



**Bannister Federal Complex
Abatement and Demolition Plan Supplements**

Remediation and Demolition, Bannister Federal Complex, 1500 E. Bannister Road, Kansas City, MO

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Prepared for: **CenterPoint Properties**

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Section 1. Introduction and Background

This document was prepared to assist with and supplement previously prepared documents relating to the abatement, remediation, and demolition of buildings and structures of the property known as the Bannister Federal Complex (BFC) located at 1500 East Bannister Road in Kansas City, Missouri. Documents are in preparation for the transfer of the property, subsequent demolition and redevelopment from the National Nuclear Security Administration (NNSA) to Bannister Transformation & Development (BTD) hereinafter referred to as the Owner. The site is intended to be developed for commercial/industrial use.

The Abatement and Demolition Plan Supplements (ADPS) presented in this document are intended to clarify procedures, support, and supplement existing plans and documents prepared by the Owner's Representative, CenterPoint Properties (CenterPoint), its' Subcontractors, and the designated BFC Demolition Contractor, Brandenburg Industrial Service Company (Brandenburg). References to Brandenburg throughout this document are intended to refer to Brandenburg and its designated subcontractors. These supplements are to be followed by all assigned Consultants, Contractors and their Subcontractors (as applicable) and to define requirements for providing asbestos and the identified regulated or hazardous materials/contaminants of concern (COC) or potential contaminants of concern (PCOC) abatement, decommissioning and demolition services at the BFC.

The measures set forth herein ensure that workers, visitors, and the general public are protected from exposure to asbestos, COC's, and activities relating to the abatement, remediation, decommissioning and demolition of the BFC property. In conjunction with this, they provide for an effective and efficient process to complete the work of this project and to allow for the development of the property.

This ADPS document is a component of the overall Demolition Plan being submitted to appropriate regulatory authorities for review and approval to ensure compliance with applicable laws, codes, rules, and regulations. The ADPS is intended to detail requirements for the Asbestos and COC abatement needed to complete the overall project in a manner consistent with legal requirements. It was developed based upon the commitment by CenterPoint, its Consultants, and its Contractors to prevent potential exposure to asbestos and COC inside and outside the Site buildings and to safeguard workers, on-site personnel, and the public from construction debris and materials, and to maintain a safe working environment. Accordingly, CenterPoint, its Consultants, and its Contractors propose to:

- (i) Conduct the abatement work, remediation, and demolition in a protective and expeditious manner in full compliance with applicable laws, thereby protecting workers and the public;
- (ii) To the extent feasible, bulk load waste materials to minimize truckloads, traffic congestion, air pollution, environmental pollution, and noise concerns associated with the process and vehicles servicing the site; and;
- (iii) Address letters from regulatory agencies concerning the previously submitted Brandenburg BFC Demolition Plan.

Proposed Project

CenterPoint specializes in remediating, and re-developing aging commercial facilities. The Bannister Federal Complex is one of the federally owned facilities to undergo such a redevelopment following a public to private ownership change.

The larger project will include not only the abatement and remediation, and demolition of the existing facility, but site remediation and construction activities in support of a new, state-of-the-art, warehousing facility. It is the goal of CenterPoint, its' Consultants, and Contractors to conduct the proposed abatement, cleanup, and demolition in a manner which; (i) will not expose the general public to asbestos and identified COC, (ii) will minimize worker exposure to asbestos and other COC through the use of appropriate and approved engineering controls and personal protective equipment, (iii) will minimize adverse impacts of the project on the adjacent community, and (iv) will address the practical operational opportunities and challenges presented by the Site.

General Description of Project Scope

It is the intent of BTB and CenterPoint Properties, along with their Consultants and Contractors that the project will be performed and will reflect the following factors:

1. A Clear Understanding of Project Priorities
 - Focus on the Safety of All Involved
 - Establishing a Culture of Teamwork and Compliance
 - Full Recognition of Potential Neighborhood Impacts
 - Timely Communication
 - Consistency With All Regulatory Requirements
 - Schedule Compliance
2. All activities and Work Plans have been developed with the intent to limit the amount of construction materials and site materials that will be required to leave the site as either regular waste product or contaminated or hazardous waste. The Work Plans are developed with the intent of Re-Use of materials on-site that meet clean fill requirements and the recycling of materials off-site to the extent feasible. Each identified waste and potential waste stream has been evaluated following extensive Due Diligence activities at the site.
3. Where there is a need for transport of large scale materials or debris off-site, the evaluation of routes of exit and transport from the site and means and methods of transport have been evaluated. Specific Traffic Control Plans will have been developed by Brandenburg for use throughout the project.
4. Several locations at the site are below grade, and will require backfill as part of the demolition.
5. All activities must be completed consistent with commercial/industrial standards, as well as any applicable laws and local regulations.
6. All references to codes and standards in the Work Plan Supplements and on the drawings shall mean the latest edition, amendment, and/or revision of such reference documents in effect as of the date of these documents.
7. Brandenburg and its Subcontractors shall have the manpower and equipment to complete the work in accordance with the approved Project Schedule.

Abbreviated Project Phasing Description and Schedule

The following Figure and Tables provide a general description of the Areas or Phases identified for the sequencing of Vertical Demolition by Brandenburg, and the buildings or structures included in each Phase of the project. The Phase Areas described in the table are depicted on Figure 1 (Vertical Demolition Phase Plan) below. These Area diagrams are to be used for general planning purposes. The actual site work and phasing may change as operating conditions during site activities may dictate alterations to facilitate efficiency and potentially reduce costs. Brandenburg has developed a schedule for the general activities to be performed. Several of the areas defined below may have activities being performed concurrently prior to the actual demolition. The demolition of structures is intended to be performed in accordance with the phasing defined by Brandenburg on the following site overview:

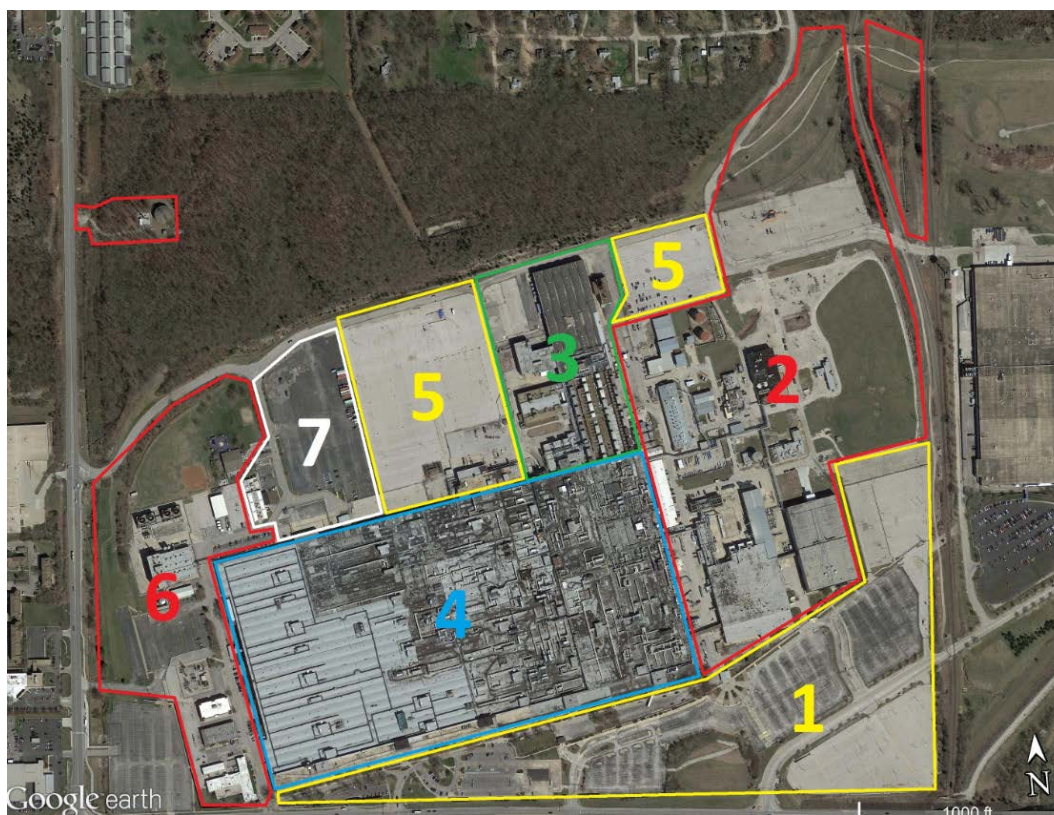


Figure 1 - Vertical Demolition Phase Plan

The following Table 1.0 provides a list of the major buildings or structures associated with the project. The table corresponds to the diagram "Exhibit 1 Site Plan" a copy of which is provided as an Attachment A of this ADPS Document. The Table references the approximate Phase for which the major structures (including below grade utilities, etc.) at the plant will be removed or demolished. These are intended to be approximate and may change as the project progresses. The "Item No." corresponds to a matching number on the above-referenced diagram.

Table 1.0 – Building Phase Designation		
Item/Bldg. No.	Description	Project Phase Proposed
1	Manufacturing Building	4
2	Main Office Building	4
3	GSA – Federal Aviation Administration	6
4	GSA – Fleet Management Center	6
5	West Boiler House	6
6	GSA – FSS Commodity Center	6
7	GSA – Employee Entrance – West	6
8	GSA – Employee Entrance – North	4
13	Manufacturing Support Building	2
14	Four Experimental Test Cells	3
15	Polymer Building	2

<i>Table 1.0 – Building Phase Designation</i>		
<i>Item/Bldg. No.</i>	<i>Description</i>	<i>Project Phase Proposed</i>
16	Kinematics Building	2
21	Water Reservoir – Empty	6
22	GSA Radio Support Hut	6
23	GSA – Microwave Tower	6
24	Abandoned Water Control Pit – Reservoir	6
25	Truck Scale and Booth	2
26	Shelter (Former Liquid Waste)	2
27	Chip Waste Shelter	2
28	Containerized Waste Shelter	2
29	Oil Separator Shelter	2
30	Fire Main Backflow	5
31	Air Monitoring Building and Tower	6
32	Central Bannister Guard Building	1
38	Pipe Tunnel	2
39	Pipe Tunnel (Boiler House)	6
41	GSA – IRS Warehouse	3
42	GSA – Material Handling Building	3
44	GSA – Meter House	6
46	Four Unfinished Test Cells	2
47	Employee Entrance – North	4
48	East Power House	2
49	East Cooling Towers	2
50	GSA – Shops	6
51	GSA – Storage Building	6
52	GSA – Day Care Center	6
53	Fire Main Backflow	6
54	High Power Lab	3
55	Water Meter Pit	Stays
56	Tower	Stays
59	Waste Management Building	2
60	Storage Building	6
61	Oil Storage Tanks (West Boiler House)	6
62	Waste Acid Shelter	2
63	Barrel Lot	2
64	Shelter (Red – X)	2
65	Chemical Storage Acid Shelter	2
66	Process Liquids Storage Tanks	2
68	Storage Shed	2
69	Storage Tanks	2

<i>Table 1.0 – Building Phase Designation</i>		
<i>Item/Bldg. No.</i>	<i>Description</i>	<i>Project Phase Proposed</i>
70	KCP&L Substation	Stays
71	West Basin	6
72	Cooling Towers	6
73	Solid Waste Disposal Building	2
74	Production Storage Building	2
75	Supervisory Control Building	2
76	Storage Bunker	2
77	Oil Storage Building	2
78	East Bannister Guard Building	2
79	West Bannister Guard Building	1
80	North Guard Building	5
81	Air Monitoring Building	Demolished
82	Air Monitoring Building	Demolished
83	Air Monitoring Building	GSA Building
84	Pedestrian Tunnel	1
85	Main Switch Gear	6
86	North Wing Lab	3
87	Test Cells	3
88	Forge & Casting	3
89	Fire Protection Pump Building/Tank	2
90	Mold Heating and Cooling Equipment	2
91	Plating Building	2
92	Technical Transfer Center	2
93	Northeast Guard Building	2
94	Northwest Guard Building	7
95	Special Demolition Shelter	2
96	Special Process Building	2
97	Groundwater Monitoring Equipment Building	Stays
98	Industrial Wastewater Pretreatment Facility	Stays

Work Hours

In order to minimize the noise impact, construction activity, in particular the demolition and movement of construction equipment shall be limited to typical daylight hours, within the hours of 6:00 AM to 8:00 PM from Monday through Sunday.

Asbestos abatement and other activities which are performed entirely within the limits of the buildings at the site may be conducted at any time as long as the noise requirements are not violated.

Section 2. Acronyms

ACM	Asbestos-Containing Material
AEC	Atomic Energy Commission
ADPS	Abatement and Demolition Plan Supplements
AST	Aboveground Storage Tank
Be	Beryllium
BFC	Bannister Federal Complex
BGS	Below Ground Surface
BRA	Baseline Risk Assessment
BTD	Bannister Transformation & Development
CBD	Chronic Beryllium Disease
CenterPoint	Owner's Representative, CenterPoint Properties
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
COC	Contaminant of Concern
CRZ	Contamination Reduction Zone
CSR	Code of State Regulations
CVOC	Chlorinated Volatile Organic Compound
DCCR	Description of Current Conditions Report
DCE	Dichloroethylene (or Dichloroethene)
DNR	Department of Natural Resources
DOE	Department of Energy
DOT	Department of Transportation
EPA	Environmental Protection Agency
FEA	Facility Environmental Assessment
GFCI	Ground Fault Circuit Interrupter
GSA	General Services Administration
HASP	Health & Safety Plan
HAZWOPER	Hazardous Waste Operations & Emergency Response
HEPA	High Efficiency Particulate Air
IRS	Internal Revenue Service
KCP	Kansas City Plant
KCPL	Kansas City Power & Light
MODNR	Missouri Department of Natural Resources
MHWMF	Missouri Hazardous Waste Management Facility

MODOT	Missouri Department of Transportation
MSOP	Missouri State Operating Permit
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
NNSA	National Nuclear Security Administration
NOI	Notice of Intent
NPE	Negative Pressure Enclosure
OSHA	Occupational Safety & Health Administration
Owner	Bannister Transformation & Development, LLC
PCB	Polychlorinated Biphenyls
PCM	Phase Contrast Microscopy
PCOC	Potential Contaminant of Concern
PEL	Permissible Exposure Limit
Papadopoulos	S.S. Papadopoulos & Associates
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit
SAP	Sampling and Analysis Plan
SDS	Safety Data Sheet
SPCC	Spill Prevention, Control & Countermeasures
SSL	Site-Specific Screening Level
SSO	Site Safety Officer
STEL	Short Term Excursion Limit
SWMU	Solid Waste Management Unit
SWPPP	Stormwater Pollution Prevention Plan
TCA	Trichloroethane
TCE	Trichloroethylene (or Trichloroethene)
TEM	Transmission Electron Microscopy
TSP	Trisodium Phosphate
TSS	Total Suspended Solids
TPH	Total Petroleum Hydrocarbons
TWA	Time Weighted Average
ULSD	Ultra-Low Sulfur Diesel
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation

USEPA	United States Environmental Protection Agency
USMC	United States Marine Corps
VOC	Volatile Organic Compound
WSR	Waste Shipment Record

Section 3. Definitions

ABC Rubble: This term refers to asphalt, brick, and concrete rubble created during the demolition process.

Approve: The term "approved," where used in conjunction with the Contractor's submittals, applications, and requests, is limited to the responsibilities and duties of the Bidder stated in General and Supplementary Conditions. Such approval shall not release Brandenburg from responsibility to fulfill Contract Document requirements, unless otherwise provided in the Contract Documents.

Contractor: This refers to Brandenburg Industrial Service Company, (Brandenburg), the selected BFC Demolition Contractor and its Subcontractors.

Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Owner's Representative," "requested by the "Owner's Representative," and similar phrases. However, no implied meaning shall be interpreted to extend the Owner's Representative's responsibility into Brandenburg's area of demolition supervision.

Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations."

General: Definitions contained in this Section are not necessarily complete, but are general to the extent that they are not defined more explicitly elsewhere in the Project Documents.

General Superintendent: This is the Contractor's Representative at the work site. This person will generally be the Competent Person required by OSHA in 29 CFR 1926.

Indicated: This term refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help locate the reference; no limitation on location is intended except as specifically noted.

Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, and protecting, cleaning and similar operations."

Installer: An "Installer" is an entity engaged by the Contractor, either as an employee, subcontractor or sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operations they are engaged to perform.

Landowner: Refers to Bannister Transformation & Development (BTD). Also referred to as the Owner throughout this document.

Owner's Representative(s) or Project Administrator: This is the entity mentioned as the Owner's on-site assigned representative(s), CenterPoint Properties (CenterPoint). The Owner's Representative will represent the Owner during abatement, remediation, decommissioning, and demolition and until final payment is due. The Owner's Representative will advise and consult with the Owner. The Owner's instructions to the Contractor may be forwarded through the Owner's Representative.

Non-PCB means less than 50 ppm PCBs.

Non-PCB Transformer means any transformer that contains less than 500 ppm PCB.

PCB Transformer means any transformer that contains 500 ppm or greater PCBs.

PCB Contaminated means a non-liquid material containing PCBs at concentrations ≥ 50 ppm but < 500 ppm; a liquid material containing PCBs at concentrations ≥ 50 ppm but < 500 ppm or where insufficient liquid material is available for analysis, a non-porous surface having a surface concentration $> 10 \mu\text{g}/100 \text{ cm}^2$ but $< 100 \mu\text{g}/100 \text{ cm}^2$, measured by a standard wipe test as defined in 40 CFR 761.123.

