman Yard Demolition / Historic Stabilization Package developed by Lord Aeck Sargent on behalf of Atomic which was reportedly approved by Georgia HPD. This package outlines which materials from each building are to be renovated in accordance with historic preservation practices approved by Georgia HPD. This package, in conjunction with United's Hazardous Material Surveys, were used in developing this draft Cleanup Work Plan.

4.4 Davis-Bacon Act

All abatement work funded by the City of Atlanta's EPA Brownfields RLF grant funds will comply with the Davis-Bacon Act which requires payment of the prevailing wage rate for cleanup activities. The budget and schedule will take this into account. More details regarding the Davis-Bacon Act can be found on the US Department of Labor's (DOL) website: https://www.dol.gov/whd/regs/compliance/whdfs66.pdf.

"The remainder of this page intentionally left blank."

5 Cleanup Activities

The following section presents a discussion of the abatement activities to be incorporated during cleanup. This document is not considered an abatement design, and should not be used as such. This document incorporates the minimum abatement requirements with respect to applicable local, state, and federal asbestos and lead-based paint regulations.

All cleanup activities will also comply with an EPA approved Site-Specific Quality Assurance Project Plan (SSQAPP) which outlines work to be completed, analytical sampling methodologies, and quality control/quality assurance (QA/QC) requirements.

This section was developed using a combination of the May 2018 United Consulting Amendment #2 Hazardous Material Survey for the Pullman Yard Property and the June 2018 Pratt Pullman Yard Demolition / Historic Stabilization Package for the planned building renovation. This draft Cleanup Work Plan will need to be revised upon any changes to these documents.

5.1 Asbestos Abatement

5.1.1 Definitions

The following asbestos terminology is used throughout this cleanup work plan when identifying the applicable regulations and appropriate cleanup methods.

Asbestos-containing material (ACM) is material containing more than one percent asbestos as determined using the methods specified in appendix E, subpart E, 40 CFR part 763, section 1, Polarized Light Microscopy. The NESHAP classifies ACM as either "friable" or "non-friable".

Friable ACM is ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. Non-friable ACM is ACM that, when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

Non-friable ACM is further classified as either Category I ACM or Category II ACM. Category I ACM and Category II ACM are distinguished from each other by their potential to release fibers when damaged.

Category I ACM includes asbestos-containing gaskets, packings, resilient floor coverings, resilient floor covering mastic, and asphalt roofing products containing more than one percent asbestos. Asphalt roofing products which may contain asbestos include built-up roofing; asphalt-containing single ply membrane systems; asphalt shingles; asphalt-containing underlayment felts; asphalt-containing roof coatings and mastics; and asphalt-containing base flashings. ACM roofing products that use other bituminous or resinous binders (such as coal tars or pitches) are also considered to be Category I ACM.

Category II ACM includes all other nonfriable ACM, for example, asbestos-cement (A/C) shingles, A/C tiles, and transite boards or panels containing more than one percent asbestos. Generally speaking, Category II ACM is more likely to become friable when damaged than is Category I ACM. The applicability of the NESHAP to Category I and II ACM depends on: (1) the condition of the material at the time of demolition or renovation, (2) the nature of the operation to which the material will be subjected, (3) the amount of ACM involved.

Regulated asbestos-containing material (RACM) is asbestos-containing material regulated under NESHAP. RACM is defined in § 61.141 of the NESHAP and includes: (1) friable asbestos-containing

material; (2) Category I non-friable ACM that has become friable; (3) Category I non-friable ACM that has been or will be sanded, ground, cut, or abraded; or (4) Category II nonfriable ACM that has already been or is likely to become crumbled, pulverized, or reduced to powder. If the coverage threshold for RACM is met or exceeded in a renovation or demolition operation, then all friable ACM in the operation, and in certain situations, non-friable ACM in the operation, are subject to NESHAP regulations.

Class I Work is the most potentially hazardous class of asbestos jobs. This work involves the removal of asbestos-containing thermal system insulation and sprayed-on or troweled-on surfacing materials. Thermal system insulation includes ACM applied to pipes, boilers, tanks, ducts, or other structural components to prevent heat loss or gain. Surfacing materials include decorative plaster on ceilings and walls; acoustical materials on decking, walls, and ceilings; and fireproofing on structural members.

Class II Work includes the removal of other types of ACM that are not thermal system insulation such as resilient flooring and roofing materials. Examples of Class II work include removal of asbestoscontaining floor or ceiling tiles, siding, roofing, or transite panels.

Class III Work includes repair and maintenance operations where ACM or presumed ACM (PACM) are disturbed.

Class IV Work includes custodial activities where employees clean up asbestos-containing waste and debris produced by construction, maintenance, or repair activities. This work involves cleaning dust-contaminated surfaces, vacuuming contaminated carpets, mopping floors, and cleaning up ACM or PACM from thermal system insulation or surfacing material.

5.1.2 <u>Pre-Abatement Activities</u>

Prior to performing any asbestos abatement, an asbestos abatement design developed by a trained and an accredited EPA Asbestos Project Designer should be established. The abatement design will provide specific details for placing regulated non-contained areas, regulated contained areas, and contained negative pressure enclosures. The design will also provide information with respect to appropriate personal protection equipment (PPE), air sampling requirements, and personal air monitoring requirements.

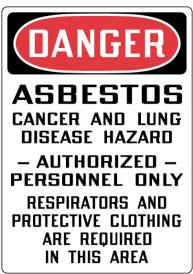
The abatement design must consider and comply with the negotiated provisions of the Georgia HPD and the National Park Service corresponding rulings and/or permits.

A 10-day Georgia NESHAP Notification Form is required to be completed before all demolition work, regardless if asbestos is identified or not. Demolition means the wrecking or taking out of any load-supporting structural member of a facility with any related handling operations. For renovation activities, GA NESHAP notification is required before the disturbance of the following ACM:

- 10 linear feet of thermal system insulation piping
- 10 square feet (ft²) on other facility components

For any regulated areas, appropriate signage indicating the presence of asbestos containing material should be adequately posted. Regulated areas should be established prior to abatement work critical barriers and with adequate signage indicated the presence of asbestos along entrances. Examples of signage include:





5.1.3 Abatement Activities

It is the current cleanup objective to abate and remove all identified ACM. As such, this work plan will describe suggested abatement activities to take place at each building to completely remove any identified ACM.

In the event that abatement cannot occur due to construction limitations (e.i., in-ground asbestos piping), then the material should be left in place and every step taken to limit access and potential impact to human health. In this eventuality, an Operations and Maintenance (O&M) Plan should be implemented to assess the condition of the ACM and effectiveness of any preventative measures.

Each building is listed below with suggested abatement activities.

Building 1 – Machine Shop

Roofing

Approximately 370 linear feet of roof sealant along flashing paper was identified as ACM located on the east and west edges of the roof. This roofing component is Category I Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. Given its exterior location, the work will be conducted in a regulated non-contained area.

ACM roof systems may be removed either through manual methods or approved machinery such as a rotating blade (RB) roof cutter. During removal, when applicable, dust control methods should be implemented, such as wetting and/or HEPA-filtered local exhaust ventilation. All asbestos-containing roofing building materials will be placed in a lined dumpster with 6-millimeter (mil) plastic sheeting.

Building 2 – Foundry

Roofing

Approximately 39,200 ft² of roof flashing, sealant, and tar paper was identified as ACM located throughout the roof. As this material is comingled and considered one system, it is Category I Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. Given its exterior location, the work will be conducted in a regulated non-contained area.

ACM roof systems may be removed either through manual methods or approved machinery such as a rotating blade (RB) roof cutter. During removal, when applicable dust control methods should be

implemented, such as wetting and/or HEPA-filtered local exhaust ventilation. All asbestos-containing roofing building materials will be placed in a lined dumpster with 6-mil plastic sheeting.

Building 3 - Connector Building

Roofing

Approximately 8,400 ft² of roof asphalt and tar paper were identified as ACM below a corrugated metal pitched roof located throughout. Asbestos was also identified in the gray flashing sealant at an unknown quantity. As these materials are comingled they are considered one system which are Category I Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. Given its exterior location, the work will be conducted in a regulated non-contained area.

ACM roof systems may be removed either through manual methods or approved machinery such as a rotating blade (RB) roof cutter. During removal, when applicable dust control methods should be implemented, such as wetting and/or HEPA-filtered local exhaust ventilation. All asbestos-containing roofing building materials will be placed in a lined dumpster with 6-mil plastic sheeting.