PCB Bulk Product Waste means waste derived from manufactured products containing PCBs in a non-liquid state, at any concentration where the concentration at the time of designation for disposal was greater

than or equal to 50 ppm PCBs. PCB bulk product waste does not include PCBs or PCB Items regulated for disposal under 40 CFR 761.60(a) through(c), 761.61, 761.63, or 761.64. PCB bulk product waste includes, but is not limited to:

- (1) Non-liquid bulk wastes or debris from the demolition of buildings and other man-made structures manufactured, coated, or serviced with PCBs. PCB bulk product waste does not include debris from the demolition of buildings or other man-made structures that is contaminated by spills from regulated PCBs which have not been disposed of, decontaminated, or otherwise cleaned up.
- (2) PCB-containing wastes from the shredding of automobiles, household appliances, or industrial appliances.
- (3) Plastics (such as plastic insulation from wire or cable; radio, television and computer casings; vehicle parts; or furniture laminates); preformed or molded rubber parts and components; applied dried paints, varnishes, waxes or other similar coatings or sealants; caulking; adhesives; paper; Galbestos; sound deadening or other types of insulation; and felt or fabric products such as gaskets.
- (4) Fluorescent light ballasts containing PCBs in the potting material.
 - **PCB Remediation Waste** means waste containing PCBs as a result of a spill, release, or other unauthorized disposal, at the following concentrations: Materials disposed of prior to April 18, 1978, that are currently at concentrations ≥ 50 ppm PCBs, regardless of the concentration of the original spill; materials which are currently at any volume or concentration where the original source was ≥ 500 ppm PCBs beginning on April 18, 1978, or ≥ 50 ppm PCBs beginning on July 2, 1979; and materials which are currently at any concentration if the PCBs are spilled or released from a source not authorized for use under this part. PCB remediation waste means soil, rags, and other debris generated as a result of any PCB spill cleanup, including, but not limited to:
 - (1) Environmental media containing PCBs, such as soil and gravel; dredged materials, such as sediments, settled sediment fines, and aqueous decantate from sediment.
 - (2) Sewage sludge containing < 50 ppm PCBs and not in use according to § 761.20(a)(4); PCB sewage sludge; commercial or industrial sludge contaminated as the result of a spill of PCBs including sludges located in or removed from any pollution control device; aqueous decantate from an industrial sludge.
 - (3) Buildings and other man-made structures (such as concrete floors, wood floors, or walls contaminated from a leaking PCB or PCB-Contaminated Transformer), porous surfaces, and non-porous surfaces.

Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."

Regulation: The term "Regulations" includes laws, statutes, ordinances and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the Work, whether they are lawfully imposed by authorities having jurisdiction or not.

Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the project site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests.

Transite: Trade name for "asbestos-cement" products. Usually identified in panels or preformed pipe sections.

Work Site: "Work Site" or "The Site" Is the space available to Brandenburg for performance of the work, either exclusively or in conjunction with others performing other activities as part of the project. The extent of the work site is shown on the Drawings.

DEFINITIONS RELATIVE TO ASBESTOS OR OTHER CONTAMINANT ABATEMENT:

Abatement Contractor: The Abatement Contractor refers to the licensed Asbestos Abatement Contractor utilized for the performance of all regulated asbestos-containing materials abatement activities.

Aerosol: A system consisting of particles, solid or liquid, suspended in air.

Aircell: Insulation normally used on pipes and duct work that is comprised of corrugated cardboard which is frequently comprised of asbestos combined with cellulose or refractory binders.

Air Monitoring: The process of measuring the fiber content of a specific volume of air.

Amended Water: Water to which a surfactant has been added to decrease the surface tension to 35 or less dynes. Utilized for the wetting of asbestos materials or debris.

Asbestos: The asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite. For purposes of determining respiratory and worker protection both the asbestiform and non-asbestiform varieties of the above minerals and any of these materials that have been chemically treated and/or altered shall be considered as asbestos.

Asbestos-Containing Material (ACM): Any material containing more than 1% by weight of asbestos of any type or mixture of types.

Asbestos-Containing Building Material (ACBM): Surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a building.

Asbestos-Containing Waste Material: Any material which is or is suspected of being or any material contaminated with an asbestos-containing material which is to be removed from a work area for disposal.

Asbestos debris: Pieces of ACBM that can be identified by color, texture, or composition and includes dust, if the dust is determined by an accredited inspector to be ACM.

Authorized Visitor: The Owner, the Owner's Representatives, testing lab personnel, emergency personnel or a representative of any federal, state and local regulatory or other agency having authority over the project.

Barrier: Any surface that seals off the work area to inhibit the movement of fibers or contaminants of concern.

Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches.

Ceiling Concentration: The concentration of an airborne substance that shall not be exceeded.

Clean Fill: The Missouri Solid Waste Management Law defines clean fill as: Uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinder blocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the department for fill, reclamation or other beneficial uses.

Demolition: The wrecking or taking out of any building component, system, finish or assembly of a facility together with any related handling operations.

Disposal Bag: A properly labeled 6 mil thick leak tight plastic bags used for transporting asbestos waste from the work site to a disposal site.

Encapsulant: A material that surrounds or embeds asbestos fibers in an adhesive matrix, to prevent release of fibers.

Removal encapsulant: a penetrating encapsulant specifically designed to minimize fiber release during removal of asbestos-containing materials rather than for in situ encapsulation.

Encapsulation: Treatment of asbestos-containing materials, with an encapsulant.

Enclosure: The construction of an air tight, impermeable, permanent barrier around asbestos-containing material to control the release of asbestos fibers into the air.

Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.

Friable Asbestos Material: Material that contains more than 1.0% asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

Glovebag: A sack (typically constructed of 6 mil transparent polyethylene (poly) or polyvinylchloride plastic) with inward projecting long sleeve gloves, which are designed to enclose an object from which an asbestos containing material is to be removed.

HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in diameter.

HEPA Filter Vacuum Collection Equipment (or vacuum cleaner): High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97% efficiency for retaining fibers of 0.3 microns or larger.

Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.

Negative Pressure Ventilation System: A method of providing low-velocity airflow from uncontaminated areas into contaminated areas by means of a portable exhaust system equipped with HEPA filters. A pressure differential and ventilation system. **Personal Monitoring:** Sampling of the asbestos fiber concentrations or other specific contaminant within the breathing zone of an employee. Media, sampling duration, and analysis will vary by contaminant.

Pressure Differential and Ventilation System: A local exhaust system, utilizing HEPA filtration capable of maintaining a pressure differential with the inside of the Work Area at a lower pressure than any adjacent area, and which cleans recirculated air or generates a constant air flow from adjacent areas into the Work Area.

Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.

Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.

Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

Time Weighted Average (TWA): The average concentration of a contaminant in air during a specific time period.

Visible Emissions: Any emissions containing particulates including asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

Wet Cleaning: The process of eliminating asbestos contamination or contaminated dusts from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.

Work Area: The area where asbestos or other contaminant related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, or other contaminants and entry by unauthorized personnel. Work area is a Regulated Area as defined by 29 CFR 1926. In cases involving Class I, II, and III asbestos work, the regulated area includes, at a minimum, the area in which the workers move about in the process of performing the work.

Section 4. Project Responsibilities

All of the Sections of this ADPS document shall be part of the contract between CenterPoint and its Subcontractors.

Representative Parties Involved with the Project – Project Team

- Bannister Transformation & Development (BTD) will be the Owner of the project.
- CenterPoint Properties (CenterPoint) will be the Owner's Representative and Project Administrator for the Project.
- Brandenburg Industrial Service Company (Brandenburg) is the selected Demolition Contractor (and any subcontractors) under contract to CenterPoint for performance of the work.
- SS Papadopoulos (Papadopoulos) is the Environmental assessment and remediation consultant firm selected by CenterPoint for the project.
- Olsson Associates (Formerly Lutjen Engineering) is the civil engineering firm selected by CenterPoint to provide services for performance of the work.
- E W Wells Group, LLC (Wells) is an Environmental Consultant selected by CenterPoint to assist with project document preparation, review, planning and oversight services.

Demolition Contractor General Requirements

Brandenburg shall be responsible for providing, at a minimum, the following:

Fully comply with the Health and Safety Requirements, as well as all applicable local, state and federal regulations relating to demolition activities, and regulated/hazardous materials abatement, packaging, transporting, and disposal.

All issues and events concerning this project shall be considered "confidential" and all correspondence shall be coordinated with the Owner or Owner's Representatives.

A Site Superintendent, who is a Kansas City licensed Demolition Supervisor Class I or II and who has responsibility to implement the HASP, the authority to direct work performed under this contract and verify compliance, shall be designated and assigned, full-time, to the Project Site. The Site Superintendent shall be the primary point-of-contact for Brandenburg's activities, correspondence, interfaces, responsibilities, and will represent Brandenburg with regard to all field matters and obligations.

The focus of the Abatement and Demolition Contractor (Brandenburg) and its Subcontractors shall be to utilize state-of-the-art procedures and to safely perform all activities in a manner which promotes material reuse and recycling while minimizing wastes and waste streams which are detrimental to the environment. Brandenburg shall be responsible to completely document the disposition of all materials at the site with the intent to record "green activities" including the volumes of materials reused, recycled, and disposed including all wastes and re-use/minimization of water and other disposable materials throughout the course of the project. This documentation shall be provided to CenterPoint during and at the completion of the project.

Furnish all union labor, materials, field supervision, equipment, tools of the trade, insurance, containers, transportation, permits, notifications, and required fees for the proper packaging, labeling, transportation and disposal of equipment and building materials, asbestos-containing materials, asbestos-contaminated debris, regulated/hazardous materials, universal wastes, and the demolition of structures, all piping and associated equipment, tanks, including concrete foundations and below-grade structures, and all out-buildings to twelve feet below ground level including any associated below-grade structures associated with out-buildings.

Brandenburg shall employ at the site during the performance of the work or any part thereof, a competent superintendent(s) or foreman who shall be satisfactory to the Owner, and who shall not be replaced except with the consent of the Owner, unless they shall cease to be in the employ of Brandenburg. Such superintendent or foreman shall represent and have full authority to act for Brandenburg in their absence and all directions given to such superintendent or foreman shall be as binding as given to Brandenburg.

Brandenburg shall supervise and direct the work. Brandenburg shall be solely responsible for all demolition means, methods, techniques, sequences and procedures, and safety precautions employed for the work under the Contract.

Brandenburg shall give all notices and comply with all laws, ordinance rules and regulations bearing on the conduct of the work as drawn and specified.

Brandenburg shall secure licenses, permits, inspections, and certificates related to the work.

Brandenburg shall remove any and all violations relating to the work specified herein and in the BFC Demolition Plan which may be placed against the property.

Contractor/Subcontractors Personnel

Brandenburg shall provide evidence confirming that all on-site personnel (Brandenburg and Subcontractors) involved in the decommissioning and demolition activities meet all applicable Health and Safety requirements, including training and medical monitoring. In addition, all Contractor's supervisory personnel directly involved in demolition activities must also have Occupational Safety and Health Administration (OSHA) 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training (in accordance with Part 1910.120 of Title 29 of the Code of Federal Regulations [29 CFR Part 1910.120]) and corresponding 8-hour refresher course updates. Brandenburg shall provide evidence of 40-hour training and corresponding 8-hour refresher course updates (i.e., certificates of training completion for on-site supervisory personnel) prior to mobilization to the site. Other personnel shall be trained as applicable for the work being performed or areas where work is to be performed.

Brandenburg's employees and second tier Subcontractor employees must have training appropriate for demolishing a contaminated site including relevant HAZWOPER training and certifications (as applicable).

In addition, Brandenburg shall maintain one Supervisor on-site at all times who has provided evidence of training for the OSHA 30-hour General Industry Outreach Training Course for every 50 Contractor/Subcontractor personnel on site.

Brandenburg shall provide evidence that on-site personnel removing asbestos-containing, lead-containing, regulated and PCB materials are licensed, qualified, certified, and trained (as applicable for each contaminant) to conduct the applicable removal activities.

Brandenburg shall provide evidence they have all appropriate licenses for asbestos abatement, decommissioning, and demolition work for the State of Missouri per all applicable local, state and federal regulations.

Within 10-days prior to the start of on-site activities, provide the names, qualifications and certifications of the designated on-site asbestos abatement supervisor(s) responsible for on-site supervision of the abatement work and the primary contact during performance of the Work.

Copies of valid asbestos worker and/or asbestos supervisor certificates and/or licenses for all personnel engaged in the asbestos abatement activities will be required to be maintained on-site at all times.

Brandenburg shall provide proof of appropriate employee training or accreditation acceptable to agencies with jurisdiction over the site.

Attend weekly meetings for progress review and issue resolution with Owner's representatives and on-site Consultant(s).

Weekly, during the course of the project and at project completion, provide copies of all documentation including all notifications, daily logs, and reports, records, sampling results, weigh tickets and waste manifests.

The demolition work will be performed under the oversight of CenterPoint and its' assigned representatives, who will ensure that all work practices associated with asbestos abatement, decommissioning and demolition and disposal activities are in compliance with the applicable regulations and contractual agreements.

CenterPoint and its' authorized representative(s) for Project Oversight have complete stop-work authority for Brandenburg's non-compliance with safety, health, and environmental issues, but will not be responsible for directing any Contractor's Personnel.

CenterPoint's on-site representative(s) and Consultant(s) shall review Brandenburg's Project Specific Work Plans and Health and Safety Plan, and will advise CenterPoint regarding any deficiencies that may be present and provide recommendations as appropriate.

CenterPoint's representatives and Consultant(s) will review Brandenburg's notifications for accuracy and changes or delays, and maintain a copy of all notification records while the project is being conducted.

CenterPoint's on-site representative(s) will monitor all work practices during asbestos, regulated materials, and COC abatement and demolition activities and ensure that all practices are in compliance with the applicable regulations and contract provisions. Noted violations will be immediately brought to Brandenburg's attention for correction/resolution.

CenterPoint's Representatives will review copies of the waste shipment records (WSR) prepared by Brandenburg including hazardous and non-hazardous waste manifests.

Brandenburg will notify CenterPoint's on-site representative(s) prior to transporting shipments of any waste material off-site.

Brandenburg will prepare a final report documenting all work activities, including photographs, copies of all reports, logs, records, weigh tickets, hazardous and non-hazardous waste manifests and sampling results.

Compliance with Regulations

Brandenburg shall comply with all applicable local, state, and federal regulations including but not limited to the following:

1. Missouri Code of State Regulations - Title 10, Department of Natural Resources
2. Missouri Code of State Regulations – Title 11, Department of Public Safety -Division 40 – Division of Fire Safety
3. State of Missouri Department of Labor Rules and Industrial Relations Rules and Regulations.
4. Occupational Safety and Health Administration (OSHA) regulations.
5. National Electrical Code, NFPA 70.
6. Local Kansas City Code of Ordinances.
7. Life Safety Code, NFPA 101.
8. Plans and Specifications in excess of code/regulation requirements and not contrary to same.
9. National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61
10. Environmental Protection Agency (EPA) Relevant and Applicable Rules and Regulations
11. Brandenburg is also responsible to comply with and enforce the conditions located in the filings, certificates and permits granted to the project.

Section 5. Health and Safety

Brandenburg has submitted with the Brandenburg BFC Demolition Plan a copy of the Brandenburg Safety Policy and Standard Operating Procedure Manual. In addition to the manual, Brandenburg shall within ten (10) days prior to on-site activities provide the project and Site specific HASP addressing all of the activities associated with the BFC Demolition Plan. The plan is to be distributed to all parties involved with the project including MODNR representatives. The Health and Safety Plan shall be developed in accordance with requirements set forth in 29 CFR 1910.120(b)(4)(ii) and the following:

An organizational structure shall be developed that sets forth lines of authority (chain of command), responsibilities, and communication procedures concerning site safety, health, and emergency response. This organizational structure shall cover management, supervisors and employees of Brandenburg and subcontractors. The structure shall include the means for coordinating and controlling work activities of subcontractors and suppliers. The HASP shall include a description of this organizational structure as well as qualifications and responsibilities of each of the provided individuals.

Conduct daily health and safety meetings; one in the morning before starting work and additional meetings as necessary. These meetings shall be documented and documentation kept on site for review for the duration of the project.

Brandenburg shall be solely responsible for initiating, maintaining and supervising all safety programs and precautions associated with this work. Brandenburg shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to all employees on the work site and any other persons who may be affected thereby. Brandenburg's responsibility shall include, but is not limited to: the evaluation, selection, and training to ensure the use of all safety equipment and personal protective equipment (PPE) required to safely execute the scope of work and comply with all Owner requirements.

Dedicated Safety Supervisor(s)

Brandenburg shall employ a full time dedicated Site Safety Officer (SSO). One additional Safety Supervisor will be provided (for every 50 employees/subcontractor employees) whose responsibility shall be to survey the job site and correct safety deficiencies. Brandenburg shall provide the name and credentials of the SSO and additional Safety Supervisors to CenterPoint within ten days following project Award. The SSO is required to be on site throughout the execution of the contract and is in addition to the Field Superintendent/Supervisor. Safety violations shall subject the work to stoppage until corrected. The Owner may intervene, as necessary, in safety incidents and take appropriate action including removal of violators from the site.