Flooring

Approximately 2,500 ft² of asbestos floor tile, mastic, and paper under the floor tile were identified as ACM located in the office area. This material is Category I Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work.

This material is located within the interior of the building, and the work will be conducted in a regulated contained work area. The following procedure is recommended:

- Pre-clean the area to remove any miscellaneous debris and limit dust exposure;
- Set up containment consisting of two layers of 6-millimeter (mil) plastic sheeting for critical barriers and 4-mil plastic sheeting on the walls for a splashguard;
- Set up a negative pressure containment utilizing negative air machines and vent to outside the building;
- Remove flooring materials manually with a floor scraper with wet methods;
- If necessary, apply an EPA approved chemical solvent or floor stripper designed to remove asbestos containing mastic; and
- Place all abated ACM in double-bagged polyethylene sheeting.

Building 4 – Blacksmith Building

Roofing

Approximately 3,200 ft² of roofing felt paper and roof shingles were identified as ACM located throughout the roof. This material is Category II Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. Given its exterior location, the work will be conducted in a regulated non-contained area.

ACM roof systems may be removed either through manual methods or approved machinery such as a rotating blade (RB) roof cutter. During removal, when applicable dust control methods should be implemented, such as wetting and/or HEPA-filtered local exhaust ventilation. All asbestos-containing roofing building materials will be placed in a lined dumpster with 6-mil plastic sheeting.

Building 5 - North Saw-Tooth

Roofing

Approximately 12,000 ft² of roof asphalt and tar paper were identified as ACM below a corrugated metal pitched roof located throughout. As these material are comingled and considered one system, it is Category I Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. Given its exterior location, the work will be conducted in a regulated non-contained area.

ACM roof systems may be removed either through manual methods or approved machinery such as a rotating blade (RB) roof cutter. During removal, when applicable dust control methods should be implemented, such as wetting and/or HEPA-filtered local exhaust ventilation. All asbestos-containing roofing building materials will be placed in a lined dumpster with 6-mil plastic sheeting.

Windows

Approximately 900 windows panes with caulking was identified as ACM. The exact quantity is unknown, as each window pane contained varying amounts of caulking. This material is Category II Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. This material was located on the interior and exterior of the windows and as such the work will be conducted in a regulated non-contained area.

The following abatement procedure is recommended:

- Prior to removal, place polyethylene or resilient drop cloths or tarps on the surfaces on the inside and outside the base of each window to catch any caulking that may become lose during removal;
- Remove any loose pieces via wet methods and a HEPA vacuum;
- It is likely necessary to remove the entire window to adequately remove all ACM. Remove the window assembly with intact caulking compound left in place so long as the window assemblies are handled carefully and the ACM is adequately wetted with amended water.
- Removed window assembly wrap polyethylene sheeting;
- Upon removal of window assembly, remove under wet conditions any remaining ACM caulking on window frame; and
- Dispose of contaminated materials as asbestos containing waste materials (ACWM).

Building 6 - South Saw-Tooth

Windows

Approximately 1,450 windows panes with caulking was identified as ACM. The exact quantity is unknown, as each window pane contained varying amounts of caulking. This material is Category II Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. This material was located on the interior and exterior of the windows and as such the work will be conducted in a regulated non-contained area.

The following abatement procedure is recommended:

 Prior to removal, place polyethylene or resilient drop cloths or tarps on the surfaces on the inside and outside the base of each window to catch any caulking that may become lose during removal;

- Remove any loose pieces via wet methods and a HEPA vacuum;
- It is likely necessary to remove the entire window to adequately remove all ACM. Remove the window assembly with intact caulking compound left in place so long as the window assemblies are handled carefully and the ACM is adequately wetted with amended water.
- Removed window assembly wrap polyethylene sheeting;
- Upon removal of window assembly, remove under wet conditions any remaining ACM caulking on window frame; and
- Dispose of contaminated materials as ACWM.

Gaskets

Asbestos was also identified in the gaskets of the furnace. However, according to Atomic personnel, this material was removed by a licensed asbestos abatement contractor, Winter Environmental, in February 2019. Therefore, this material no longer will be addressed.

Building 7 - Small Brick Building

Fire Door

One asbestos fire door was identified. This material is Category II Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. However, as the asbestos containing material is located within the metal door and intact, this material is not friable and not considered RACM. Therefore the removal will consists of a regulated non-contained area. The entire door should be removed from the building and placed in a lined dumpster with 6-mil plastic sheeting to be disposed of as ACWM.

Building 8 – Brick Infill

Roofing

Approximately 2,400 ft² of roofing felt paper and roof shingles were identified as ACM located throughout the roof. These materials are Category II Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. Given its exterior location, the work must be conducted in a regulated non-contained area.

ACM roof systems may be removed either through manual methods or approved machinery such as a rotating blade (RB) roof cutter. During removal, when applicable dust control methods should be implemented, such as wetting and/or HEPA-filtered local exhaust ventilation. All asbestos-containing roofing building materials will be placed in a lined dumpster with 6-mil plastic sheeting.

Building 10 – Large Metal Prefab

Piping

Approximately < 10 linear feet of pipe wrap over metal piping were identified as ACM located in two spots within the building. An estimated 390 feet of linear feet of piping insulation partially wrapped around two pipes located within a pipe chase observed in the exterior of northwest of Building 10. This quantity is likely higher as United's previous reports indicated they could not identify where the pipe chase began and ended. Both the pipe wrap and pipe insulation are considered friable ACM and its abatement is considered OSHA Class I work. The work should be conducted in a regulated contained area.

The pipe wrap and pipe insulation should be removed within contained negative-pressure enclosure. Given the small amount of pipe wrap and exterior location of the pipe insulation, controlled glove bag negative air enclosures should be implemented to remove the friable ACM under negative containment. The following procedure is recommended:

- The area should be isolated with critical barriers set up;
- Abatement workers should don personal protection equipment as outlined in abatement design;
- Vacuum with HEPA filter all debris beneath the glove bag operation;
- Place polyethylene sheeting underneath glove bag operation;
- Custom cut glove back to fit piping with appropriate removal tools inside bag;
- Place duct tape around pipe and seal edges of glove bag with duct tape;
- Provide duct taped sealed opening for HEPA vacuum and nozzle for amended water;
- Test bag for leaks (smoke tube recommended), repair as needed;
- Spray wrap and/or insulation with amended water;
- Remove material;
- Lockdown any remaining friable materials on piping with encapsulant;
- Thoroughly rinse tools in glove bag and carefully remove;
- Deflate glove bag with HEPA vacuum and seal bag;
- Use proper decontamination procedures and remove any personal protection equipment as outlined in the abatement design;
- Dispose of glove bag with contaminated materials as ACWM.

Building 11 – Small Block and Metal Building

Roofing

Approximately 60 linear feet of roof mastic / sealant was identified where the roof meets the building on the eastern edge. This roofing component is Category I Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. Given its exterior location, the work will be conducted in a regulated non-contained area.

ACM roof systems may be removed either through manual methods or approved machinery such as a rotating blade (RB) roof cutter. During removal, when applicable dust control methods should be implemented, such as wetting and/or HEPA-filtered local exhaust ventilation. All asbestos-containing roofing building materials will be placed in a lined dumpster with 6-millimeter (mil) plastic sheeting.

It should be noted that NESHAP does not apply to roofing systems with Category I Non-Friable roofing material for projects with less than 5,580 square feet (ft²). GA EPD NESHAP notification is still required.

Building 12 - Brick and Metal Building

Roofing

Approximately 280 linear feet of roof sealant was identified along the perimeter of the lower roof. This roofing component is Category I Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. Given its exterior location, the work will be conducted in a regulated noncontained area.

ACM roof systems may be removed either through manual methods or approved machinery such as a rotating blade (RB) roof cutter. During removal, when applicable dust control methods should be implemented, such as wetting and/or HEPA-filtered local exhaust ventilation. All asbestos-containing roofing building materials will be placed in a lined dumpster with 6-millimeter (mil) plastic sheeting.

Building 13 – Metal Infill Building

Roofing

Approximately 3,040 ft² of roofing system was identified as ACM located throughout the roof. This materials is Category II Non-Friable Miscellaneous ACM and its abatement is considered OSHA Class II work. Given its exterior location, the work will be conducted in a regulated non-contained area.

ACM roof systems may be removed either through manual methods or approved machinery such as a rotating blade (RB) roof cutter. During removal, when applicable dust control methods should be implemented, such as wetting and/or HEPA-filtered local exhaust ventilation. All asbestos-containing roofing building materials will be placed in a lined dumpster with 6-mil plastic sheeting.

Piping

Approximately 27 linear feet of pipe wrap over metal piping were identified as ACM located in one location within the building. The pipe wrap is considered friable ACM and its abatement is considered OSHA Class I work. The work should be conducted in a regulated contained area.

The pipe wrap should be removed within contained negative-pressure enclosure. Given the small amount of pipe wrap, controlled glove bag negative air enclosures should be implemented to remove the friable ACM under negative containment. The following procedure is recommended:

- The area should be isolated with critical barriers set up;
- Abatement workers should don personal protection equipment as outlined in abatement design;
- Vacuum with HEPA filter all debris beneath the glove bag operation;
- Place polyethylene sheeting underneath glove bag operation;
- Custom cut glove back to fit piping with appropriate removal tools inside bag;
- Place duct tape around pipe and seal edges of glove bag with duct tape;
- Provide duct taped sealed opening for HEPA vacuum and nozzle for amended water;
- Test bag for leaks (smoke tube recommended), repair as needed;
- Spray wrap with amended water;
- Remove material:
- Lockdown any remaining friable materials on piping with encapsulant;

- Thoroughly rinse tools in glove bag and carefully remove;
- Deflate glove bag with HEPA vacuum and seal bag;
- Use proper decontamination procedures and remove any personal protection equipment as outlined in the abatement design;
- Dispose of glove bag with contaminated materials as ACWM.

5.1.4 <u>Post-Abatement Activities</u>

Upon completion of asbestos activities, when applicable, the following should be conducted:

- Wet wipe abated surfaces;
- HEPA vacuum abated surfaces; and
- Visual Inspection by a competent supervisor or third party asbestos supervisor

5.1.5 <u>Decontamination Plan</u>

It is suggested that a separate three stage personnel and equipment decon be constructed at the entrance to each work area. All personnel leaving the contaminated work area will decontaminate prior to leaving the work area. All equipment and containerized waste leaving the contaminated work area will be decontaminated prior to removal from the work area.

5.1.6 <u>Negative Pressure System</u>

Negative pressure will be maintained at a minimum of 0.02 inches of water column and with a minimum of four air changes per hour inside the asbestos abatement containment utilizing 2,000 cubic feet per minute (CFM) HEPA filtered air filtration devices. The negative pressure system will be ventilated to outside the building.

5.1.7 Clearance

Final clearance of non-friable materials in regulated non-contained areas will be based on visual inspection by a competent supervisor and/or a third party asbestos supervisor.

Final clearance for friable and non-friable materials in regulated contained areas will be cleared by a third-party air monitor using PCM analysis as outlined in EPA AHERA regulations (40 CFR 763). If clearances criteria are not met, then additional cleaning is required as outlined in the abatement design. Analytical method requirements and sampling methodology are outlined in the SSQAPP and referenced in Section 4.2.

5.1.8 Disposal

All wetted, asbestos waste will be bagged in double 6-mil polyethylene asbestos labeled disposal bags, sealed with duct tape, removed from buildings placed in a polyethylene lined dumpster. The waste will be removed as ACWM under appropriate waste manifests to an approved asbestos landfill.

5.2 Lead-Based Paint

5.2.1 <u>Definitions</u>

The following lead-based paint terminology is used throughout this cleanup work plan when identifying the applicable regulations and appropriate cleanup methods.

Lead-Based Paint means paint or other surface coatings, including varnish, shellac, stains, and enamels, that contain lead equal to or greater than 1.0 mg/cm² or 0.5% by weight or 5,000 parts per million (ppm).

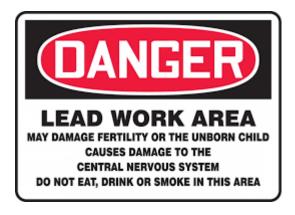
Target Housing is a single- or multi-family dwelling built before 1978.

Child-Occupied Facility is a facility, or portion of a building, built prior to 1978 and visited by the same child 6 years of age or younger twice in one week with each visit lasting three or more hours. For example, daycares, child-care facilities, preschools, and kindergarten and first grade classrooms are examples of child-occupied facilities.

5.2.2 Pre-Abatement Activities

Prior to performing any lead-based paint abatement, a lead abatement design must be established by a Georgia certified Lead Project Designer. The abatement design will provide specific details on work areas, abatement methods, lead hazard and control methods, and interior dust abatement/cleanup methods. The design will also provide information with respect to appropriate personal protection equipment (PPE) and personal air monitoring requirements.

Post Lead/Danger signs at the entrances of work areas. Examples of signs include:





5.2.3 <u>Abatement Activities</u>

It is the current cleanup objective to abate and remove all identified LBP. As such, this work plan will describe suggested abatement activities to take place at each building to completely remove any identified LBP.

The primary methodology for removing all identified LBP is to remove all loose and flaking paint through the use of hand scrappers and wet methods. However, this methodology is unlikely to remove all lead-based paint adhered to the substrate. Without removing the substrate, various amounts of LBP will likely remain in place. To further prevent deterioration and the spread of lead-based paint, it is recommended that after all loose, flaking, and scrapable paint is removed, two coats of a clear lead encapsulate be applied to stabilize any remaining lead-based paint.

In addition, during construction it may be determined that various LBP surfaces cannot be safely or adequately abated. In this eventuality, the material should be left in place and every step taken to limit access and potential impact to human health. An O&M Plan should be implemented to assess the condition of any unabated LBP and the effectiveness of any preventative measures.

The lead-based paint locations and substrates for each building are discussed in Section 3.3.

Most of the lead-based paint identified throughout the buildings were located on metal, brick, or wood surfaces, including walling, columns, beams, railings, and windows. As such, the recommended methodology for abatement for each building and identified LBP surface is the following:

- The work area should be isolated with danger/lead signs posted at entrances;
- Abatement workers should don personal protection equipment as outlined in abatement design;
- Vacuum with HEPA filter debris around removal work areas;
- Place 4-mil polyethylene sheeting underneath removal work areas;
- Spray painted surfaces with amended water;
- Remove loose and flaking lead-based paint from building components with hand scrappers;
- Loose and flaking paint chips will be gathered on 4-mil polyethylene sheeting;
- One all scrapable, loose, and flaking paint has been removed, apply two coats of clear lead encapsulant;
- Carefully bag all removed lead-based paint in 4-mil polyethylene sheeting and placed in 55gallon drums to be sampled for waste characterization purposes prior to disposal; and
- Use proper decontamination procedures and remove any personal protection equipment as outlined in the abatement design.

Additional lead-based paint abatement methodologies will be outlined in the abatement design.

5.2.4 Post-Abatement Activities

Upon completion of lead-based paint abatement activities, when applicable, the following should be conducted:

- Wet wipe abated surfaces;
- HEPA vacuum abated surfaces; and
- Visual Inspection by a Georgia licensed lead supervisor or lead inspector.

5.2.5 <u>Decontamination Plan</u>

It is suggested that a separate three stage personnel and equipment decon be constructed at the entrance each work area. All personnel leaving the contaminated work area will decontaminate prior to leaving the work area. All equipment and containerized waste leaving the contaminated work area will be decontaminated prior to removal from the work area.

5.2.6 <u>Clearance</u>

Final Clearance sampling following lead-based paint abatement will be completed by a licensed Lead Inspector in accordance with HUD Guidelines for Evaluation and Control of Lead-Based Paint Hazards Chapter 15 Clearance. Visual clearance will be completed to verify the removal of LBP and absence of visible dust and potential lead emissions, followed by wipe sampling for the presence of dust per EPA & HUD clearance criteria via ASTM 1728. The number of samples are dependent on Table 15.1 of the Chapter 15, and typically require the following:

- Floors minimum of four per building with four or more rooms, plus within 10 feet of each contained regulated area
- Window sills or window trough minimum of four per building with four or more rooms

Analytical method requirements and sampling methodology are outlined in the SSQAPP and referenced in Section 4.2.

5.2.7 <u>Disposal</u>

Removed lead-based paint will be characterized for waste disposal purposes by analyzing for lead toxicity characteristics leaching procedure (TCLP) testing by an accredited laboratory. Upon analysis, lead contaminated materials will be disposed of in accordance with local, state, and federal regulations.