Personnel

A Site Superintendent, who has responsibility to implement the HASP, the authority to direct work performed under this contract and verify compliance, shall be designated and assigned, full-time, to the Project Site. The Site Superintendent shall be the primary point-of-contact for Brandenburg's activities, correspondence, interfaces, responsibilities, and will represent Brandenburg with regard to all field matters and obligations.

All Brandenburg and subcontractor personnel must be able to understand and respond to basic safety signs, labels, directions, and warnings, in English, written or oral. All personnel must either be able to communicate in English, or the Contractor must ensure that there is at least one person with each work group on site that can communicate in English and translate for those who cannot. All signs, labels, and other documents cited in this contract will be provided in English at a minimum.

When conditions warrant, either Brandenburg or the Owner (in coordination with each other) may require a "Safety Stand-Down" to communicate and emphasize the focus on safety, whether resulting from a near-miss, or from an actual injury to Brandenburg's employees or subcontractors.

Brandenburg shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to all employees on the work site and any other persons who may be affected thereby. Brandenburg's responsibility shall include, but is not limited to: all safety

equipment and personal protective equipment (PPE) required to safely execute the scope of work, and to comply with the Owner requirements.

All personnel on-site shall wear at a minimum throughout the course of the project appropriate hard-hats, safety glasses, steel-toed boots, and high visibility vests. Brandenburg is responsible to determine all other PPE for each task being performed by employees or subcontractor's employees.

Personnel entering any identified exclusion or contamination reduction zones shall have successfully completed 40 hours of hazardous waste instruction (HAZWOPER Training) off the site; 3 days actual field experience under the direct supervision of a trained, experienced supervisor; and 8 hours refresher training annually. On-site supervisors shall have completed the above training and 8 hours of additional, specialized training covering at least the following topics:

- The Employer's Health & Safety Program;
- Personal Protective Equipment Program;
- Spill Containment Methods; and
- Health Hazard Monitoring Procedures and Techniques.

Copies of current training certification statements shall be submitted prior to initial entry onto the work site.

Site-specific training sessions shall be completed by Brandenburg in accordance with the BFC Demolition Plan for all Site employees.

General Safety Information

Brandenburg shall be solely responsible for initiating, maintaining and supervising all safety programs and precautions associated with this work. Storage of fuel for equipment shall only be permitted in areas designated by Brandenburg and approved by CenterPoint. All fuel and/or petroleum products storage areas must have secondary containment. Contractor staging/laydown areas are to be identified on a Site Plan by Brandenburg and maintained at the Site during the course of the project.

Brandenburg shall provide a sufficient number of his own hand held fire extinguishers to meet the needs of this project in accordance with applicable regulations. In addition, Brandenburg shall provide temporary fire watch via site security personnel for all full containment areas to be active during all off-hours when personnel are not on site.

Brandenburg's employees and Subcontractors must be cautioned that tanks, vessels, equipment and pipelines may contain residual amounts of hazardous, non-hazardous and/or flammable materials. Brandenburg is responsible to confirm. Brandenburg employees and any associated Subcontractors must be properly protected with appropriate head and body garments and other personal protective equipment (PPE) to protect against any residual materials remaining in pipes or vessels within the facility. Brandenburg shall be responsible for the hazard evaluation and the selection of appropriate PPE.

All critical safety devices, such as shut down switches, guards, etc., on all equipment are to be inspected and/or actuated prior to arrival at the site and before job start each day the equipment is in use. A Critical Equipment Inspection and Testing Checklist or similar form shall be completed on a daily basis. For high wear equipment, such as shears, the equipment shall be visually inspected 2 times per day.

Eating and drinking will only be allowed in designated areas.

All trash generated by Brandenburg shall be properly emptied/disposed of on a daily basis.

Smoking on the property is NOT permitted except in designated areas.

All injuries shall be reported to CenterPoint's on-Site Representative immediately. (Within 15 minutes).

Brandenburg shall provide a safety orientation meeting for all his employees, prior to the start of work to review all possible hazards involved. This meeting is to be documented as to attendees and subject matter and a copy of the documentation provided to CenterPoint. Brandenburg is responsible for their employee's health and safety at all times while on the job site.

CenterPoint will convey Brandenburg's schedule and coordinate with Brandenburg who will work in harmony with other site Contractors as necessary.

Brandenburg shall be responsible for proper physical barricades restricting access to unsafe areas or openings created during the abatement and demolition process. It is anticipated that holes or openings including pits, trenches, and basement areas will be exposed creating fall hazards and will require appropriate barricades or protective measures. These hazards must be addressed immediately upon the creation of the hazard and in accordance with all applicable regulatory requirements.

The following requirements shall be applicable for all work areas that may be considered a confined space under OSHA regulations:

Brandenburg shall be responsible for determining the requirements for confined space entry at all locations and comply with all aspects of OSHA's Confined Space Regulations. A copy of Brandenburg's Confined Space Program, training certificates and site-specific monitoring/permitting protocol shall be provided to CenterPoint prior to commencement of the Work.

Verifying the structural integrity of the building roofs and other building components (e.g., floor slabs, walls, floor grates, stairs, ladders, and equipment) is the sole responsibility of Brandenburg. Brandenburg shall design and implement measures (i.e., supports, catwalks, platforms and man-lifts) to provide safe working conditions in all areas of the Site where access is necessary to remove ACMs and/or regulated-hazardous materials or to perform dismantling or demolition activities. As necessary, Brandenburg shall design and implement measures (i.e., shoring, partial roof/wall removal) to provide safe working conditions in areas of the buildings where potential overhead structural safety risks may exist during the course of the project. If necessary, Brandenburg shall also perform the assessment of all surfaces where heavy equipment will be placed to confirm that surfaces will support the loads being imposed upon them. Specific attention to voids beneath the building/paved areas/slabs should be made.

Site Specific Health & Safety Plan

The HASP shall include a safety and health hazard/risk analysis for each site task and operation to be performed. The hazard/risk analysis shall provide information necessary for determining safety and health procedures, equipment, and training to protect onsite personnel, the environment, and the public. Available site information shall be reviewed when preparing the "Hazard/Risk Analysis" section of the HASP.

The HASP shall include a comprehensive section that addresses the tasks and objectives of the site operations and the logistics and resources required to reach those tasks and objectives. The HASP shall outline the personnel structure and responsibilities as referenced above.

Section 6. General Conditions

Brandenburg's Subcontractor personnel are required to limit travel within the limits of the project site areas where work activities are assigned or being performed.

On-site work is intended to be limited to daylight hours between the hours of 6 a.m. and 8 p.m. for all exterior abatement and demolition activities.

- As part of the work plan, Brandenburg supplied a tentative project schedule in an agreed upon format. The schedule included sufficient detail to be able to determine weekly physical progress of the project. No commencement of asbestos or regulated/hazardous materials related work will be scheduled until all regulatory and contractual documentation is in place.
- During asbestos abatement, regulated/hazardous materials abatement, decommissioning, and demolition activities, Brandenburg shall implement control measures, as necessary to minimize the generation and migration of dust particulates or contaminants beyond the work area. This shall include the use of a watering truck and other dust control equipment/methods for use on the site during the demolition/construction activities as defined here and in the BFC Demolition Plan.
- Brandenburg shall provide all equipment including mechanical lifts and erect all scaffolding, ladders and step platforms to provide a safe access to and facilitate the asbestos abatement and demolition of the facility. Contractor shall comply with OSHA regulations, other regulatory requirements and site safety standards for lifts, scaffolding and elevated work.
- Critical lifts, if required, must comply with a critical lift plan. Estimates of weights and specifications of the lift procedure and rigging set-up must be performed by qualified staff. Placement of heavy equipment on any areas of the site where concrete slabs exist will require Brandenburg to confirm the ability or capacity of the slab areas to withstand the weights being applied to them. Brandenburg should be aware of the existence of below-grade tunnels, chases, basement areas, and voids which may impact the ability for placement of heavy equipment above.
- Brandenburg shall provide all scaffolding, tools, rigging and other appurtenances for the proper execution of this Contract and, also, erect and properly maintain at all times all necessary fences, hang-out warning and danger lights or signs and take all other necessary precautions for the protection of all persons, property and the work. Brandenburg where necessary may be requested to provide confirmation of equipment/methods of installation and compatibility.
- Brandenburg shall remove all owned materials, equipment and personnel from the Site upon completion of the Work.
- All work covered by this document and the BFC Demolition Plan will be conducted in strict compliance with all applicable federal, State of Missouri, and local regulations, statutes, codes and policies.
- The Owner will not supply any materials for this dismantlement project. Brandenburg is required to furnish all materials required to complete the Scope of Work. Operational support may be provided upon request, at the Owners discretion.

Notifications/Permits

Brandenburg shall be responsible for obtaining/submitting all licenses, permits, and notifications for the performance of all aspects of the asbestos and regulated materials remediation and demolition and disposal/recycling or re-use of all generated wastes and materials. CenterPoint or their representative will be alerted prior to all agency notifications.

Specific notifications include but may not be limited to the following:

1. Missouri Department of Natural Resources notifications for asbestos abatement and demolition activities.

2. Kansas City notifications for asbestos abatement and post-abatement reporting.
3. Notifications to the City of Kansas City, Fire, and Health Departments for asbestos abatement and demolition activities.
4. Elevator Decommissioning Notifications including required inspections (if applicable).
5. Fire Department Notifications for Confined Space Entry (if applicable).
6. Notice of Intent for PCB Waste Activity
7. State of Missouri Portable Crusher Permit(s)
8. National Pollutant Discharge Elimination System (NPDES) Construction Notice of Intent
9. State of Missouri Underground Storage Tank (UST) Decommissioning Certifications

Ten business days prior to proceeding with asbestos abatement and the demolition activities, Brandenburg shall submit a copy of all Notifications for the Asbestos Abatement Project and Demolition Project as required. Provide copies of notifications of abatement and demolition submitted to the City of Kansas City Police, Fire, and Health Departments.

Other Conditions

- Participate in weekly project management and construction management meetings/conference phone calls, and submit weekly project status reports due by close of business on Friday to CenterPoint's Representative.
- Brandenburg will be responsible for security protocols while at the site and during entering/exiting. CenterPoint will not be held responsible for theft of any tools, equipment, etc., used, supplied or required by Brandenburg or its Subcontractors.
- For Safety reasons, Workers must use plant roadways and walkways when going to and coming from the job site.
- Brandenburg's employees shall park their vehicles only in areas designated for that purpose.
- If a conflict exists between drawings and/or any reference material, actual field conditions will dictate.
- Brandenburg shall not allow any mud/debris to be tracked on to plant or public roads.

On-Site Project Management and Monitoring

Brandenburg shall assign an on-site Project Monitor to perform all compliance testing, and oversight throughout the course of the project in accordance with the requirements defined in this document and the Brandenburg BFC Demolition Plan. The Project Monitor utilizing several on-site personnel will perform monitoring of abatement/remediation work practices and performance, inspection of the work sites, and site perimeter and final clearance air sampling and analysis for each phase of the asbestos or COC removal or remediation and demolition activities, as necessary. Quality control and testing criteria have been established and will be followed by the Project Monitor.

The Project Monitor(s) is responsible to notify the CenterPoint On-Site Representative(s) who have the authority to stop the Work any time he/she determines, either personally or through the services of another party that conditions are not within those presented in the Work Plans and Supplements, other conditions arise that warrant work stoppage (i.e., safety observations) and/or applicable regulations. The work shall not resume until conditions have been corrected and corrective steps have been taken to the satisfaction of the Project Monitor.

Authority to Stop Work

BTD and CenterPoint representatives, shall have the authority to stop the abatement, decommissioning, or demolition work based upon violations of applicable law, the HASP, the BFC Demolition Plan, the Permits,

and/or any approved variances. The stoppage of work shall occur upon notification (and concurrence) to the CenterPoint On-Site Representative and shall continue until conditions have been corrected to the satisfaction of the Owner's representative, Owner's Consultants, Project Monitor and Regulators, as appropriate.

In addition, the occurrence of any or all of the following events will be reported in writing to the CenterPoint On-Site Representative and will require Brandenburg to stop abatement/remediation, or demolition activities (may be limited to work being performed in the specific area or building as applicable) and initiate appropriate corrective actions which may include additional engineering controls:

- For Asbestos Abatement – Excessive airborne fibers detected outside containment area above action levels described in the Air and Environmental Monitoring Plan or the BFC Demolition Plan.
- Exceedances of US EPA trigger levels for any COC (See Air Monitoring Plan).
- Breaks in containment barriers during abatement activities.
- Loss of negative air pressure (below 0.02 inches of water column).
- Serious injury within the containment area or during demolition activities.
- Fire or other safety emergency.
- Power failure affecting the abatement process or the maintenance of negative air pressure in a negative pressure enclosure.
- Any visible emissions noted exterior to the work areas.

Section 7. On-Site Project Setup and Performance Details

This section presents a representative task-by-task description of the abatement, remediation, and demolition activities to be implemented at the site. It is intended to supplement the already developed Brandenburg BFC Demolition Plan and is not intended to be comprehensive detailing every task or activity required to be performed. However, it is intended to point out requirements or minimum requirements for specific items/activities deemed to be significant to the execution of the project as a whole.

The work of this project, for both demolition activities and abatement activities shall be conducted by Brandenburg under the following general work tasks and in accordance with the Brandenburg BFC Demolition Plan:

Mobilization/Site Services

Brandenburg shall be responsible for mobilizing all equipment, materials, supplies, and personnel to the site within 10 days from notice to proceed or at the date of scheduled performance approved and agreed upon by all parties. All equipment mobilized to the site shall be thoroughly cleaned and inspected prior to mobilization on-site. Based upon inspection by CenterPoint and its site representatives, equipment that is not visibly clean upon mobilization to the site shall be taken off-site and cleaned prior to remobilization.

7.1 Contractor Trailers

Brandenburg shall provide maintenance and servicing of the sanitary facilities, office trailers or on-site designated office locations and staging areas, and equipment furnished with the office trailers, as necessary.

Trailers utilized by Brandenburg for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers which, in the opinion of the Owner, require exterior painting or maintenance will not be allowed on the property.

Adequate outside security lighting shall be provided at any temporary facilities. Brandenburg shall be responsible for the security of its own equipment.

7.2 Bulletin Board, Mandatory Signage, and Notifications

Immediately upon beginning of work, Brandenburg shall provide a weatherproof glass or plexi-glass-covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, Wage Rate Information poster, Project Notifications/Permits, and other information required by regulations. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees. Legible copies of the aforementioned data shall be displayed until work is completed.

7.3 Site Services

Brandenburg is responsible for Site Security, Site Lighting, and Power for pumping groundwater to the Industrial Wastewater Facility. Brandenburg is responsible for connecting and conveying power to all Contractor facilities utilizing licensed electricians. Brandenburg shall ensure safe installation of temporary power sources and equipment per applicable electrical code requirements. No electrical outlets will be allowed on the Site unless ground faulted. Any equipment with loose or faulty wiring will be required to be repaired or removed from the Site. Brandenburg shall coordinate proper hookups of all power to be utilized by the Contractor for all Contractor facilities, lighting, heat, and abatement or demolition activities at the start of the project. Brandenburg will be responsible for providing proper GFCI protected power panels.

Brandenburg is responsible for providing temporary lighting and heat in all work areas in accordance with applicable regulations.

Brandenburg shall be responsible for metering hookup of water using licensed personnel in coordination with the Kansas City Water Services. Water, including potable and for use during all abatement/demolition activities will be the responsibility of Brandenburg. Brandenburg shall practice

good recycling/re-use practices throughout the course of the project and to record recycled quantities/usage to be utilized for site project conservation data for use by CenterPoint.

Brandenburg is responsible for the installation of an appropriate number of sanitary facilities and for the disposal of sanitary waste for the duration of the project. All facilities are to be maintained in a clean and safe condition at all times.

Brandenburg is responsible to provide restrooms, lunchrooms, changing rooms to meet the needs of the personnel staffing required for the duration of the project in accordance with all applicable regulations.

Location of Brandenburg (and its Subcontractor's) restrooms, lunchrooms, changing rooms, etc., will be within the staging/laydown area to be shown on the site plans.

Brandenburg shall be responsible for coordinating all cutting/capping of fire hydrants and associated piping to be removed from the site in conjunction with the Kansas City Fire Department requirements. Brandenburg is responsible for coordinating with the Fire Department.

7.4 Site Mobilization Preparation

Brandenburg shall be responsible for, the following general mobilization and site preparation activities:

1. Attend a Pre-Demolition Meeting to be held at the site to introduce project team members and discuss the startup of site activities.
2. Brandenburg shall perform all required regulatory site preparation activities including specific requirements for the installation of site boundary protection for compliance with state, federal, and local regulations and all plans for site protection including any requirements identified in plans prepared by others (i.e. Storm-water Pollution Prevention Plan, Spill Prevention, Control & Countermeasures Plan, etc.).
3. Verify existing site conditions and identify, mark, and verify the location(s) of all aboveground and underground utilities, equipment, and structures, as necessary to implement the demolition activities. Brandenburg shall be responsible for maintaining appropriate clearances from utilities and pipe racks (i.e., active overhead electric lines, underground conduit/piping, etc.) during the course of the work until dismantlement of all is complete.
4. If suspect asbestos or other contaminants of concern not previously identified are encountered during the course of this project, CenterPoint will be notified in writing.
5. Brandenburg shall be responsible for the installation of appropriate decontamination facilities for the number of personnel on site for all activities in compliance with all applicable regulations and as may be required by the Health and Safety Plan, the BFC Demolition Plan and this ADPS document.
6. Brandenburg shall provide United States Department of Transportation (USDOT) approved containers for containerization of materials generated during the ACM removal activities. This shall include any drums utilized for materials generated during abatement.
7. Brandenburg shall provide all roll-off containers or trailers for proper labeling, and containerization of the ACM waste or regulated or hazardous wastes generated from the site.
8. All critical safety devices, such as shut down switches, guards, etc., on all equipment are to be inspected and/or actuated prior to arrival at the site and before job start each day the equipment is in use. A Critical Equipment Inspection and Testing Checklist shall be completed on a daily basis. For high wear equipment, such as shears, the equipment shall be visually inspected at a minimum 2 times per day.
9. Brandenburg shall establish areas for equipment storage and segregation of wastes.

7.5 Clean Air Construction

Motorized equipment utilized by Brandenburg and Subcontractors must comply with the EPA Tier 3 Vehicle Emission and Fuel Standards Program.

Contractor shall follow the EPA Clean Air Construction Initiative and the following:

1. ULSD in non-road vehicles
2. Non-road engines will meet standards in 40 CFR 89.112 or 40 CFR 1039 as applicable.
3. Staging and waiting areas will be designated for trucks during the project and will allow for radiation screening during entry/exit in strict accordance with implemented and approved radiation protocol for the project.

All diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower will have engines that meet EPA particulate matter emission standards or emission control technology certified by the manufacturer to meet or exceed emissions reductions verified by EPA. Emission control devices such as diesel oxidation catalysts or diesel particulate filters will be installed on the exhaust system side of the diesel combustion engine equipment.

7.6 Housekeeping

Brandenburg and Subcontractors shall keep the work area at all times, free from accumulations of waste materials or rubbish caused by his employees or work and, at the completion of the work, he shall remove all his rubbish from and about the building and all his tools, scaffolding and surplus materials and shall leave his work "broom clean" or its equivalent, unless more exactly specified.

Brandenburg shall restore to operating condition any sewers, drains, and other facilities that are not included in the scope of the demolition project but are impacted by the work or used by the Contractor. All temporary construction and facilities shall be removed at the completion of construction or when directed by CenterPoint's representative(s).

Brandenburg shall make provision to remove rubbish from the jobsite, as it accumulates so that the entire jobsite is in clean conditions at all times.

7.7 Security

Brandenburg shall be responsible for site Security and Site Lighting throughout the course of the Project.

Site access: Access onto the property will be gained through the Northwest Guard Building (#94 See Attachment A) which is located on the Northwest of Building #1, the Manufacturing Building. The Access point may change prior to the start of the work at the discretion of Brandenburg.

Registering: Registration takes place in the Security check-in location. Everyone entering the facility must register by signing in when entering the facility and signing out when leaving. This includes the beginning of the workday, lunch and coffee breaks and end of day departures.

ID needed for site access: At a minimum, a government issued photo id is required to gain access into the facility. Examples include but are not limited to a driver's licenses, passports, TWIC card, State issued license, etc.

7.8 Snow Removal, Cleanup, Truck Washing

Brandenburg is responsible for all snow removal that is necessary to conduct the work and provide continuous access to the Site for all areas where the Contractor requires access. Snow will be stockpiled in a location designated by Brandenburg and CenterPoint.

Trucks and vehicles leaving the Site shall be washed and cleaned as necessary to prevent debris from being deposited on streets and sidewalks. No tracking of soils or dust in the streets will be allowed. Use of street sweepers will be required if tracking is observed.

A designated "Truck Wash" or wheel wash area located near the exit(s) to the site (see BFC Demolition Plan for Truck Wash details) will be established where rinse water is collected and may be reused on site. Additional truck wash areas will be created as necessary adjacent to any areas where trucks may be required to drive over contaminated materials. In no event shall vehicles with exteriors (wheels, etc.) deemed to have been exposed to contaminants be allowed to leave the Site without being rinsed/decontaminated. The intent will be to limit the requirement to drive over contaminated areas, however, precautions and safe work practices shall be strictly observed. Water collected from what the truck wash facilities adjacent to contaminated material areas or zones will be collected, tested for contaminants of concern, and treated if necessary, disposed or recycled properly.

At the completion of the project and before final acceptance, Brandenburg shall remove all materials and equipment from the Site.

7.9 Traffic Control

Traffic Control shall be performed in accordance with the Traffic Control Plan provided as an Appendix to the Brandenburg BFC Demolition Plan. General requirements include but are not limited to the following:

- Brandenburg shall maintain and protect traffic on all affected roads during the construction period. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to persons and property.
- Brandenburg's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. Brandenburg shall investigate the adequacy of existing roads and the allowable load limit on these roads.
- City roads will not be used for vehicle queuing. Brandenburg employees will not be allowed to park on City streets.

7.10 Barricades

Brandenburg shall erect and maintain temporary barricades to limit public access to hazardous areas during demolition or abatement/remediation activities. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

Barricades shall be installed and maintained around the top of all open basement walls and other unprotected pits or openings to leave the Site in a safe condition in accordance with applicable regulations.

7.11 Rodent and Feral Animal Control

This Section specifies the general requirements for rodent and feral animal control within the limits of this contract prior to demolition, abatement, and remediation activities at the Site.

Brandenburg shall employ professional servicemen for work on this Contract, each having experience in rodent control procedures. Exterminators shall have a current license issued by the applicable regulatory agency.

Brandenburg shall submit a schedule indicating material, quantity, methods, and time schedule for extermination prior to commencement. Brandenburg shall also furnish to the Owner, the name of the licensed rodent and feral animal control exterminator.

Brandenburg shall determine the appropriate material for each treatment.

Apply materials in strict accordance with EPA-approved label directions, and the Rules and Regulations of the applicable regulatory agency.

Maintain accurate records of placement, type, and volume of rodent baits applied.

Within one week after initial application, institute a program of maintenance to rid structures and adjacent areas, within the limits of this Contract, of rodents and feral animals, and prevent their migration to abutting properties. Maintenance shall continue for the duration of the Contract.

Remove carcasses daily and dispose of properly according to law.

Upon completion of operations at the Site, remove remaining exposed bait or anticoagulant packages and dispose of properly according to law.

Section 8. Asbestos Abatement

General Asbestos Information

Asbestos is a set of six naturally occurring silicate minerals, which all have in common their eponymous asbestiform habit: long, thin fibrous crystals, with each visible fiber composed of millions of microscopic "fibrils" that can be released by abrasion and other processes. Although asbestos dates back to prehistoric times, the mineral came into popularity during the Industrial Age. Asbestos is highly resistant to chemicals, and heat and fire, and its fibrous composition made it an excellent binder when used in thousands of products utilized by the building industry. The characteristics of asbestos made its use desirable for manufacturers of building related products.

Asbestos Exposure Hazards and Personnel Protection

Unfortunately many of the characteristics that made asbestos desirable for use in building products are the characteristics that make it so dangerous to people. The hazards associated with asbestos are primarily related to the inhalation or ingestion of asbestos fibers. Irritations have also been noted when exposed to the skin. Asbestos in the lungs or digestive system do not break down like most other contaminants exposed to the chemical processes initiated by our immune systems when foreign substances are introduced. Asbestos exposure has been linked to diseases such as: asbestosis, mesothelioma cancer, and lung cancer.

OSHA has designated the following exposure limits for asbestos:

- PEL = .10 fibers per cubic centimeter of air (f/cc) – TWA by PCM analysis
- STEL = 1.0 f/cc by PCM analysis

EPA has designated the following clearance level in air following an abatement action:

- Clearance criteria - <0.01 f/cc by PCM analysis

Background: Asbestos Use and Assessment Results at BFC

Asbestos has been utilized in thousands of building materials. Its new use is banned only in a few product types (e.g. fireproofing, paper products, spray or trowel-applied applications, and thermal systems insulation). Brandenburg performed a Demolition Asbestos Survey of all buildings, structures, and equipment at the BFC. Materials determined to be asbestos-containing at the BFC included:

- Roofing Materials and Flashing
- Vinyl Floor Tiles and Associated Mastics
- Ceiling Tiles and Mastics
- Thermal Systems Insulation on Pipes, Equipment, Ductwork, and Tanks
- Window, Door, Floor, and Wall Caulking Materials
- Transite (asbestos-cement) Products including panels and piping
- Coatings/Paints on Steel Structures

General Conditions – Asbestos

Brandenburg and it's Subcontractor(s) shall provide all labor, equipment, materials, training, insurance and services necessary for the removal, segregation, processing and containerization of all remaining ACMs present across the site, in accordance with all applicable rules and regulations and as directed by CenterPoint. In addition, Brandenburg shall remove friable and non-friable ACMs not previously identified if encountered. The details provided below are intended to supplement the activities described in the Brandenburg BFC Demolition Plan.

In general, materials identified as asbestos-containing will be removed utilizing one of the following regulatory acceptable methods with material specific engineering controls defined and detailed in this section. These methods have been proven to protect workers, persons at the site, the environment, and the adjacent properties:

1. Full Containment Negative Pressure Enclosure Abatement
2. Mini-Containment Negative Pressure Enclosure Abatement (Remote Decontamination Unit)
3. Glove-bag Removal Procedures
4. Exterior Abatement – Engineering Controls/No Enclosure
5. Intact Removal – Engineering Controls

The following Table defines the types of materials that have been identified and the planned removal method for each:

Table 2. Identified ACM Materials Planned Abatement Method	
<i>Material Type</i>	<i>Planned Abatement Method</i>
Roofing/Flashing	Exterior Abatement – Engineering Controls/No Enclosure
VAT and Associated Mastic	Full Containment – Negative Pressure Enclosure
Ceiling Tiles and Mastics	Full Containment – Negative Pressure Enclosure
Interior Tank or Duct Insulation	Full Containment – Negative Pressure Enclosure
Exterior Duct Insulation/Steel Support Paint/Coatings	Exterior Abatement – Engineering Controls/No Enclosure
Fire Doors	Intact Removal – Engineering Controls
Window Caulk	Exterior Abatement – Engineering Controls/No Enclosure
Floor/Wall Caulk	Intact Removal – Engineering Controls
Transite Panels and Transite Piping	Intact Removal – Engineering Controls
Thermal System Insulation on Pipes	Full Containment – Negative Pressure Enclosure or Glove-bag Removal Procedures (Determined by Area by Brandenburg during Abatement)

Should any work or material be required which is not detailed in this document or the BFC Demolition Plan either directly or indirectly but which is nevertheless necessary for the proper performance of the required services, Brandenburg is to understand the same to be implied and required and shall perform all such work and furnish any such materials as fully as if they were particularly delineated or described therein.

The work hours for interior abatement activities on this project are not restricted.

Reporting Unusual Events: When an event of unusual and significant nature occurs at site (examples: failure of pressure differential system, rupture of temporary enclosures), prepare and submit a special report listing chain of events, persons participating, response by Brandenburg's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise CenterPoint's On-Site Representative in advance at earliest possible date.

For all abatement areas, the Abatement Contractor(s) shall begin by performing an initial cleaning, and sealing all critical barriers within the containment area(s). Pre-Cleaning activities including HEPA vacuuming and wet wipe methods will be utilized to ensure that all surfaces are clean prior to the application of poly sheeting.

The Abatement Contractor shall conduct all interior friable asbestos-containing materials abatement utilizing full containment negative pressure enclosure procedures (with exceptions for glove-bag operations in areas where only pipe insulation is to be removed), and all other interior abatement shall either be full containment or in accordance with the specific procedures detailed below. All approaches to the work areas shall be posted with applicable OSHA asbestos warning signs.

Non-moveable objects remaining in the work area shall be covered completely with a minimum of two layers of six (6) millimeter thick poly sheeting securely taped or otherwise secured in place, so as to prevent their contamination. Objects which have already been contaminated shall be thoroughly cleaned with a high efficiency particulate air (HEPA) filtered vacuum or be wet wiped before they are removed from the work area or covered in place.

All moveable objects shall be removed from each work area by the Abatement Contractor. Moveable objects which are contaminated and which may not be decontaminated must be properly disposed of as asbestos waste during the abatement procedures.

Brandenburg will be required to comply with all federal, state, and local regulations pertaining to asbestos abatement and health and safety regulations.

All staging or platforms utilized by Brandenburg shall conform to all applicable OSHA provisions.

Prior to the start of on-site work, Brandenburg shall provide the name of any Subcontractors to be used for the Work, including their qualifications, licenses, locations of origin and descriptions of the project assignments.

All plywood and poly sheeting used for the Work shall be fire retardant.

Brandenburg shall erect warning signs around the work area and at every point of potential entry from the outside. Signs must be in accordance with OSHA standard 29 CFR 1926.1101(k)(7). The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the lettering shall conform to OSHA requirements.

Brandenburg shall provide OSHA- and NESHAP-required labels for all plastic bags, drums, or other containers used to store and transport ACM. Brandenburg shall provide any other signs, labels, warnings and posted instructions that are necessary to protect, inform and warn people of the hazard from asbestos exposure. These items shall be posted in a prominent and convenient place for the workers and potential visitors (i.e., CenterPoint representatives, regulatory agencies), along with a copy of the latest applicable regulations from MODNR, OSHA, and the EPA.

During and following the removal activities, the Abatement Contractor shall containerize and place removed ACM into a temporary staging area(s) separate from other waste material, and/or directly into appropriate transportation containers. The staging area(s) (if needed) shall be constructed in accordance with all applicable local, state and federal regulations, standards and codes to shelter the materials from the elements (e.g., wind, precipitation, surface-water runoff). The location of the temporary staging area must be reviewed and approved by the CenterPoint Representative or Consultant.

At the end of each workday, the Abatement Contractor shall remove the asbestos debris accumulated during that day's Work activities from the work area and place in the approved containers. The Abatement Contractor shall provide a daily tally of all ACM removed. No removed or bagged ACM shall be allowed to be stored within the building. The roll-off container and/or trailer shall be covered appropriately and/or secured at the end of each shift.

For exterior and roof areas the entire area shall be pre-cleaned to a condition of "no visible debris".

Brandenburg shall be responsible for all controlled demolition work required to properly access all visible or identified asbestos materials for abatement. Resulting debris shall be disposed of as either asbestos-containing waste or demolition debris as required or defined in the BFC Demolition Plan.

Any materials deemed to be ACM, prior to start of the Work or as a result of the Work, shall be treated as such and disposed of properly by the Contractor.

Brandenburg shall provide adequate and sufficient temporary lighting for the interior of buildings/structures, as needed. Sufficient work area lighting must comply with OSHA 29 CFR 1926, Regulations for Illumination.

Brandenburg shall provide adequate ventilation of the work areas.

The following sections define the minimum procedures required for the abatement of specific materials identified throughout the site by material type. Should state, local, or federal regulations conflict with any of these procedures, then the most stringent shall apply. During the course of the project, Brandenburg may determine that differing engineering controls or area designations are required to complete any of the materials and will make adjustments to containment sizes, engineering controls, and sequencing (while maintaining the required controls described below).

Conflicting Requirements: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced. Refer requirements that differ, and uncertainties as to which quality level is more stringent to the CenterPoint Representative for a decision before proceeding.

8.1 Full Containment Negative Pressure Enclosure (NPE) Abatement Setup Requirements

The walls and floors of the full containment areas shall be covered with 2 layers of fire retardant poly sheeting, unless otherwise approved by the Owner. Where temporary walls are to be constructed to segregate Work Areas, the Contractor shall construct "rigid" barriers prior to the application of wall poly. Brandenburg shall pre-clean all wall and floor surfaces that contain visible dust or asbestos debris, other than those from which asbestos is to be removed, with a HEPA-filtered vacuum, wet cleaning methods, or both. Brandenburg shall cover all surfaces except floors with 6 mil thick poly sheeting that is at least 4 mil thick. Brandenburg shall cover floors with a minimum of two layers of 6 mil thick poly sheeting. Brandenburg shall affix poly sheeting on the walls in a manner that ensures that it will remain in position throughout the length of the project. The wall sheeting and the floor sheeting shall overlap enough to ensure a seal that will endure the entire length of the project. Brandenburg shall immediately repair any tears in the poly sheeting identified throughout the course of the project.

The regulated area will be ventilated to move contaminated air away from the breathing zone of employees toward a filtration or collection device equipped with a HEPA filter.

Brandenburg shall install a three-chambered decontamination unit equipped with a functioning shower to the containment structure(s).

All electrical cords and connections inside/outside the work area shall be equipped with ground fault circuit interrupters (GFCI). The Abatement Contractor shall lock-out all electrical power and HVAC systems, and disable any fire and/or intrusion alarms inside the work area.

The Abatement Contractor shall comply with OSHA regulations pertaining to respiratory protection.

Waste Packaging: All asbestos-containing materials are to be saturated with water and surfactant until they are containerized. All amended water and encapsulant shall be applied using airless sprayers or low flow hoses. All asbestos-containing materials shall be containerized promptly and not allowed to accumulate inside the work area. All waste materials shall be containerized by double-bagging in 6 mil thick plastic bags, double-wrapped and sealed with 6 mil Poly sheeting and duct tape. All waste shall either be stored in a locked and properly labeled dumpster, supplied by the Abatement Contractor and stored on-site at a location to be determined prior to the start of the work, or shall be removed from the site on a daily basis. All surfaces inside the work area shall be cleaned by HEPA vacuuming and/or wet cleaning techniques to a condition of no visible debris. All cleanup materials shall be disposed of as asbestos waste.