"The remainder of this page intentionally left blank."

6 Schedule and Phasing

It is anticipated that all work will be started in summer 2019, with completion by the end of 2020.

It is Cardno understanding that the abatement will occur in stages based on the overall project phasing schedule which is in the process of being finalized by Atomic and their selected contractor(s). When project scheduling is confirmed, this Cleanup Work Plan will be updated.

"The remainder of this page intentionally left blank."

7 References

- Hazardous Material Survey, with Addendums 1 & 2 Former Pullman Yard, 225 Rogers Street NW, Atlanta, Georgia, Original June 8, Addendum 1 September 28, 2017, and Addendum 2 May 1, 2018, United Consulting
- AHERA regulations: https://www.epa.gov/asbestos/asbestos-and-school-buildings
- NESHAP regulations: https://www.epa.gov/asbestos/overview-asbestos-national-emission-standards-hazardous-air-pollutants-neshap
- HUD LBP regulations: https://www.hud.gov/program_offices/healthy_homes/lbp/hudguidelines
- OSHA lead regulations: https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1025
- OSHA asbestos regulations: https://www.osha.gov/SLTC/asbestos/
- DeKalb County Board of Tax Assessors GIS: https://maps.dekalbcountyga.gov/parcel/
- DOL website: https://www.dol.gov/whd/regs/compliance/whdfs66.pdf.

Figures



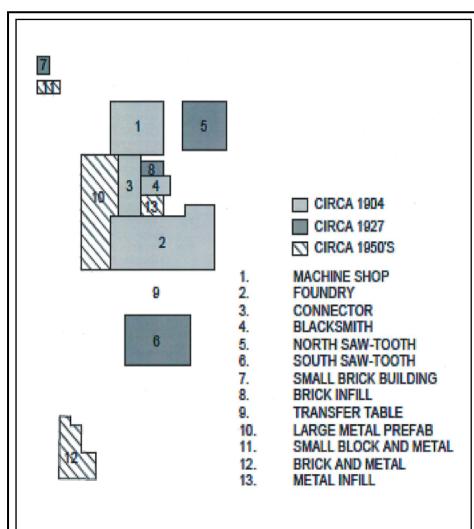






SSQAPP Pullman Yard Fulton County, Atlanta, GA Cardno Project: 0002420000

Figure 1 Site Location Map Source: GoogleEarth











Not to Scale

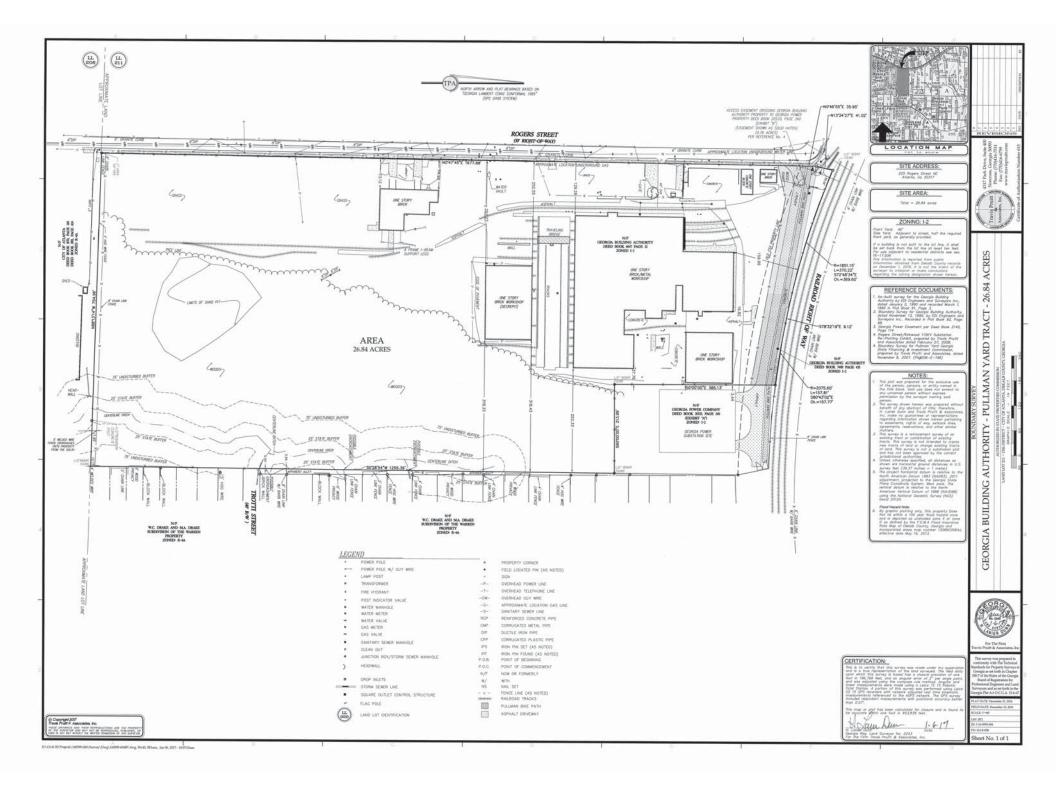
Draft Cleanup Work Plan Pullman Yard Fulton County, Atlanta, GA Cardno Project: 0002420000

Figure 2 **Building Layout Map**

Source: GoogleEarth

Appendix A Site Survey





Appendix B

Excerpts from United's Hazardous Survey Addendum #2, May 2018





May 1, 2018

Maureen Meulen **Atomic Entertainment Development, LLC** 120 Rogers Street NE Atlanta, GA 30317

RE:

Amendment 2 - Hazardous Material Survey - Location and Estimated Quantities Data Package

for Asbestos Containing Materials and Lead Base Paint

Pullman Yard Property

225 Rogers Street, Atlanta, DeKalb County, Georgia

Project No. ATENT-17-GA-01288-01

United Consulting has completed the limited Asbestos Containing Materials (ACM) and Lead Base Paint (LBP) survey at the Pullman Yard property (Project Site). The purpose of this survey was to locate and/or identify common building materials for the presence of asbestos fibers or lead base paint, that may be present at the Project Site.

Bulk sampling was performed in substantial conformance with the United States Environmental Protection Agency's (EPA's), "Guidance for Controlling Asbestos-Containing Materials in Buildings" (EPA 560/5-85-024, 1985). Lead Base Paint testing was performed using an XRF, a real-time instrument, and sampling was performed in accordance to EPA/HUD sampling guidelines. No LBP samples were sent to the laboratory. Sample locations were chosen in the field, based on the identification of visible suspect materials.

The enclosed data package includes an overview diagram (provided by Lord Aeck, Sargent, project architect), and individual building data and photographs showing the locations of the impacted materials. Laboratory identified ACM are shown in yellow, and LBP identified materials are shown in blue.

A site plan overview is provided, a table listing the individual building numbers, the roofing square footage, approximate building areas, and summary of ACM and LBP impact areas.

A separate page is provided identifying the identified locations of materials which need to be abated or managed under an O&M plan. For example, there is a page showing the identified locations of ACM inside a building (if applicable), there is a separate page showing the identified locations of ACM outside of a building (if applicable), there is a page showing identified locations of a LBP inside (if applicable), and there is a page showing the identified locations of LBP outside the building (if applicable).

The National Emissions Standard for Hazardous Air Pollutants (NESHAP) requires the removal of ACM prior to activities which would disturb them. United Consulting recommends that the ACM be removed by a qualified asbestos abatement contractor, prior to renovations or demolition, using State of Georgia accredited personnel, in accordance with applicable federal, state and local regulations governing the removal of ACM.



A Ten-Day Notification should be forwarded to the Georgia Department of Natural Resources (DNR), Georgia Environmental Protection Division (EPD), by the building owner or demolition contractor prior to the start of any building demolition activities.

Representative areas of the Project Site were sampled on a limited basis where a visual identification of suspect materials could be made. United Consulting shall not be held responsible for errors, miscalculations, assumptions, misinterpretations or other problems or liabilities arising from, or associated with, firms or individuals bidding on asbestos abatement work that rely solely, or in part, on this document.

This report has been prepared on behalf of the client, Atomic Entertainment Development. Should any other person, partnership, or corporation desire to rely upon this report, it will be necessary for United Consulting to update the report for the new user.