For all negative pressure containment areas, a work area ventilation system shall be used to provide a minimum of four (4) air changes per hour. The work area shall be maintained at a negative pressure differential of 0.02 inches of water column. The pressure differential shall be monitored and recorded with a differential pressure meter equipped with a continuous recorder (e.g. strip chart) and

a warning buzzer which will sound if the pressure differential drops below 0.02 inches of water. Make up air shall enter through the decontamination system. Exhaust air shall be HEPA filtered before discharging from the work area. The exhaust hoses of the HEPA units shall be exhausted through vents leading outside the building where feasible. The Abatement Contractor shall be responsible to have windows removed (where applicable), as necessary, for the installation of plywood or Plexi-glass inserts to vent the HEPA exhausts. The Abatement Contractor shall be responsible for determining the number of HEPA filtration units required for each containment area and shall maintain a supply of back-up units to be utilized should units break down. The air filtration equipment shall establish and maintain a flow of air into the work area from all adjacent areas as demonstrated by using smoke producing tubes or other appropriate means. Brandenburg shall perform this test daily and record the results for inspection upon request by applicable regulators. The air filtration system shall exhaust air to the outside of the building through a duct installed in the poly sheeting.

The Abatement Contractor shall be responsible for providing adequate lighting and heat within the containment area(s), as necessary.

The NPE will be inspected for breaches and smoke tested for leaks on a daily basis. The enclosure must be kept under negative pressure throughout the period of its use until successful clearance has been achieved.

As detailed above and at the intervals stated, all waste materials generated within the contained area shall be properly passed through the waste load-out area after being wet-wiped to remove any residual dust that may remain on the packaging.

Clearance Testing: Following all negative pressure enclosure abatement activities and the complete removal of properly packaged and labeled waste, the Project Monitor or Air Sampling Technician shall perform a thorough visual inspection of the containment area including all surfaces within the contained area. Should dust or debris or standing water be observed, the Abatement Contractor shall be required to clean all surfaces where materials are observed. Upon satisfactory completion of the visual inspection, the Project Monitor shall perform the required Air Clearance testing and analysis services (see Air and Environmental Monitoring Plan in Section 16).

Containment Teardown: Upon successful completion of the air clearance sampling, the Abatement Contractor shall perform the containment and critical barrier removal process. All waste generated during this process shall be properly packaged, and labeled for disposal as asbestos-containing waste. All materials used for the abatement process shall be properly removed. No residual tape or poly shall remain.

The Project Monitor shall confirm the completion of the abatement in the Area by performing the final teardown inspection and documentation.

8.2 Roofing/Flashing Materials Abatement

Brandenburg shall remove all roofing materials from each of the buildings where roofing/flashing has been identified as asbestos-containing. Roofing materials will be removed as part of the demolition process and are not intended to be removed prior to the demolition of building structures.

All asbestos-containing roofing and flashing materials shall be removed and maintained wet during removal activity. Care should be taken not to make any roofing materials friable. Roofing materials must be disposed of properly as general demolition debris.

The person(s) performing the roofing materials removal operation shall wear a half-mask dual cartridge HEPA-filtered respirator, as the minimum level of respiratory protection (Brandenburg responsible for proper respirator determination).

Should it be observed that roofing materials/insulation materials are migrating to other areas of the site or to the water due to wind conditions, Brandenburg shall immediately stop work and determine the methods to correct this condition prior to continuing roof removal activities.

8.3 Interior Tank or Duct Insulation

The Abatement Contractor will construct a negative pressure enclosure in accordance with the above requirements (see 8.1). Abatement of insulation materials will take place only once the containment area has been completed and negative pressure has been established. All insulation materials shall be removed and maintained wet through the packaging and labeling process. All tank and duct surfaces shall be thoroughly cleaned. Upon completion of the removal process, all tank and duct surfaces shall be sprayed with a lock-down encapsulant and allowed to dry.

Clearance testing will be performed by the Project Monitor or Air Sampling Technician. Containment clearance and tear-down shall be in accordance with 8.1 above.

8.4 Floor Tile and Mastic Abatement

For all activities involving flooring materials and their mastics/adhesives, the Abatement Contractor shall begin by sealing all critical barriers to the area where removal is to take place. Two layers of 6 mil thick poly sheeting shall be attached to the walls.

All mastic removal activities shall be performed utilizing the appropriate respiratory protection to suit the activity (i.e. the use of chemical solvents may require specific respiratory protection.) All flooring and mastic materials must be maintained adequately wet during all removal operations. Care shall be taken to ensure that the flooring materials are removed as whole as possible minimizing breakage and potential fiber release.

Clearance sampling shall be performed in accordance with Section 16 – Air and Environmental Monitoring. Upon achieving successful clearance testing, the Abatement Contractor shall promptly complete the removal of all poly and waste materials, packaging, and labeling for disposal as asbestos waste.

8.5 Ceiling Tile and Mastic Abatement

For all activities involving asbestos-containing ceiling tiles and their mastics/adhesives, the Abatement Contractor shall begin by sealing all critical barriers to the area where removal is to take place. Two layers of 6 mil thick poly sheeting shall be attached to the walls and floor.

All tile and mastic removal activities shall be performed utilizing the appropriate respiratory protection to suit the activity (i.e. the use of chemical solvents may require specific respiratory protection.) All ceiling tile and mastic materials must be maintained adequately wet during all removal operations. All waste generated shall be immediately containerized in accordance with 8.1 above.

Clearance sampling shall be performed in accordance with Section 16 – Air and Environmental Monitoring. Upon achieving successful clearance testing, the Abatement Contractor shall promptly complete the removal of all poly and waste materials, packaging, and labeling for disposal as asbestos waste.

8.6 Exterior Duct Insulation – Steel Support Paint - Coating Materials Abatement

The Abatement Contractor shall perform all exterior duct insulation, steel support paint and the exterior coating on Building 92 using exterior engineering control methods. The Abatement Contractor shall perform a pre-cleaning in the immediate vicinity of the base of the building or area below the materials being removed. Two layers of 6 mil poly shall be utilized on the ground to the base of the building or material location and out 30 feet from the material or building walls. As stated in the BFC Demolition Plan, a regulated area will be constructed using tape and snow fence type material to restrict access to the area. Only personnel involved in the abatement action shall be allowed access to the regulated area.

All waste generated shall be immediately containerized in accordance with 8.1 above. At the completion of abatement the Abatement Contractor shall HEPA vacuum the ground poly, and carefully roll the poly onto itself to contain any dust or debris remaining on the poly. All ground poly shall be disposed of as asbestos waste.

8.7 Exterior Window Caulking/Glazing Abatement

The Abatement Contractor shall provide a barrier at the ground level a minimum of 50 feet away from the perimeter of the building where caulking/glazing removal work is taking place. The barrier shall be clearly marked and shall conform to all applicable regulations regarding removal and/or construction activities.

The Abatement Contractor shall be responsible for the cleanup of the perimeter ground surrounding the building. Cleanup shall include a thirty (30) foot distance from the perimeter of the building out away from the building. Cleanup shall include all roofing, window putty/caulking, or any other debris materials that are visible on the ground.

All asbestos-containing caulking/glazing materials shall be removed and maintained wet during removal activity in accordance with the Brandenburg BFC Demolition Plan. Care should be taken not to make any caulking/glazing materials friable. All waste materials must be carefully lowered to the ground. No dropping of materials will be allowed. All caulking/glazing materials including window units if the unit is removed whole must be disposed of properly as asbestos-containing materials.

The person(s) performing the materials removal operation shall wear a half-mask dual cartridge HEPA-filtered respirator, as the minimum level of respiratory protection (Brandenburg responsible for proper respirator determination). Protective clothing shall be utilized during all caulking removal activities.

8.8 Fire Door Abatement

Due to the sealed nature of the asbestos insulation in the fire doors, they shall be removed intact in accordance with the Brandenburg BFC Demolition Plan.

8.9 Floor and Wall Caulking Abatement

The removal of floor and wall caulking materials shall be performed utilizing engineering controls and appropriate PPE. Only personnel performing the removal of the floor and wall caulk will be allowed in the vicinity of the abatement activity. The creation of a regulated area within approximately 30 feet of the materials being removed shall be maintained. In locations where access can be restricted through the use of doorways and entrances, the Abatement Contractor shall restrict access to only abatement personnel.

All waste shall be properly double-bagged, and labeled for disposal. Bagged materials shall be placed into waste containers for proper off-site disposal.

8.10 Transite Panel and Transite Pipe Abatement

The Abatement Contractor shall provide a barrier at the ground level a minimum of 30 feet away from the perimeter of the location where Transite removal work is taking place. The barrier shall be clearly marked and shall conform to all applicable regulations regarding removal and/or construction activities.

The Abatement Contractor shall be responsible for the cleanup of the floor or ground surrounding the area or material location. Cleanup shall include a thirty (30) foot distance from the material to be removed out away from the material. Cleanup shall include all other debris or dust materials that are visible on the floor or ground.

Prior to the start of any Transite Panel abatement, the Abatement Contractor shall apply a lock-down encapsulant to all exposed surfaces. All asbestos-containing Transite panels shall be removed and maintained wet during removal activity by torch cutting or carefully unscrewing/unbolting using mechanical methods if necessary. Care should be taken not to make any Transite panel materials friable. All waste materials must be carefully lowered to the ground, re-wetted and wrapped and sealed in either 2 waste disposal bags or 2 layers of 6 millimeter thick poly sheeting. No dropping of materials will be allowed. All Transite panels must be labeled and disposed of properly as asbestos-containing materials.

Some of this work is to be performed at heights. The Abatement Contractor is responsible for the proper safety and engineering controls to maintain the safety of all workers and personnel not performing the work. The Abatement Contractor must have appropriate training and personnel for the performance of and use of lifts.

Section 9. Lead-Based Paint Work Plan

General Lead-Based Paint Information

Pure lead (Pb) is a heavy metal at room temperature and pressure. A basic chemical element, it can combine with various other substances to form numerous lead compounds. Lead can damage the central nervous system, cardiovascular system, reproductive system, hematological system, and kidneys. When absorbed into the body in high enough doses, lead can be toxic.



Lead Exposure Hazards and Personnel Protection

The hazards associated with lead and lead-based paint are primarily related to the inhalation or ingestion of lead, lead vapors or lead dust. Irritations have also been noted when exposed to the skin or eyes. Concerns during demolition activities typically relate to the inhalation of fumes during cutting activities or dust generated from loose and peeling paints.

Brandenburg shall be responsible for compliance with the OSHA 29 CFR 1926 & 1910 Regulations. It shall be the sole responsibility of Brandenburg for compliance with all applicable OSHA Lead in Construction Regulations pertaining to the safety and health of their employees for the work under this Contract.

OSHA has defined the following exposure levels:

- IDLH -100 mg/m3 (as Pb)
- OSHA PEL - TWA 0.050 mg/m3
- Short-term exposure guidelines: None developed.

Appropriate personal protection when performing lead-based paint removal shall include appropriate respiratory protection, protective clothing and gloves. Skin: Wear appropriate personal protective clothing to prevent skin contact.

Eyes: Wear appropriate eye protection to prevent eye contact.

The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc. Work clothing that becomes wet or significantly contaminated should be removed and replaced.

Workers whose clothing may have become contaminated should change into uncontaminated clothing before leaving the work premises.

Background: Lead-Based Paint Use and Assessment Results at BFC

Brandenburg performed a lead-based paint inspection of the BFC. Results indicated that lead-based paint or lead-containing paint is present at the site on most metal surfaces and some small areas of painted building walls, floors, columns and, and other components to be demolished under this Contract. MODNR Waste Management Program defines Lead-based paint' is defined as paint containing at least 5,000 ppm lead, or 0.5% lead. Material painted with lead-based paint may not be used as clean fill. Material coated with paint containing up to 4,999 ppm lead may still be used as clean fill.

Work under this Contract includes complete demolition of the facility and all interior components.

Project Execution

9.1 Engineering Controls

Should removal of lead paint from any surfaces be required, Brandenburg shall utilize 6 mil poly drop-cloths immediately beneath the area where de-leading is to occur.

9.2 Lead-Based Paint Remediation Process

Brandenburg shall recycle all metals collected during the demolition process at off-site recycling locations.

It is the intent to utilize the majority of the painted building materials that are not on metal (slated for recycling) for crush and fill material.

Materials that did not meet the MODNR reuse criteria shall be segregated as stated in the Brandenburg BFC Demolition Plan and disposed of properly off-site.

Brandenburg shall also be responsible for proper clean-up of all paint chips and/or paint chip debris which is generated during the segregation process or demolition activities. All paint debris shall be properly bagged and disposed as hazardous lead-waste, and all areas shall be cleaned utilizing HEPA vacuums.

Torch cutting and De-leading activities: If torch cutting of any painted steel structures is to be performed, Brandenburg shall perform all activities in accordance with the OSHA Lead in Construction Standard (1926.62). Torch cutting is to be performed using proper, personnel protection, and disposal methodologies. All personnel performing abatement (if necessary) shall wear appropriate PPE. De-leading shall be performed using a method that will minimize the generation of dust. Several de-leading methods are acceptable (i.e., chemical stripping, needle-gun, mechanical chipping, hand tools, etc.) Any waste including dust, paint chips, etc. shall be collected following the abatement and properly disposed of as hazardous lead waste along with any disposable materials including disposable protective clothing, cloths used in the cleaning process and poly. The use of HEPA Vacuums is acceptable to collect dust and paint chips that may have collected on surfaces below the remediation or on the component being abated. Personnel monitoring shall be performed during this process by Brandenburg in accordance with the Site specific HASP and their personnel monitoring program.

Brandenburg will be required to comply with all federal, state, and local regulations pertaining to lead abatement and health and safety regulations.

9.3 Post Abatement Inspection

Should abatement be required, the affected area of lead-paint abatement shall be inspected by Brandenburg's Project Monitor to determine that no lead-paint remains on the surfaces.

Section 10. Regulated/Hazardous Materials Abatement Work Plan

For all regulated materials removal Brandenburg shall ensure that all materials identified as universal wastes, regulated or hazardous waste be properly removed and disposed of by a licensed hazardous waste hauler or an appropriate hauler for the regulated material being removed. All regulated wastes shall be appropriately labeled and disposed of or recycled in accordance with all state, federal, and local regulations. Waste Manifests, Bills of Lading, or Waste Shipment Records shall be appropriately filled out and maintained by Brandenburg.

Project Execution

Prior to initiating major demolition activities, all regulated waste materials shall be removed, segregated/consolidated (as necessary), containerized, and staged at designated areas for transportation and disposal by the Contractor at a facility that has been evaluated and approved by CenterPoint. Specific requirements/emergency response plans and procedures for Mercury-containing Devices are provided in the next Section (11). The types of waste materials to be collected are identified by material in the Brandenburg BFC Demolition Plan. They include the following:

- Lead Acid and Nickel Cadmium Batteries;
- Hydraulic Oils;
- Non-PCB dielectric fluids;
- Mercury-containing devices/switches;
- Mercury light bulbs;
- Lighting systems;
- PCB and non-PCB Light ballasts;
- Sediments and Sludges;
- Compressed Nitrogen Cylinders;
- Exit Signs (radioactive);
- CFC-Containing and Refrigerant-Containing Equipment
- Fire Extinguishers; and
- Other miscellaneous items including product(s) in system piping throughout the plant.

TABLE 4: UNIVERSAL AND REGULATED WASTE SUMMARY

Light Ballasts	31,296	EA
Fluorescent Lights	67,459	EA
High Intensity Mercury Vapor Lights	3,978	EA
Cubicle Lighting	3,060	EA
CFC Containing Equipment	118	EA
Emergency Lights	1,915	EA
Exit Signs	1,770	EA
Fire Extinguishers	657	EA
Fire Hoses	192	EA
Batteries	71	EA
Nitrogen Tanks	7	EA
Ovens – Walk In	5	EA
PC & TV Screens	66	EA
Mercury –Thermostats, Gauges, Light Switches	211	EA

Table 3. Facility Environmental Assessment

10.1 Engineering Controls

Brandenburg shall utilize properly trained workers to perform the collection of all identified materials for either proper packaging for disposal or for recycling.

When appropriate, workers shall utilize appropriate body, head, eye, hands and foot protection while performing the collection or packaging of materials. Brandenburg shall be responsible to determine if PPE including respiratory protection is warranted for each activity being performed. The use of hand tools, poly floor coverings, and differing containerization methods/techniques may be employed.

10.2 Remediation or Collection of Regulated or Hazardous Materials

All PCB-Containing Light Ballasts and Fluorescent Light Bulbs located within the buildings are to be removed and properly disposed or recycled in accordance with applicable regulations. Care should be taken not to break any fluorescent light bulbs or tubes. Any broken bulbs or tubes should be cleaned up

immediately during abatement operations (See Mercury-Containing Materials Removal/Spill Response Work Plan Section 11.0).

Removal of Hazardous Waste Sludge identified in the Facility Environmental Assessment shall be performed in accordance with the Hazardous Waste Sludge Removal Work Plan in Section 12.0.

Brandenburg shall be responsible for collection, segregation/consolidation (as necessary), containerization, staging, and transportation and disposal work. Regulated or Hazardous Materials requiring removal, packaging, and disposal/recycling have been quantified and are detailed in the Brandenburg BFC Demolition Plan Waste Operations Manual – Section 2.0 Anticipated Waste Materials. If temporary on-site storage of Universal or Hazardous Waste is necessary, all containers must be clearly identified regarding contents and waste accumulation start date. Storage areas must have secondary containment, be clearly designated, and meet all other applicable regulatory requirements including signage.

10.3 Refrigerant Collection (Freon and other CFC's) and Disposal

Brandenburg shall be responsible for utilizing qualified personnel or Subcontractor to depressurize, evacuate, and collect all refrigerant gases, and oils including Freon and other CFC's where identified throughout the facility in appliances, fixtures, or process equipment. All collected materials shall be properly containerized and disposed in accordance with local, state, and federal regulations. All personnel performing the collection shall wear appropriate PPE where required by regulation and the Brandenburg H&S Plan.

10.4 Post-Remediation or Collection Inspection

Brandenburg's Project Monitor shall be responsible for inspecting all interior and exterior building areas to confirm the complete removal of all materials required to be removed prior to any building or structure demolition activity that may impact them.

Section 11. Mercury Materials Removal/Spill Cleanup Work Plan

General Mercury Information

Mercury is a shiny, silver-white metal that exists as a liquid at room temperature. It is highly toxic, and readily vaporizes at or near 55°F. Mercury bio-accumulates in humans, animals and the environment.

It has a very high level of electrical conductivity and is often used in batteries, rectifiers, oscillators, power control switches and vapor lamps. Mercury is not water-soluble, and vapor can accumulate in wall spaces, attics, and depressions.

Mercury Exposure Hazards and Personnel Protection

The central nervous system is very sensitive to mercury vapor. Chronic exposure is characterized by behavior changes, weakness, fatigue, weight loss, gastro-intestinal dysfunction, tremors in fingers, eyelids and lips, memory loss, insomnia and depression. Very high exposures to mercury vapor can cause acute poisoning and/or death. Symptoms usually begin with cough, chest tightness, difficulty breathing and upset stomach. Acute inhalation of mercury vapor may result in chills, nausea and general malaise, tightness in the chest, chest pain, difficulty breathing, cough, kidney damage, stomatitis, gingivitis, salivation, diarrhea and death. Mercury is considered a poison and the routes of exposure include inhalation, ingestion and absorption through the skin and mucus membranes. The most common route of exposure for elemental mercury is inhalation. The most common route for exposure for organic mercury is ingestion. Mercury has a delayed burning sensation to the skin and eye of several minutes up to several hours.

Brandenburg shall be responsible for compliance with the OSHA 29 CFR 1926 & 1910 Regulations. It shall be the sole responsibility of Brandenburg for compliance with all applicable OSHA Regulations pertaining to the safety and health of their employees for the work under this Contract.

- OSHA PEL Eight-hour time weighted average = 0.10 mg/m³, TWA (as mercury vapor)
- OSHA Ceiling Limit = 0.1 mg/m³ (as mercury vapor), currently enforced as an 8-hr. TWA.

The National Institute for Occupational Safety and Health (NIOSH) has established a recommended exposure limit (REL) of 0.05 mg/m³ as mercury vapor over a 10-hr. work day. Although not required for worker safety, this REL is included for reference as a conservative benchmark.

Background: Mercury Use and Assessment Results BFC

It has been determined that mercury-containing fixtures of various types are present at the BFC site. The BFC DCCR and Brandenburg's Environment Assessment reports identified 67,459 fluorescent light bulbs, 3,978 high intensity mercury vapor lights, and 211 thermostats, gauges and various switches, all of which contain either elemental mercury or mercury vapor. No other locations or materials were identified as containing mercury at concentrations requiring abatement or remediation prior to building demolition. Work under this Contract includes complete demolition of the facility and all interior components.

Project Execution

11.1 Engineering Controls – Mercury Products Packaging (Spills Cleanup)

Mercury light bulbs, mercury switches and other items such as HID bulbs will be removed from the fixtures intact for recycling, and placed into DOT specification shipping containers designed for this purpose, labeled with appropriate DOT and EPA labels. The hazard description of the materials will be Mercury contained in manufactured articles class 8, UN2809, PGIII. These items will be removed and placed in appropriate packaging at temporary staging areas in building interior locations determined by the demolition contractor. We anticipate that these temporary staging areas may be centrally located in large areas where fixtures are being collected, or may be located on mobile carts and moved between smaller areas. Removal shall take place in accordance with the State of Missouri's Rules of the Department of Natural Resources Division 25 – Hazardous Waste Management Commission Chapter 16 -Universal Waste regulations.

Each centralized temporary staging area will be underlain by 6-mil poly sheeting in case of accidental breakage of a mercury-containing item. For those applications where small mobile carts are used to transport the cardboard box storage containers in smaller areas for fixture collection, poly sheeting is not necessary beneath the mobile carts.

Workers involved in the removal, transport and temporary storage of mercury-containing fixtures will wear appropriate personal protective equipment (PPE) as described in Brandenburg's Site-Specific HASP and in accordance with OSHA regulations. When approved cardboard storage containers are full, they will be transported to the central waste storage and staging area for final packaging and recycling, as described in Brandenburg's Waste Management Plan. Brandenburg shall collect intact, and recycle all mercury-containing fixtures collected during the demolition process at off-site recycling locations. It is not anticipated that these mercury-containing fixtures will require special accommodations other than careful removal and handling, as the mercury is completely contained inside the fixtures. However, if breakage of a fixture occurs, mercury may be released to the environment. The following procedures are to be used **ONLY** in the case of a mercury release due to fixture breakage. Each temporary collection area and each mobile cart shall have an emergency mercury spill kit.

This guidance applies to mercury spills of less than one tablespoon. A typical broken household thermometer contains approximately 1 gram, thermostats approximately 3 grams, and a compact fluorescent bulb approximately 5 milligrams. One tablespoon (15 mg) of mercury weighs about a half of a pound. Spills of one pound (two tablespoons) or more must be reported to the National Response Center at 1-800-424-8802 and the Missouri Department of Natural Resources 24-hour Environmental Emergency Response hotline at 573-634-2436 immediately.

Brandenburg will be required to comply with all federal, state, and local regulations pertaining to mercury abatement or cleanup and health and safety regulations.

11.2 Mercury Spill Remediation Process

Procedure In the event of Breakage or a Spill: Brandenburg shall evacuate the spill area immediately and contact Brandenburg's on-site Safety Manager. Ensure that worker's shoes, clothing and other items do not have any mercury on them before they are allowed to leave the area. Restrict entry to the area to only those necessary to clean up the spill. Isolate the spill area by creating a Regulated Area. The affected room should be isolated from other rooms in the building by closing interior doors leading to other inside areas. Open exterior doors and windows for ventilation if possible. Use fans to circulate the air in the spill area before, during and after cleanup.

The HVAC, and any other circulation systems that could circulate air from the spill area to other parts of the building, should be turned off. Mercury vaporizes at room temperature and is readily absorbed through the lungs. These vapors are odorless and colorless.

Prevent the mercury from spreading onto sloping or porous surfaces. Do not allow mercury near drains, cracks or crevices. Leave the room to ventilate for at least 15 minutes before starting cleanup procedures.

Utilize commercially available mercury spill kit. Spill kit should include at a minimum:

- eye dropper or syringe without needle
- safety glasses or goggles
- rubber, latex or nitrile gloves
- small plastic container with lid (like a 35-mm film canister)
- slightly larger plastic container with lid
- flashlight or high intensity lamp
- index cards or rubber squeegee
- small plastic dustpan

- masking tape, scotch tape or duct tape
- zip-top plastic bags
- larger sealable plastic containers or bags
- powdered zinc
- paper towels
- plastic bucket or tray
- strong plastic trash bags (2-6 mils thick)

All workers within the Regulated Area shall wear appropriate protective clothing, including disposal nitrile gloves, Tyvek body covering and booties. If mercury came in contact with exposed skin, immediately wash exposed areas with warm water and mild detergent.

Perform air monitoring with a mercury vapor direct reading instrument. If instrument indicates a concentration in air of 0.1 mg/m³, a half-face respirator with mercury vapor canisters and safety glasses/goggles should be worn.

Establish contamination zone using sandwich boards, cones or other stanchions and caution tape or survey flagging. Zone should extend beyond area of known spill (minimum of 20') to prevent accidental exposure to workers.

While minimizing contact with the spill area, pick up any large pieces of glass from the broken bulb or mercury-containing item and place them on a paper towel. Carefully fold the paper towel around the broken glass and put it in a sealable plastic disposal container or bag. Put the used paper towels in the sealable container. Single-use tools used to clean up the spill should be placed in the disposal container. Label the container as "Hazardous Waste - Mercury". Prior to disposal, all containers shall be labeled in accordance with applicable regulations. Multi-use tools that came in contact with the mercury should be thoroughly cleaned with an anionic (alkaline) detergent, and dried. Unused tools and cleaned multi-use tools may be returned to spill kit.

Place the gloves and disposable clothing in disposal container for disposal. Any clothing or shoes that came in direct contact with the mercury should be placed in the disposal container. Clothing and shoes that did not come into direct contact with the mercury should be placed outdoors to air out. Once thoroughly aired out, the clothing can be laundered as normal and the shoes wiped off with damp paper towels.

Brandenburg's Project Monitor shall monitor the spill area for mercury vapor levels in the affected room with a direct reading mercury vapor meter. If mercury is detected, re-clean the impacted area and repeat air monitoring until mercury vapor concentrations return to a safe level. Special mercury vacuums may be used. Do not use a standard vacuum cleaner.

Procedure for Liquid Spills on Hard Surfaces

If the spill occurred on a hard surface, such as a metal cart or non-carpeted concrete floor, the mercury probably shattered into tiny beads and spread in many directions. Determine the extent of the spill. Hold a flashlight at an angle to the surface to determine the extent of the spill. The beads will reflect light from the flashlight. Check a large area around the spill and pay special attention to surface cracks, crevices and other hard to reach areas. Gather up all visible mercury utilizing appropriate PPE and spill kit tools.

Use an index card or rubber squeegee to gather the mercury beads together. Start at the outer edges of the spill and push all of the material toward the center of the spill area. Scoop the mercury up using the index card or squeegee and dustpan. Place the recovered mercury into the small plastic disposal container.

An eyedropper or syringe can be used to pick up any remaining mercury beads that are visible. Use the flashlight to locate remaining mercury beads and tilt the eyedropper or syringe at an angle to the surface to collect the mercury. Once all of the visible beads have been collected, put the recovered mercury into the small plastic container and seal the lid. Place the used eyedropper or syringe in a zip-top bag when finished.

If there are very tiny beads of mercury that can't be collected using these methods, Workers may wrap a piece of tape around a gloved finger, sticky side out, and collect the material by gently dabbing at the contaminated area. Place the used tape in the disposal container when finished.

Sprinkle the contaminated area with zinc powder moistened with water. Use enough to cover the area with a fine layer. Rub the powder into any surface cracks and crevices with a paper towel. Use the index card or squeegee to pick up the amalgamated mercury mixture and put it into the disposal container. Rub the area with additional paper towels until all residues are gone. Place the used paper towels and index card or squeegee in disposal container.

Zinc powder binds with mercury to form a safer amalgam and helps ensure recovery of as much mercury as possible. The powder can be obtained at many commercial safety equipment suppliers. Commercially available mercury spill powder containing sodium thiosulfate and finely powdered EDTA (ethylenediaminetetra acetic acid) may also be used. If using a commercial powder, follow the instructions provided on the container.

Check carefully for remaining mercury. Use the flashlight to check for any remaining mercury beads. Any fluids utilized for cleaning during the process shall be retained for appropriate disposal.

Liquid Spills on Carpeted Surfaces Cleanup Procedure

If the spill occurred on a carpeted surface, it is almost impossible to effectively pick up the mercury. Hold the flashlight at an angle to the surface to determine the extent of the spill. The beads will reflect light from the flashlight. Check a large area around the spill. Remove the contaminated carpet. Carefully cut out the contaminated section of carpet using a utility knife. Take care not to tilt or shake the carpet any more than necessary to minimize the spread of mercury. Gently place the contaminated carpet into sealable disposal container. If utilizing plastic bags, double wrap the bag in another bag for disposal. Label the outer bag "Hazardous Waste - Mercury. Label appropriately for disposal.

Check carefully for remaining mercury. Use the flashlight to check for any remaining mercury beads in the adjacent carpet and the bare sub-floor. If necessary, clean the sub-floor following the instructions for hard surfaces above utilizing tools from mercury spill kit.

11.3 Post-Decontamination Inspection and Verification Sampling

In the event that a mercury spill and subsequent cleanup occurs, the following post cleanup inspection and monitoring will be conducted to evaluate the success of the remedial action.

Once the cleanup had been conducted, ventilate the room outdoors using fans, keeping the interior doors to this room closed if possible. Ventilate for 24-48 hours. Brandenburg's Project Monitor will then conduct air monitoring with a direct reading mercury vapor instrument. If mercury levels in air are 0.1 mg/m³ or higher, repeat all cleaning steps. All work related to mercury-containing items and emergency spill procedures will follow requirements detailed in the Brandenburg Site-specific Health and Safety Plan. Safety requirements specific to mercury include compliance with the OSHA Permissible Exposure Limit (PEL) concentrations.

All waste generated during this process shall be properly packaged, and labeled for disposal as hazardous waste. All materials used for the abatement process shall be properly removed.

Section 12. Hazardous Waste Sludge Removal Work Plan

Testing of sludge located in Plating/Etching Pits #1 and #2 in Building #1 – Manufacturing building identified lead at potentially hazardous concentrations. The following discussion presents safety information regarding lead and outlines details of sludge management procedures.

General Sludge (Lead-Contaminated) Information

Pure lead (Pb) is a heavy metal at room temperature and pressure. A basic chemical element, it can combine with various other substances to form numerous lead compounds. Lead can damage the central nervous system, cardiovascular system, reproductive system, hematological system, and kidneys. When absorbed into the body in high enough doses, lead can be toxic.

Sludge Exposure Hazards and Personnel Protection

The hazards associated with lead are primarily related to the inhalation or ingestion of lead, lead vapors or lead dust. Irritations have also been noted when exposed to the skin or eyes. Concerns during the remediation of this sludge material would primarily be potential for exposure to dust via inhalation or through contact with the skin or eyes.

Brandenburg shall be responsible for compliance with the OSHA 29 CFR 1926 & 1910 Regulations. It shall be the sole responsibility of Brandenburg for compliance with all applicable OSHA Lead in Construction Regulations pertaining to the safety and health of their employees for the work under this Contract.

OSHA has defined the following exposure levels:

- IDLH -100 mg/m³ (as Pb)
- OSHA PEL - TWA 0.050 mg/m³
- Short-term exposure guidelines: None developed.

Appropriate personal protection when performing lead-based sludge removal shall include appropriate respiratory protection, protective clothing and gloves. Skin: Wear appropriate personal protective clothing to prevent skin contact. Brandenburg shall be responsible for personnel monitoring as applicable in accordance with OSHA requirements and the site specific HASP.

Eyes: Wear appropriate eye protection to prevent eye contact.

The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc.

Work clothing that becomes wet or significantly contaminated should be removed and replaced.

Workers whose clothing may have become contaminated should change into uncontaminated clothing before leaving the work premises.

Background: Sludge Source at BFC

Residual Lead-Contaminated Sludge and water was identified during the Brandenburg Facility Environmental Assessment. The sludge was generated during a plating/etching manufacturing process. The sludge is located in Plating/Etching Pits #1 and #2 in Building #1 – Manufacturing building. The sludge was tested and analyzed and determined to fail TCLP-Lead testing criteria. The material is considered a hazardous waste and shall be removed, packaged, appropriately labeled and shipped for disposal as hazardous lead waste.

Project Execution

Removal of the residual contaminated sludge and water will be performed by Brandenburg in accordance with the following:

12.1 Engineering Controls - Regulated Area Setup

Brandenburg shall begin by creating a Regulated Area surrounding the Etching Pits where the hazardous sludge is located. Brandenburg shall define the regulated area a minimum of 30' away from the pit areas on all sides or the nearest wall utilizing appropriate barriers and barrier tape. Appropriate signage shall be utilized identifying the area as a Lead Hazard and restricting access to only qualified and authorized personnel. Brandenburg shall provide materials and supplies sufficient to perform the sludge removal activities. All equipment to be utilized including hand tools, pressure washers, Bobcat equipment, etc. shall be stationed inside the Regulated Area.

Entry and exit to the Regulated Area shall be monitored and only authorized abatement personnel, consultants, or regulators using appropriate PPE shall be allowed entry to the Work Area once negative pressure is established.

Should it be determined that the Sludge materials will be dry at any point during the removal process, then Brandenburg shall be required to seal all critical barriers in the area and obtain negative pressure within the work area following the negative pressure containment criteria and measurement criteria (0.02" water column) defined in Section 8.1.

Containers to be utilized for waste disposal shall be either appropriately lined or sealable containers (i.e. drums).

All personnel entering the Regulated Area shall be appropriately trained and wearing proper PPE including respiratory protection in accordance with the Brandenburg Site specific HASP.

12.2 Sludge Remediation Process

Brandenburg shall utilize either a Bobcat or similar equipment to perform the bulk removal and loading of sludge materials. Materials may be removed by personnel using shovels and hand tools.

Brandenburg may choose to utilize a Vacuum Truck to collect sludge materials. Should the use of a vacuum truck be utilized, appropriate cleaning and decontamination of the truck following use and emptying will be required.