Sincerely,

UNITED CONSULTING

Leonard J. Diprima, Jr., P.G, Associate Environmental Specialist Luke von Oldenburg, CHMM, CIH, CSP Industrial Hygienist

LVO/LJD/slv

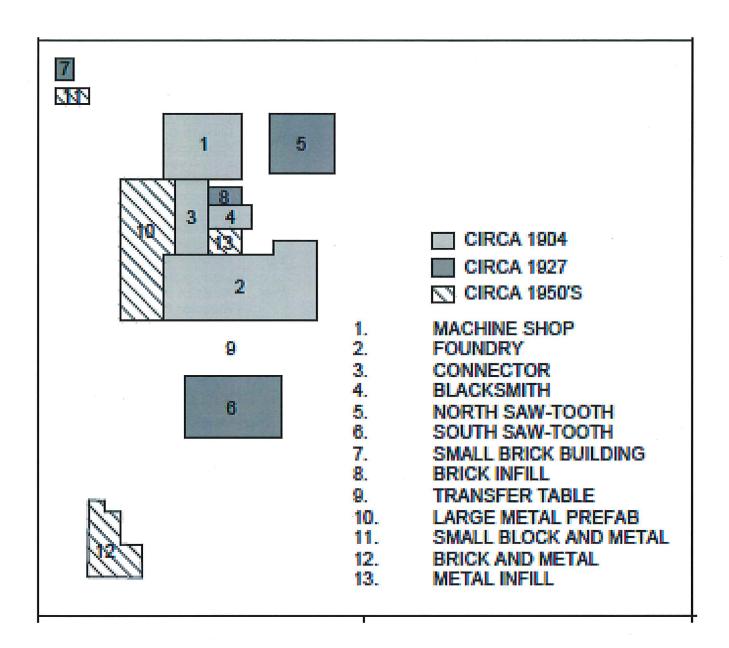
cc: Andrea L. Rimer, Troutman Sanders LLP

Ben Norton, Brasfield & Gorrie

SharePoint: ATENT-17-GA-01288-01

APPENDICES

Attachment A Laboratory Results



ACM - Lead Base Paint Summary

Building Number	Roof* Area sq. ft.	Building foot print sq. ft.	Lead Inside	Lead Outside	Asbestos Inside	Asbestos Outside	Comment
, 1	16,915	~18,000	Yes	No	No	Yes	Lead – steel and hand rail Asbestos Roof Flashing
2	37,387	~34,250	Yes	No	No	Yes	Lead steel Asbestos Roof
3	9,210	~8400	Yes	No	Yes	Yes	Lead – yellow hand rails Asbestos roof and flashing Asbestos mastic, tile, under paper
4 - west	3,787	~1600	Yes	No	No	Yes	Lead – yellow walls Asbestos roof
4 - east		~1600	No	No	No	Yes	Asbestos Roof
5	12,045	~13,800	Yes	No	Yes	Yes	Lead – steel Asbestos caulking Asbestos Roof
6	17,412	~20,350	Yes	No	Yes	Yes	Lead – steel Asbestos caulking Asbestos Roof
7	1,162	~1200	Yes	No	-	No	Lead Steel rafters
8	2,128	~2400	Yes	No	No	Yes	Lead – white interior wall paint Asbestos roof
10	20,315	~23,500	Yes	Yes	Yes	No	Lead – Yellow painted pipe and steel Asbestos – pipe wrap
11	-	~	No	No	No	Yes	Asbestos – Silver Mastic
12	10,264	~10,200	Yes	No	No	Yes	Lead – Orange steel Asbestos Sealant along building
13	~3,040	~3,040	No	No	Yes	Yes	Asbestos Pipe Wrap Asbestos Roof

Notes:

Aside from "Roof Areas," building areas, perimeters, lengths and volumes are approximations based on site visits, measuring wheel, and provided PDF drawings.

The above measurements are related to the buildings and not the amount, size, or volume of asbestos or lead base paint.

Final responsibility of the estimations of the amount of Asbestos and Lead Base Paint to be abated will rely solely on the contractor who will be performing the task of abatement and removal.

As with all environmental investigations, there may be hidden pipe chases, vaults, etc... and other areas which may not have been visible during the surficial site walk.

The exterior pipe chase, located on the western edge of Building 10, is approximately 390 feet long. We do not know the start or the end of the pipe chase. Currently there appears to be two sets of pipes partially wrapped in asbestos insulation.

^{*}Roof Areas are calculated by Lord Aeck Sargent - The information is attached to this package

LORD **AECK** SARGENT

Roof Schedule

Root Schedule		
Туре	Area	Comments
Generic - 6"	4,337 SF	BUILDING 1
Generic - 6"	8,420 SF	BUILDING 1
Generic - 6"	4,158 SF	BUILDING 1
Clearstory - Windows	1,854 SF	BUILDING 1
Clearstory - Windows	1,854 SF	BUILDING 1
Generic - 6"	26,006 SF	BUILDING 2
Generic - 6"	2,139 SF	BUILDING 2
Generic - 6"	2,093 SF	BUILDING 2
Generic - 6"	4,033 SF	BUILDING 2
Generic - 6"	3,116 SF	BUILDING 2
Clearstory - Windows	1,553 SF	BUILDING 2
Clearstory - Windows	1,115 SF	BUILDING 2
Generic - 6"	9,210 SF	BUILDING 3
Generic - 6"	1,961 SF	BUILDING 4
Generic - 6"	1,826 SF	BUILDING 4
SawTooth Solid Roofs	2,409 SF	BUILDING 5
SawTooth Solid Roofs	2,409 SF	BUILDING 5
SawTooth Solid Roofs	2,409 SF	BUILDING 5
SawTooth Solid Roofs	2,409 SF	BUILDING 5
SawTooth Solid Roofs	2,409 SF	BUILDING 5
Clearstory - Windows	1,157 SF	BUILDING 5
Clearstory - Windows	1,111 SF	BUILDING 5
Clearstory - Windows	1,111 SF	BUILDING 5
Clearstory - Windows	1,111 SF	BUILDING 5
Clearstory - Windows	1,111 SF	BUILDING 5
SawTooth Solid Roofs	4,353 SF	BUILDING 6
SawTooth Solid Roofs	4,353 SF	BUILDING 6
SawTooth Solid Roofs	4,353 SF	BUILDING 6
SawTooth Solid Roofs	4,353 SF	BUILDING 6
Clearstory - Windows	2,065 SF	BUILDING 6
Clearstory - Windows	2,065 SF	BUILDING 6
Clearstory - Windows	2,065 SF	BUILDING 6
Clearstory - Windows	2,065 SF	BUILDING 6
Flat Roof	1,162 SF	BUILDING 7
Generic - 6"	2,128 SF	BUILDING 8
Metal-Low Slope	343 SF	BUILDING 10
Metal-Low Slope	19,972 SF	BUILDING 10
Roof in Question	4,971 SF	BUILDING 10
Metal-Low Slope	6,192 SF	BUILDING 12
Flat Roof	4,072 SF	BUILDING 12
Concrete - BLDG 12	41 SF	BUILDING 12
	4FF 070 CF	

Grand total: 41

155,878 SF

Window Schedule

Steel

- 67 Openings 9,338 S.F.

Wood

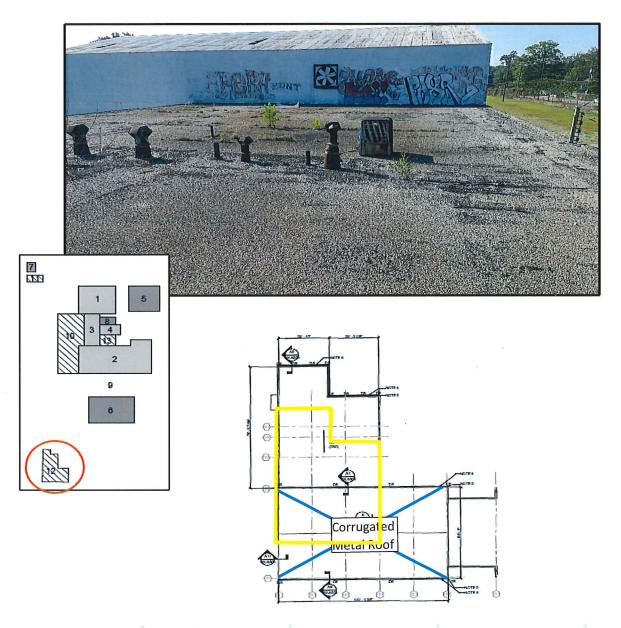
- 192 Openings 22,875 S.F. 6 Louvers

Aluminum

- 3 Openings 360 S.F.

Asbestos

Roof Sealantg



Building 12 – Outside Roof

Asbestos roof sealant - asbestos

Lower asphalt roof – The Sealant between the two buildings and sealant along the edge is positive for Asbestos.

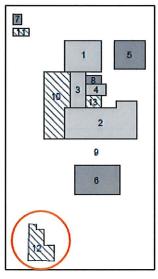
Estimated: Lower asphalt roof perimeter ~ 280 linear feet

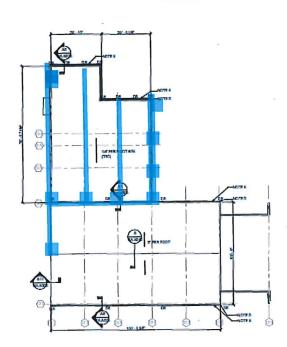
The overall tar/gravel roof is Non-detect for asbestos.

Lead Base Paint

Steel beams (lower sections)



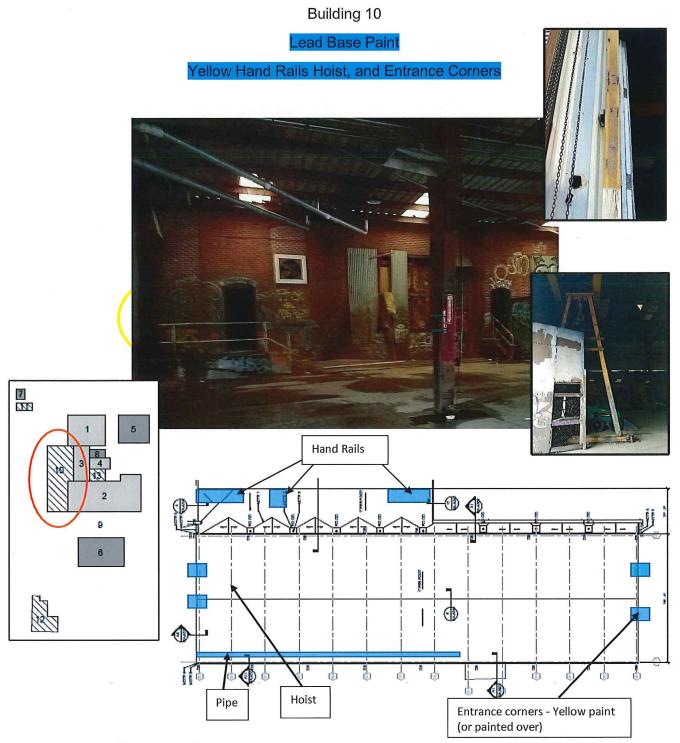




Building 12 Inside – Lower section

LBP – vertical and horizontal, steel supports, orange I-Beams (mostly in the lower roof section).

Estimated: ~600 linear feet of steel.



Building 10: Inside -

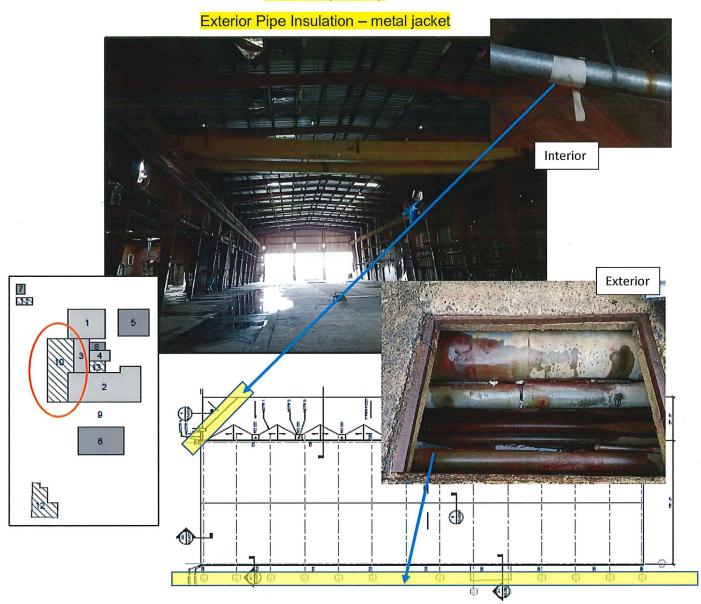
LBP — Hand Rails - Painted Yellow — (Three sets of rails, Estimated: ~125 linear feet). Hoist, Water pipe (yellow paint) along west wall (Estimated: ~ 120 linear feet) and the Posts/corners at entrances on north and south ends (note yellow paint).

Note, the metal roof and walls are Non-LBP.

Building 10

Asbestos

Interior Pipe Wrap



Building 10 - Inside

Pipe Wrap - two joint spots.

Estimated: < 10 linear feet.

Building 10 - Outside

Pipe Insulation in chase.

Estimated: pipe chase length: ~ 390 linear feet (at least two lines with partial asbestos wrap).

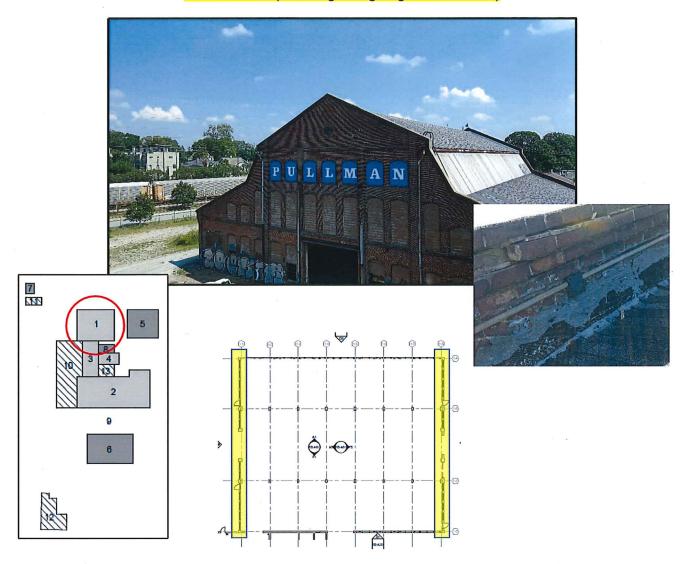
WE DO NOT KNOW WHERE THE PIPES IN THE PIPE CHASE START AND STOP.

NOTE ALL ESTIMATES ARE APPROXIMATE. ABATEMENT CONTRACTOR(S) SHOULD VERIFY ALL ESTIMATES PROVIDED.

Building 1

Asbestos

Roof Sealant (Flashing along edge and sealant)



Building 1 – Outside

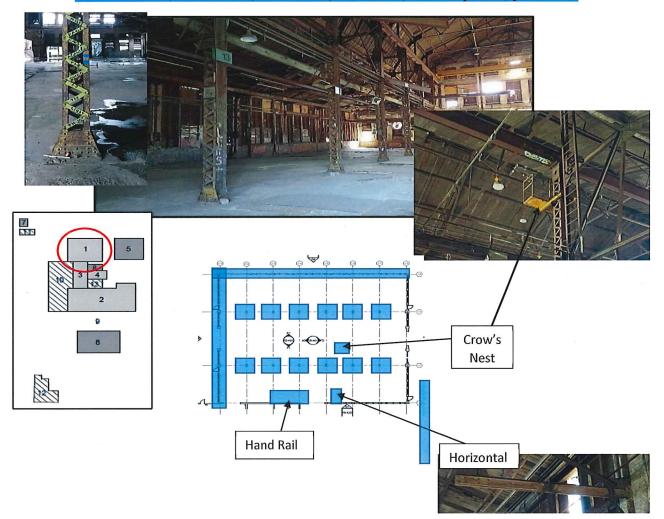
Asbestos roof sealant along flashing paper.

Estimated: ~ 370 linear feet.

Asphalt Shingles on roof paper (non-asbestos) directly on wood.

Lead Base Paint

Steel columns, crow's nest, hoist arms, lower wall, window jambs, yellow rail



Building 1 - Inside

(12 - vertical, painted, lattice post – the lower 10 feet only).

Estimated: ~120 linear feet

Upper Crow's nest (yellow) and horizontal I beam (yellow) - linear feet undetermined.

Hand painted rail (yellow).

Estimated: ~23 linear feet of

Wall surface - lower 4 feet of west, north and northeast walls.

Estimated: ~2200 sq. ft.