Upon completion of the bulk removal of sludge, Brandenburg shall utilize pressure washers to thoroughly remove the remaining sludge materials from the walls and floor surfaces within the Etching Pits. All water utilized during the process shall be collected for proper disposal as hazardous lead waste.

All materials including disposable clothing or cleaning supplies shall be properly containerized, sealed, and labeled for disposal. All equipment exiting the Regulated Area shall be cleaned and inspected prior to being allowed outside of the Regulated Area.

Brandenburg shall be responsible for any required personnel monitoring in accordance with the Site specific HASP.

12.3 Post-Decontamination Inspection and Verification Sampling

Upon completion of the removal and cleaning process, the Project Monitor shall perform a final visual inspection of all surfaces to confirm the removal of all sludge materials. No analytical sampling will be required post-decontamination.

Section 13. Beryllium Areas Decontamination Work Plan

General Beryllium Information

The element beryllium is a grey metal that is stronger than steel and lighter than aluminum. Its physical properties of great strength-to-weight, high melting point, excellent thermal stability and conductivity, reflectivity, and transparency to X-rays make it an essential material in the aerospace, telecommunications, information technology, defense, medical, and nuclear industries. Beryllium is used industrially in three forms: as a pure metal, as beryllium oxide, and most commonly, as an alloy with copper, aluminum, magnesium, or nickel.

Beryllium Exposure Hazards and Personnel Protection

Exposure to beryllium via inhalation of airborne beryllium or skin contact with beryllium-containing dust, fume, mist, or solutions can cause health effects. Under OSHA's beryllium standards (29 CFR 1910.1024; 29 CFR 1915.1024; 29 CFR 1926.1024) employers must reduce exposures to airborne beryllium to or below the beryllium PELs through engineering controls to the extent feasible, supplemented by respirators where all feasible controls are not sufficient to reduce exposures to or below the PELs. In addition, PPE (e.g. gloves, shoe covers) is required when airborne exposures can exceed the PEL or STEL or there is the potential for skin exposure.

OSHA also requires employers provide workers with detailed training on the health effects of beryllium. Training must include, among other things: information on the health hazards associated with airborne exposure to and dermal contact with beryllium, including the signs and symptoms of Chronic Beryllium Disease (CBD); information on the purpose, proper selection, fitting, proper use, and limitations of personal protective clothing and equipment, including respirators; any protective measures workers can take to protect themselves for airborne or skin exposure to beryllium (including personal hygiene practices); and the purpose and description of the medical surveillance program and medical removal protection.

All work in Department 93 and 21 will follow requirements for personnel protection including respiratory protection, full body clothing, head cover, and proper glove selection detailed in the Brandenburg Site-specific Health and Safety Plan. Safety requirements specific to beryllium include compliance with the OSHA Permissible Exposure Limit (PEL) concentrations defined below:

- Eight-hour time weighted average = 0.002 mg/m³
- Ceiling Concentration = 0.005 mg/m³ (30 minutes), with a maximum peak of 0.025 mg/m³.
- The National Institute for Occupational Safety and Health (NIOSH) has established a recommended exposure limit (REL) of 0.0005 mg/m³. Although not required for worker safety, this REL is included for reference as a conservative benchmark.

Background: Beryllium Use and Assessment Results at BFC

The following background information was provided to Wells and is quoted directly from information acquired from NNSA relating to beryllium use at the BFC.

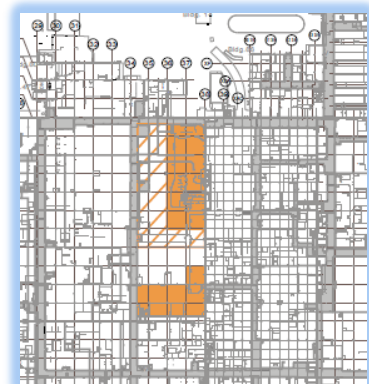
Hazardous material controls, established in compliance with Atomic Energy Commission (AEC), DOE, EPA, and OSHA regulations, are in place to ensure proper management of beryllium at the KCP.

Honeywell's involvement with beryllium at the Kansas City Plant is the result of using DOE/NNSA specified parts. The Kansas City Plant has never machined pure beryllium or used significant amounts of pure beryllium but it has been a continuous user of beryllium in the form of metallic alloys and ceramic compounds since the early 1960s.

Typically, the beryllium-copper alloys used at the Kansas City Plant contain 1.8% to 2% beryllium to add strength to the alloy. This alloy was machined into different products under wet (flood coolant) conditions to capture related dust and particles. However, after machining, the products often required manually performed dry abrasion operations, such as deburring, lapping, resurfacing and polishing, to remove blemishes on the machined surface. Although two different pure beryllium metal components have been

"Beryllium-oxide compounds were also used in development and production applications and were a component of many purchased items used in assemblies. Beryllium-oxide covered rollers were used in the manufacturing of filled-elastomer products. Some of this beryllium-oxide was abraded into the filled plastic material and was not hazardous as long as it remained within the plastic binder.

In April 2015, 138 samples were collected from the walls and floors of Department 93 area by Brandenburg. Sample locations are shown in Brandenburg "Department 93 South End Figure" included as Attachment B of this document for reference. Of these, 105 samples did not contain beryllium at concentrations above the Laboratory Reporting Limit of less than 0.1 mg/kg or lower. Among the 33 samples that contained detectable levels of beryllium, the highest concentration measured was 2.7 mg/kg. See the copy of Brandenburg Report "Table 4 – Summary of Beryllium Detections provided as Attachment C of this document for reference. Remaining contamination has been identified in Department 93 and Department 21 which are adjacent. The contamination in these areas was created through the machining of beryllium-containing alloys; as such, the contamination is in a sticky matrix from the coolants that were used and it is not likely to easily become airborne. The material was identified typically above the 8' height on the walls, ceilings, and other surfaces. The Figure 3 to the right depicts a general layout of the area to be cleaned (highlighted areas encompass areas where beryllium detections



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Applicable Regulations:

Brandenburg will be required to comply with all federal, state, and local regulations pertaining to beryllium abatement and health and safety regulations.

Review of regulatory requirements potentially applicable to beryllium management at the BFC identified the following:

- Code of Ordinances, City of Kansas City, Chapter 8 – Air Quality Control Code (Code of Gen. Ords. 1967, § 18.82; Ord. No. 41255, 6-9-72; Ord. No. 56726, 8-2-84)

Section 8.2 defines Beryllium compounds as a Hazardous Air Pollutant and sets a *De minimis* emission level of 0.0004 ton per year.
- Missouri Code of State Regulations (CSR) Title 10 - Department of Natural Resources, Division 10 - Air Conservation Commission, Chapter 6 - Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri

Also identifies Beryllium as a Hazardous Air Pollutant and establishes a Significant Monitoring Concentration for Beryllium of 0.01 micrograms/meter³ (ug/m³) as a 24-hour average. Part 10-6.060 describes requirements for Construction Permits for new emission sources. These requirements are not applicable because no air emission source is associated with the planned Beryllium Area decontamination activities.
- OSHA workplace safety requirements shall be detailed in the Site-specific Health and Safety Plan.

Project Execution

The intent of this Beryllium Decontamination Work Plan is to define the minimum requirements for the cleaning or decontamination of surfaces within the Department 21 and 93 Area of the BFC where beryllium surface contamination has been identified, and to provide information relating to the decontamination confirmation process. The Department 21 and 93 Area is uniquely suited for this decontamination procedure including limiting the potential for migration of contaminants and allowing for the simplified prep process and establishment of negative air within the Area due to the following:

- The Departments are clearly segregated within the facility by solid wall barriers that go from floor to ceiling with limited penetrations to adjacent areas.
- Primarily openings to adjacent areas are limited to doorways and minor openings where pipes, electrical system conduits or cable trays or HVAC systems penetrate the walls at height.
- No windows exist in the Area.
- The ability to collect water from the floors is made easier due to floor slopes and trenches that exist due to the machining processes previously performed within the Area.
- Most moveable objects and equipment have been previously removed from the Area.

Project execution specific to the Department 21 and 93 area includes the following activities.

13.1 Engineering Controls – Containment Area Setup

Brandenburg shall begin by performing an initial cleaning, and sealing all critical barriers within the containment area(s). Pre-Cleaning activities including vacuuming and wet wipe methods will be utilized to ensure that all surfaces are clean prior to the application of poly sheeting to critical barriers.

The contaminated Department 93 and 21 area will be isolated, entrances and exits sealed, and ventilation ducts blocked as needed to assure that liquids and airborne dust do not escape during the decontamination work. Brandenburg shall perform the cleaning and collection of materials located on the floors utilizing wet methods and by hand to allow for the sealing of all “low points” or areas to eliminate the ability for water and contaminants to migrate outside the area. This will allow for the development of a water collection and filtration system based at these low points to collect all water generated and utilized during the pressure-

washing cleaning process. Water shall be gathered at the low point water collection system(s) through the use of brooms or squeegees or shall be directly vacuumed where accumulating around the work area.

Brandenburg shall install a three-chambered decontamination unit equipped with a functioning shower to the containment structure(s). Brandenburg shall erect warning signs around the work area and at every point of potential entry from the outside. Signs must be in accordance with OSHA requirements. The warning signs shall be a bright color so that they will be easily noticeable. The size of the sign and the lettering shall conform to OSHA requirements.

Entry and exit to the containment shall be monitored and only authorized abatement personnel, consultants, or regulators using appropriate PPE shall be allowed entry to the Work Area once negative pressure is established.

All electrical cords and connections inside/outside the work area shall be equipped with GFCI's. Brandenburg shall lock-out all electrical power and HVAC systems, and disable any fire and/or intrusion alarms inside the work area.

For all negative pressure containment areas, a work area ventilation system shall be used to provide a minimum of four (4) air changes per hour. The work area shall be maintained at a negative pressure differential of 0.02 inches of water column. The pressure differential shall be monitored and recorded with a differential pressure meter equipped with a continuous recorder (e.g. strip chart) and a warning buzzer which will sound if the pressure differential drops below 0.02 inches of water. Make up air shall enter through the decontamination system. Exhaust air shall be HEPA filtered before discharging from the work area. The exhaust hoses of the HEPA units shall be exhausted through vents leading outside the building where possible. Brandenburg shall be responsible for determining the number of HEPA filtration units required for each containment area and shall maintain several back-up units to be utilized should units break down.

The regulated area will be ventilated to move contaminated air away from the breathing zone of employees toward a filtration or collection device equipped with a HEPA filter. The NPE will be inspected for breaches and smoke tested for leaks on a daily basis. The enclosure must be kept under negative pressure throughout the period of its use until successful clearance has been achieved.

13.2 Beryllium Remediation Procedure

Following successful setup of the negative pressure enclosure, all walls, ceilings, floor areas, and equipment (plumbing, HVAC, cable trays, etc.) will be cleaned utilizing a pressure washer system(s). All water utilized by Brandenburg shall be collected and disposed of properly as hazardous "Be" waste. No water will be allowed to be discharged from the Work Area. Brandenburg may incorporate an in-process filtration system to perform the collection and filtration of water during the cleanup process to be re-used in the process. This system if utilized will not allow for the discharge of any water utilized during the process, but will allow for a "loop-type" water use system. This method would allow for limiting the volume of water utilized and requiring disposal as hazardous waste.

Man-lifts or appropriate staging will be used to assure thorough cleaning of upper portions of the walls and will be utilized for visual inspection following the completion of the cleaning process. All wash water will be contained in the work area and disposed as hazardous waste. All floor areas will be mopped and wiped down to remove remaining sediments and residual liquids.

Brandenburg shall provide OSHA- and NESHAP-required labels for all plastic bags, drums, or other containers used to store and transport hazardous beryllium waste. Brandenburg shall provide any other signs, labels, warnings and posted instructions that are necessary to protect, inform and warn people of the hazard from beryllium exposure. These items shall be posted in a prominent and convenient place for the workers and potential visitors (i.e., CenterPoint representatives, regulatory agencies).

Brandenburg and its Subcontractors shall perform the Work in accordance with all applicable federal, state and local regulations, standards and codes.

13.3 Post-Decontamination Inspection and Verification Sampling

Following decontamination activities and the complete removal of properly packaged and labeled wastes generated throughout the process including water, the Project Monitor shall perform a thorough visual inspection of the containment area including all surfaces within the contained area. Should dust or debris or standing water be observed, the Abatement Contractor shall be required to clean all surfaces where materials are observed. Upon satisfactory completion of the visual inspection, the Project Monitor shall perform the required Air Clearance testing (see Air and Environmental Monitoring Plan in Section 16 and analysis services).

Following completion of area decontamination, verification samples will be collected. Verification sampling will be directed toward two objectives:

- Indoor air quality will be tested to assure that subsequent demolition activities can proceed without risks associated with exposure to airborne beryllium dust (See Section 16 – Air and Environmental Monitoring Plan); and
- The Department 93 and Department 21 walls and floors will be tested at or near (within two feet) the locations (approximately 12 locations) where the highest sample results (1.0 mg/kg or greater) were recorded during the initial investigations (See Attachment C and Section 16 - Air and Environmental Monitoring Plan) to confirm the cleaning process successfully reduced the existing Be levels and to assure these materials can be managed with other demolition debris without beryllium-related hazards.

Upon successful completion of the air clearance and surface sampling, Brandenburg shall perform the containment and critical barrier removal process. All waste generated during this process shall be properly packaged, and labeled for disposal as non-hazardous waste. All materials used for the abatement process shall be properly removed. No residual tape or poly shall remain.

The Project Monitor shall confirm the completion of the abatement in the Area by performing the final teardown inspection and documentation.

Following verification sampling, the Department 93 area will be cleared for inclusion in the demolition project without further need for special measures related to beryllium management. All walls and floor slabs within the Beryllium areas identified on the Diagram provided in Attachment B will be removed and disposed of off-site as C&D waste.

Section 14. PCB-Containing Materials Removal

General PCB Information

Polychlorinated biphenyls were extensively used as dielectric and coolant fluids in electrical apparatus, in heat transfer fluids, surface coatings, inks, adhesives, and in many products like caulking materials. Because of their longevity, PCBs are still widely in use, even though there has been significant intentional decline in their manufacture since the 1960s. Because of PCBs' environmental toxicity and classification as a persistent organic pollutant, PCB production was banned by the United States Congress in 1979. Many rivers, buildings of all types, and other public and private sites are contaminated with PCBs. PCBs may be released into the environment, for instance when waste that contains PCBs is incinerated or stored in landfills. Because of possible impacts on human health and the environment, the use and production of PCBs are now banned or severely restricted in many countries. All PCBs are man-made.



PCB Exposure Hazard and Personnel Protection

According to the U.S. Environmental Protection Agency, PCBs cause cancer in animals and are probable human carcinogens. The International Research Agency on Cancer, rendered PCBs as definite carcinogens in humans. PCBs can be measured in:

- **Biological samples**, such as human blood, milk, and fatty tissue, as well as in some foods such as animal tissues, fish and dairy products
- **Environmental samples**, such as in air, drinking water, soil, sediment, and solid waste.

Humans may be exposed to PCBs by inhaling contaminated air and ingesting contaminated water and food.

OSHA has set the PEL for PCBs as 0.5 mg/m³

The NIOSH REL is 0.001 mg/m³

Background: PCB Use and Assessment Results at BFC

From Brandenburg BFC Demolition Plan – Waste Operations Manual (2.3.2) “PCB-containing oils were historically used as a dielectric in high voltage transformers, and as a hydraulic fluid and lubricant in equipment that operated at high temperatures. BFC has a history of PCB use in their processes or process equipment. All PCB-containing transformers at the BFC have been emptied and removed from the facility prior to the Facility Environmental Assessment (FEA). Sampling performed during the FEA identified low concentrations of PCBs in concrete from areas where equipment maintenance was performed, which suggests some minor historical use of equipment with PCB-containing oils. The facility was in operation at the time of the FEA, and it was not possible to sample elevator systems. Because of the potential for historical PCB usage, used oil from elevator hydraulic systems and unidentified sources will be tested for PCBs (Section 3.0) unless documentation and labeling makes it clear there are no PCBs present.”

“There are a number of non-PCB transformers still in place at the BFC. A figure describing the locations of BFC transformers is included in the most current SPCC. Unless documentation makes it clear that the transformers are non-PCB transformers, the oil within these transformers will be tested for verification prior to disposal.”

Results of the FEA were used to identify areas within the BFC where management of PCBs is necessary. See Attachment D for reference to Diagrams from Brandenburg's FEA depicting PCB material locations. All floor slabs with PCB levels less than 50 mg/kg within the PCB areas identified on the Diagram

provided in Attachment D will be removed and disposed of off-site as non-hazardous C&D waste. In addition to the specific areas identified, light ballasts potentially containing PCBs may be encountered throughout the facility. Details regarding these areas and wastes include the following:

- **PCB light ballasts**
These materials will be removed from the fixture and staged within a waste temporary storage area pending off-site disposal.
- **PCB Remediation Waste**
PCB Remediation Waste is defined as any concrete, brick, or CMU block categorized as a waste stream with PCB concentration of 50 mg/kg or more. The following are areas confirmed by results of the Facility Environmental Assessment and in conjunction by information from NNSA that would be considered a part of this waste stream:
 - Department 26
East CMU Wall
Floor Slab and associated foundations
 - Eight separate GSA Transformer Rooms
 - Building 15, Select interior walls/floors that have been encapsulated
- **PCB-impacted Material**
PCB-impacted Material is defined as any concrete, brick, or CMU block with a PCB concentration >1 mg/kg but <50 mg/kg. This includes the following areas:
 - Department 26
Ceiling
West CMU wall
West Office
West aisle way
 - Old Wood Block Flooring and Associated Mastic, Multiple Areas
 - Department 37B
South CMU Wall and associated south bay
Basement CMU Wall
 - Building 15
Roof
Select interior walls/floors and building materials
 - NNSA Building 1 Roof
This material is subject to ongoing discussions regarding potential beneficial reuse as on-site fill material.