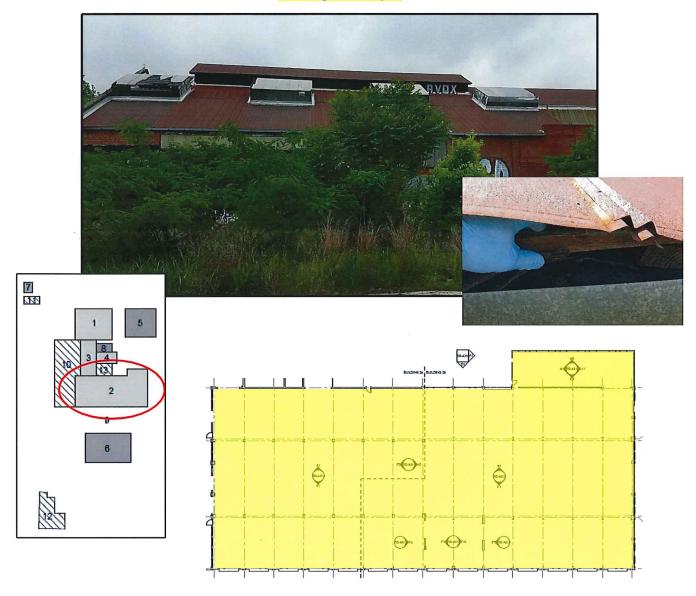
LBP - on the painted, wooden window jambs and frames.

Estimated Number of Windows: 107

Building 2

Asbestos

Roofing Felt/Paper



Building 2 - Outside

Asbestos roof flashing, sealant, and tar paper.

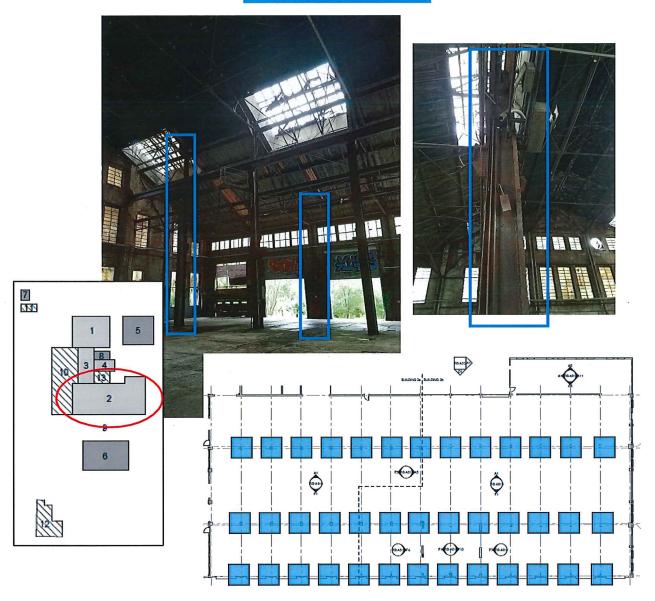
Estimated: 39,200 sq. ft.

Metal Roof on top attached to wood strappings. The corrugated roof lays on top of Asphalt shingles and asbestos felt/roofing paper.

Gutter Sealant, (non-asbestos).

Lead Base Paint

Interior metal vertical beams



Building 2 - Inside

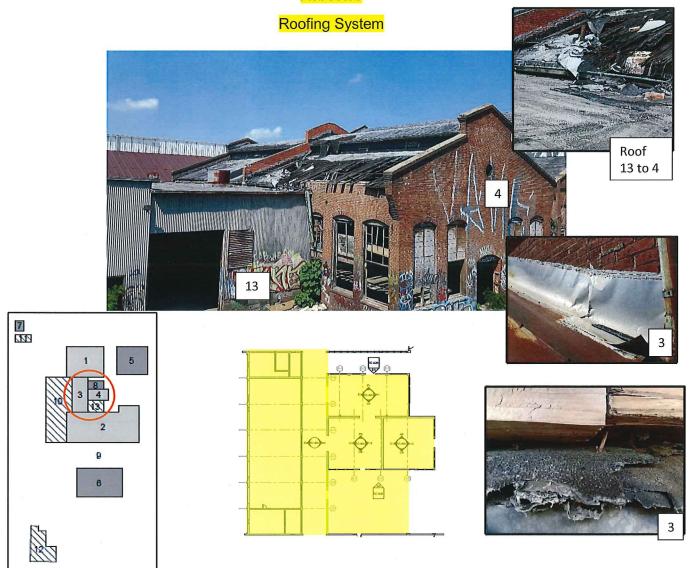
39 Vertical lattice beams – full length.

Estimated: each post ~25 feet each steel post; total ~975 linear feet

Painted walls were negative for LBP.

Buildings 3, 4, 8, 13

Asbestos



Building 13 is a flat roof – the Roofing system is Asbestos.

Estimated: Building 13 Area ~ 3040 sq. ft.

Building 4, and 8 are pitched roofs with asbestos felt paper and asbestos shingles.

Estimated: Building 4 Area ~ 3200 sq. ft.

Estimated: Building 8 Area ~2400 sq. ft.

Building 3 is pitched – metal roof with asphalt / tar paper roof system below a metal roof– asbestos.

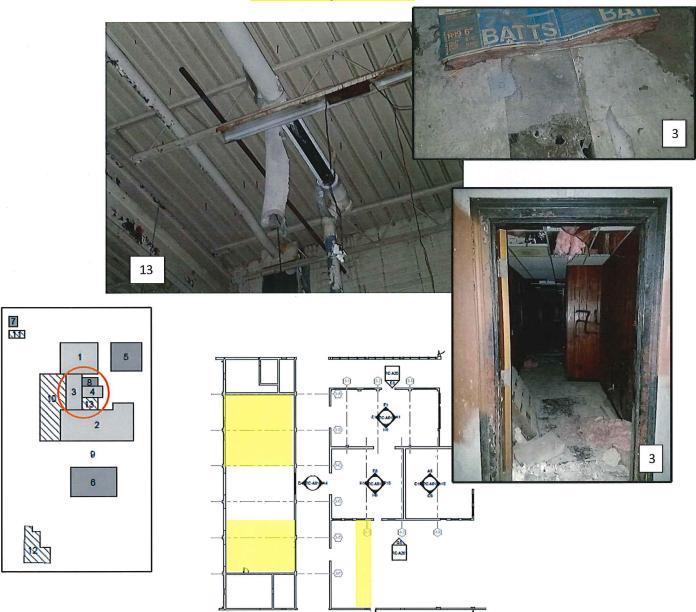
Estimated: Building 3 Area ~8,400 sq. ft.

In addition, Building 3 has asbestos in the gray flashing sealant.

Buildings 3, 4, 8, 13

Asbestos

Floor tile, Pipe Insulation



Building 3 - Inside

Office area has asbestos floor tiles, mastic, and asbestos paper under the floor tile.

Estimated: ~ 2500 sq. ft.

Building 13 - Inside

Area: length of asbestos pipe wrap overhead.

Estimated: ~ 27 linear feet.

Buildings 3, 4, 8, 13

Lead Painted

White Wall Paint Yellow Hand Rail, Green Wall Paint



Building 8 – white paint on all walls is LBP. Surface area undetermined.

Building 4 - Yellow Paint on walls is LBP. Surface area undetermined.

Building 3 - Painted hand rail.

Estimated: ~ 23 linear feet of rails plus base.

Building 3 - Green painted closet (access from Building 1).

Estimated: lower 10 feet (room 8 x 20), ~1,600 sq. ft.

Asbestos

Roofing Felt/Paper and Mastic



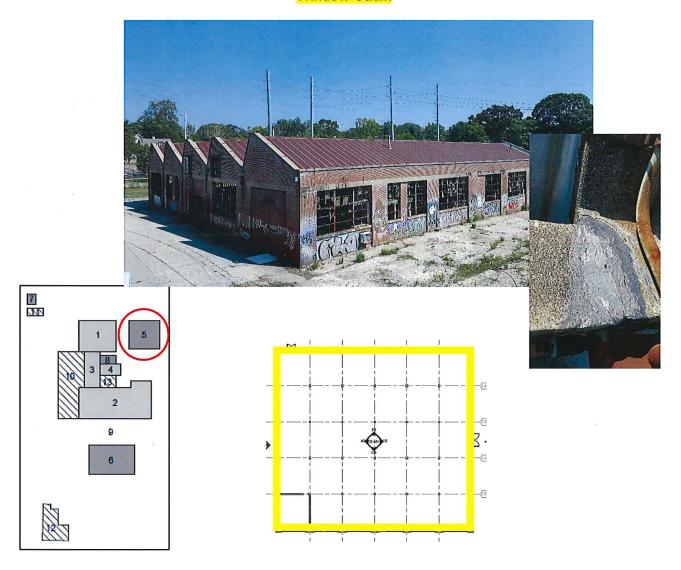
Building 5 – Outside

Asbestos roof flashing sealant and Roofing paper

Estimated: ~12,000 sq. ft.

Asbestos

Window Caulk



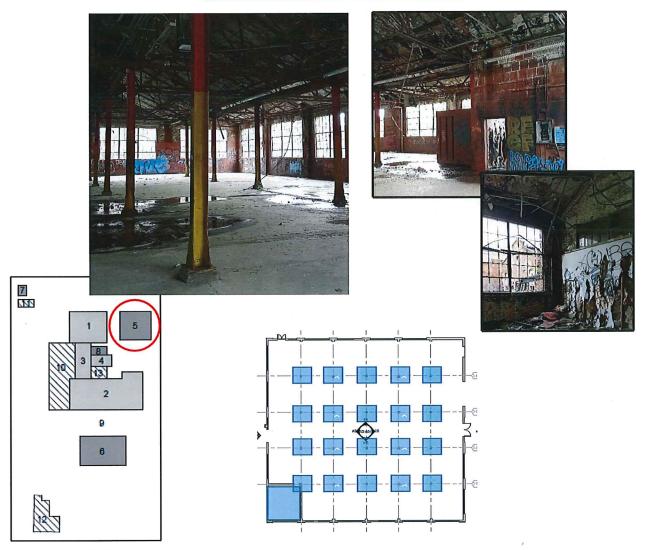
Building 5 - inside

Asbestos window caulk – amount varies in each window.

Estimated: ~900 windows panes

Lead Base Paint

Steel columns, cross beams and office



Building 5 - Inside

Vertical Steel support columns (Red and yellow paint – 14 feet tall) – LBP.

Estimated: ~280 linear feet

White, steel cross beams/trusses - LBP.

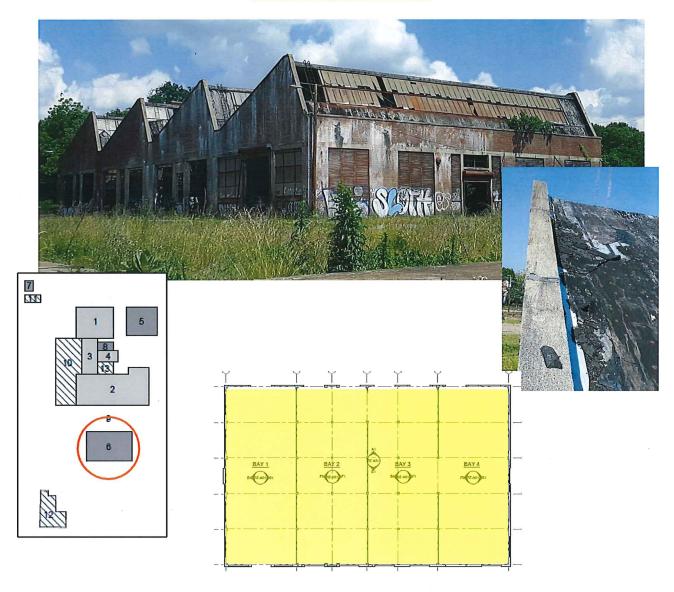
Estimated: undetermined

Corner office – white paint is LBP.

Estimated: ~20 x 22 x 14 feet, ~6,160 sq. ft.

Asbestos

Roofing Paper and Sealant



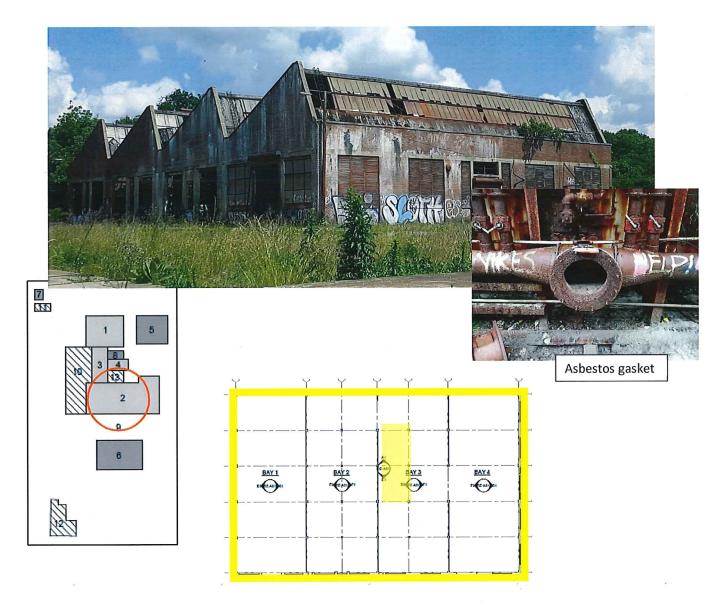
Building 6 - Outside

Roofing system is Asbestos – tar paper and black sealant.

Estimated: ~ 17,500 sq. ft.

Asbestos

Window Caulk and Furnace Insulation/Gaskets



Building 6 - Inside

Asbestos window caulk - various amounts in each window.

Asbestos in gaskets and insulation of furnace.

Building Perimeter: ~590

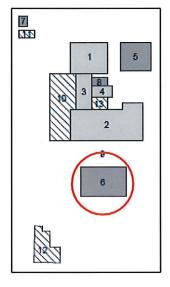
Estimated: Number of window panes 1450

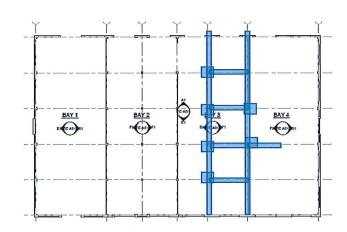
Buildings 6

Lead base paint

Inside - Yellow Steel







Building 6 - Inside

Yellow steel structure LBP.

Estimated: ~450 linear feet

Lead Base Paint

Cross Beams - No Roof



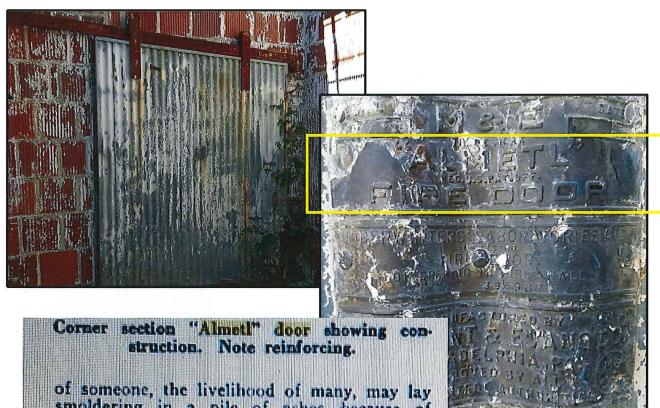
Building 7 - inside

5 I-beams (40 feet each), 14 smaller cross beams (31 feet each), and 7 minor beams (5-feet each) with white LBP across the open top.

Estimated: ~669 linear feet

Walls are non-LBP.

Asbestos Fire Door



of someone, the livelihood of many, may lay smoldering in a pile of ashes—because of someone's carelessness. Proper and complete protective equipment might have made the story entirely different.

To overcome a seemingly unfilled want in this direction the Merchant & Evans Company Fire Doors and Shutters. They are made of two sheets of corrugated galvanized steel (interlined with asbestos) bound securely in a rugated steel, which is reinforced on all edges with an extra heavy galvanized steel binder. The absence of a wood core make these doors unusually light, bringing the average weight down to less than five pounds per square foot. thus allowing very easy operation. The heavy reinforcing steel binder protects the frame from damage that might be caused by truck-There is ample provision for expansion and contraction so that any dist warping of the door is impossible. distortion or The con-

Asbestos

Mastic



Building 11 - Outside

ASBESTOS mastic sealant, gray, where the roof meets the building.

Estimated: ~60 linear feet (30 feet each side)

MASTIC IS ON BOTH SIDES, EAST AND WEST.

ATTACHMENT A

Analytical Data