Project Execution

14.1 Engineering Controls – Regulated Areas

Brandenburg shall begin by creating a Regulated Area surrounding the area where PCB contaminated building materials are to be bulk-loaded. The Regulated Area shall be large enough to allow for the use of heavy equipment and dumpsters within the Area. Access to the Regulated Area shall be restricted to personnel involved with the remediation process, the Project Monitor, Owner's Representatives, or Regulators. Regulated Area shall be clearly marked with warning signs in accordance with regulatory requirements.

Brandenburg shall create a decontamination area designated for use by all workers exiting the Regulated Area.

14.2 PCB Remediation

The work will be conducted under a "Performance Based" clean-up as described in 40 CFR 761 requiring that all materials in contact with confirmed PCB bulk product waste will be presumed to contain PCBs greater than 50 mg/kg (ppm). All state requirements in 10 CSR 25-13.010 will also be addressed. All bulk

product waste including the identified areas of block and concrete and roofing shall be bulk loaded into waste containers using heavy equipment in preparation for off-site disposal. Waste transporters will be licensed by the state as required by 10 CSR 25-13.010(5).

PCB material removal workers:

1. Shall be certified in accordance with 40 hour OSHA HAZWOPER requirements;
2. Shall comply with OSHA personal air monitoring;
3. Shall wear the appropriate protective clothing and respirator throughout the project.

Workers shall wear respiratory protection and the proper protective clothing as required during the project. All workers will remove their outer layer of PPE on a double 6-mil poly changing station, and place the PPE in a disposal bag prior to entering the existing decontamination facility already established on site.

Decontamination: The following provides a description of measures to be taken to clean equipment and containers potentially containing PCB's.

Workers will don protective gear during the work as outlined in the HASP and will utilize worker decontamination measures as follows:

1. Thoroughly clean all loose dirt and other materials from the surface with a wire brush or abrasive if necessary.
2. Apply "Metal X/ Pipe X" PCB cleaning solutions to all metal surfaces by utilizing hand pump spray bottles.
3. Thoroughly scrub by hand using scrubbers and absorbent pads.

Place used scrubbers and absorbent pads in a DOT approved container for future disposal. Also place poly sheeting, sediment, PPE in drums. Label container with PCB marking and other appropriate DOT labels.

14.3 Post-Remediation Inspection

In conjunction with Brandenburg, the Project Monitor, and the Owner's Representative(s) shall perform a visual inspection for all areas where bulk product waste is generated to insure that all visible materials associated with the collection, loading, and disposal process have been removed completely from the area.

A testing program will be performed by Brandenburg's Project Monitor in accordance with the Air and Environmental Monitoring Program defined in Section 16.

Section 15. Demolition Activities

Should any work or material be required which is not detailed in these specifications either directly or indirectly but which is nevertheless necessary for the proper performance of the required services, the Brandenburg is to understand the same to be implied and required and shall perform all such work and furnish any such materials as fully as if they were particularly delineated or described therein.

Verifying the structural integrity of the building roofs and other building components (e.g., floor slabs, walls, floor grates, stairs, ladders, and equipment) is the sole responsibility of Brandenburg. Brandenburg shall design and implement measures (i.e., supports, catwalks, platforms and man-lifts) to provide safe working conditions in all areas of the property where access is necessary to remove ACMs and/or regulated-hazardous materials. Brandenburg shall design and implement measures (i.e., shoring, partial roof/wall removal) to provide safe working conditions in areas of the buildings where potential overhead structural safety risks may exist during the course of the project.

Site Preparation

15.1 Storm Water Management

The site will be under the provisions of a Construction Storm Water Pollution Prevention Plan, the provisions of the Missouri State Operating Permit currently in place, and the BFC Demolition Plan submitted prior to any land disturbance. General requirements of the Construction SWPPP are defined below:

- Areas for stockpiling of materials will be designated. Stockpiles will be protected from storm water and wind. They will be covered or stabilized.
- Brandenburg shall not hose down pavement unless storm water control is installed down-gradient.
- Brandenburg shall practice inlet storm water control. Do not load a storm water stream with Total Suspended Solids (TSS) if there is no effective control downstream or down-gradient.
- Brandenburg shall utilize concrete washout areas that are contained.
- Water from dewatering activity must be non-turbid or treated.
- A designated area for fueling, washing, and maintenance of vehicles must be identified and pollution mitigation techniques implemented.
- A designated area for handling and disposal of construction materials must be identified and pollution mitigation techniques implemented.
- A designated area for washing of applicators and containers for paint, concrete, etc. will be established and pollution mitigation techniques implemented.
- Spill control and containment equipment will be kept local to the activity.
- Site workers must be trained in the location and use/applicability of spill equipment.
- Brandenburg shall maintain on site a minimum of four drum spill kits and additional sorbent materials enough to contain potential spills enough to contain a large spill to the ground surface.
- All storm water controls will be maintained and remain effective throughout the entire course of the project.

15.2 Stormwater Pollution Prevention Plan (SWPPP)

A project specific General operating permit for land disturbance activities will be requested through the DNR ePermitting system (<http://dnr.mo.gov/env/wpp/epermit/help.htm>). The required Stormwater Pollution Prevention Plan (SWPPP) will be prepared by Olsson for demolition activities. The SWPPP will address requirements of Missouri Clean Water Law and the National Pollutant Discharge

Elimination System (NPDES). Brandenburg must implement the erosion prevention, and sedimentation and pollution control measures identified in the SWPPP and conduct demolition activities in accordance with the Missouri State Operating Permit.

Brandenburg will be responsible for providing a responsible person to perform inspections as required by the Permit. This responsible person will be a person knowledgeable in the principles and practices of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any stormwater controls selected to control the quality of discharges from the construction activity. Brandenburg will be responsible for ensuring compliance with the Permit by implementing the stormwater controls, erosion prevention and sediment control practices, and pollution prevention measures outlined in the SWPPP and any additional measures as necessary to ensure compliance with the Permit.

15.3 Soil and Sediment Erosion Control during Construction

Soil and Sediment Erosion Control shall be performed in accordance with the SWPPP prepared by Olsson.

All drainage structures on-site shall be protected to prevent the migration of sediments from the demolition operation into the drainage structure.

Areas for stockpiling of materials will be designated. Stockpiles will be protected from storm water and wind. They will be covered or stabilized in accordance with regulatory standards. Stockpiles will be maintained a minimum of 100' away from any waterway.

Stabilization practices will be implemented when no activity is planned on disturbed soil for 14 days.

15.4 Staging Areas

Brandenburg shall maintain staging areas at the property. All staging areas shall be maintained in a clean and orderly condition. Security and management of the equipment staging areas and stockpile areas are the responsibility of Brandenburg. Brandenburg shall provide a fueling/staging area for use when refueling site equipment or vehicles. The fuel staging area(s) shall have appropriate fire extinguishers and emergency response/spill cleanup equipment located and clearly marked in the immediate area of all fueling operations. Brandenburg shall follow all regulations relating to the dispensing of fuel and maintenance and inspection of fuel dispensing equipment. Fuel storage areas shall utilize some form of secondary containment.

15.5 Electrical

Brandenburg is responsible for connecting and conveying power to Contractor facilities utilizing licensed electricians. Brandenburg shall ensure safe installation of temporary power sources and equipment per applicable electrical code requirements. No electrical outlets will be allowed on the Site unless ground faulted. Any equipment with loose or faulty wiring will be required to be repaired or removed by Brandenburg from the Site. Brandenburg shall coordinate proper hookups of and payment for all power to be utilized for all Contractor facilities, lighting, heat, and abatement or demolition activities at the start of each phase of the project.

Brandenburg shall install their own electrical panels via a licensed tradesman, as well as supply a sufficient amount of GFCI-protected electrical power to meet the operating needs of the project, including the Consultants' needs.

Brandenburg shall make all necessary applications and arrangements for electrical energy for power and light necessary for the proper completion of the Work during its entire progress. Brandenburg shall provide for all temporary wiring, switches, connections, and meters. Brandenburg shall provide sufficient electric lighting so that all work may be done in a workmanlike manner when there is not sufficient daylight. Brandenburg shall be responsible for the proper connection of GFCI panels using qualified and licensed tradespersons for each of the power connections.

Demolition General Conditions

Brandenburg shall provide all field supervision, labor, tools of the trade, material, equipment, transportation and disposal, necessary to demolish tanks, vessels, piping, buildings, steel structures, and other structures and equipment.

The masonry and steel resulting from the demolition is to be managed to maximize its re-use for the site preparation and construction activities. All efforts to minimize the disposal at construction landfills shall be made. Brandenburg shall include accommodations for managing all recyclable materials including but not limited to: rigid plastic, tile, concrete, asphalt, and metals. Brandenburg shall be responsible for providing information regarding the final disposition of all site materials including recycling, re-use, and disposal.

Several locations at the site are below grade. Disturbed areas will be rough graded/free of depressions, safety hazards.

All demolition, transportation and disposal of generated wastes shall comply with all State, Federal regulations and OSHA Codes and/or other ordinances where such are applicable.

Brandenburg shall be responsible for providing gas-free certification of each above ground storage tank (AST) or vessel before demolition of the AST or vessel can begin.

Hazardous and non-hazardous materials may not have been drained or removed from tanks, vessels, and other equipment project areas. Brandenburg should be alert for any residual liquids/materials that may be encountered while performing demolition work (See 15.11 below).

Brandenburg shall obtain all necessary work permits and approvals where required.

Brandenburg shall provide all clothing, respirators, monitoring devices, boots and other personal protective and safety equipment to Subcontractor employees for personal protection as required by all Local, State and Federal regulatory agencies while executing the contract.

Brandenburg shall be responsible for the transportation and disposal of construction debris (rubble, wood, glass, plastic, brick, cinder block, and concrete) that will be generated during the demolition project. The disposal facility will be approved by CenterPoint.

Wood and/or combustible materials recovered from demolition activities are not to be burned on site.

Manifests for all materials sent to an approved landfill shall be prepared by Brandenburg and provided to CenterPoint for review and approval.

Brandenburg shall size all materials as necessary for transportation and disposal to approved disposal facilities.

15.6 Perimeter Site Protection Activities

Brandenburg shall perform all activities identified by regulation or by site specific plans to protect the site, structures, and personnel including but not limited to the installation of site fencing, silt fencing and hay bales, etc. It is Brandenburg's responsibility to fully comply with all site planning requirements and plans including the Storm Water Pollution Prevention Plans (SWPPP), Spill Protection, Control & Countermeasures Plan (SPCC), and these Specifications.

15.7 Utility Disconnects

Brandenburg shall secure all utility disconnects to perform dismantling work.

Temporary power and water connections and disconnects are the responsibility of Brandenburg.

A joint Brandenburg and CenterPoint inspection of the electrical distribution system shall be made at mobilization and prior to start of demolition activities for each building/area. This inspection will serve as the final determination of the scope of electrical dismantling activities in each area. At this point, control of the electrical distribution system will be transferred to Brandenburg. All Lock Out, Tag Out responsibilities will be the responsibility of Brandenburg.

The Demolition will require additional coordination with CenterPoint. Brandenburg personnel are to assure that all electrical lines and piping systems are de-energized and released for demolition. Brandenburg shall strictly conform to all safety requirements, demolition procedure requirements, and scheduling determinations, regarding circuits, systems, areas, or buildings, under their jurisdiction or control. Follow lock-out/tag-out procedures prior to work as required.

Brandenburg shall verify all utility disconnects prior to securing permits for the demolition.

Brandenburg shall coordinate with the City of Kansas City Fire Department and City Engineer for the removal of existing hydrants and Piping from around the site.

15.8 General Demolition Activities

Brandenburg shall be responsible for notifying "Missouri One Call" prior to any excavations, and shall verify conditions using site-specific procedures.

Buildings are adjacent to a residential area. Care shall be taken to minimize or eliminate demolition dust from the surrounding community. A water fog shall be employed to control dust unless a greater hazard exists from icing.

Structures shall be removed to the top of their respective foundations at the ground level. Raised foundations must be removed to grade.

Basement level floors (slabs) to be left in place shall be broken up by Brandenburg to allow for water drainage.

Crushed asphalt, brick, and concrete (ABC Rubble) may be used as backfill for basements and tunnel/vault areas and sump pits up to an elevation 1 foot below finished grade. Concrete shall be mechanically crushed to both 3" and 1 ½" minus and the rebar removed prior to placing as backfill. All building debris shall be removed from all excavations and basements prior to the start of placing backfill material.

Brandenburg shall be responsible for completely filling all sub-grade void areas including tunnels, chases, and lower level rooms prior to filling all below grade foundation areas.

Surfaces disturbed during demolition shall be left reasonably flat and passable using normal vehicles. Barricades shall be installed and maintained around the top of all open basement walls and other unprotected pits and sumps to leave the Site in a safe condition.

15.9 Dust Control

Care shall be taken to minimize or eliminate demolition dust and fugitive emissions from the surrounding community. A water fog shall be employed to control dust.

Dust suppression methods will be employed to minimize the migration of dust. During the demolition phase of the project, the following specialized dust control measures for demolition will be used.

1. Water suppression sprays and misting of potential dust creating situations to prevent spreading of airborne particulates.
2. Enclosure of areas with tarps and screening when necessary to prevent the migration of dust.
3. The use of Telescopic/Mobile Misters will be employed where necessary to control dust creating activities.
4. The use of DustBoss (or similar) stationary mister systems will be employed for activities where feasible.
5. The use of manned or unmanned fire hoses shall be employed to control dust during demolition activities. The use of man-lifts may be employed where feasible to elevate firehoses either manned or unmanned.

6. Water Truck(s) shall be utilized throughout the demolition process to maintain dust control across the site. The Site will be monitored throughout each work shift and adjustments to locations where watering occurs shall be made.

During earth-moving activities the following dust control practices will be used:

1. Watering Irrigation
2. Soil Stabilization
3. Wind Breaks

Stockpiled materials may be capped or covered to limit fugitive dust if necessary from the stockpile in a manner acceptable to the Owner.

15.10 Noise Control

Brandenburg shall use every effort and means possible to minimize or eliminate noise caused by his abatement and demolition operations. Noise control measures shall be provided which are necessary to limit noise measured at the property boundary lines. The maximum allowable noise is 85 dBA (LMAX) and 75 dBA (L10) or to all local, state, and federal limits, whichever is more stringent as measured at the property line.

Brandenburg shall provide working machinery, designed to operate with the least possible noise; engine-driven machinery, where permitted, shall be equipped with mufflers.

Reasonable efforts will be made to minimize the impact of noise resulting from construction activities or demolition activities. The following noise mitigation measures are planned:

1. Comply with Construction hours' limits.
2. Speed limits on and off site will be monitored.
3. Mufflers
4. Noisy equipment will be located away from sensitive receptors when possible.
5. Engine housing panels will be kept closed.
6. Background sensing backup beepers if working near the property fence line.

15.11 Process Equipment and Tanks Draining, Removal and Cleaning

Brandenburg shall identify the location, type and quantity of all aboveground piping scheduled for decontamination and removal at the asbestos abatement and demolition project areas.

Flame cutting and hot work is allowed for structural steel but must follow appropriate regulatory requirements. Hot work may be allowed on pipes and vessels, upon approval from CenterPoint, if determined to be "gas free" per direct reading instruments.

Brandenburg shall provide a sufficient number of hand-held fire extinguishers to meet the needs of this project in accordance with applicable regulations.

Brandenburg's employees and subcontractors must be cautioned that tanks, vessels, equipment and pipelines may contain hazardous, non-hazardous and/or flammable materials. Brandenburg employees and any associated subcontractors must be properly protected with appropriate head and body garments and other personal protective equipment (PPE) to protect against any residual materials remaining in pipes or vessels within the plant. Brandenburg shall be responsible for the hazard evaluation and the selection of appropriate PPE.

All motors and equipment including but not limited to those identified in the BFC Facility Environmental Assessment or in drawings previously provided to Brandenburg during Due Diligence activities are required to be drained and flushed from all oils, lubricants, or process liquids/gases. Tracking of oils included in specific drums or lab-packs will be required so that PCB sampling may be

performed of the drums prior to disposal. Should PCB oils be detected above 50 ppm, an evaluation of the equipment and flushing/cleaning will be required. This includes all elevator equipment. It should be noted that Brandenburg is responsible for the proper decommissioning including permits/notifications/inspections of all elevator equipment.

Brandenburg shall be responsible for piping gas-freeing, separation, disconnection, removal of oil, free-flowing product, liquid waste, sludge, and solid waste. Piping removal shall be performed in a way that prevents uncontrolled discharge of fluids (e.g., residual material, cleaning fluids, wastewater, and decontamination materials) and maximizes material/liquid recovery.

Any spills resulting from Contractor activities must be reported to CenterPoint immediately and shall be remediated by properly trained and, if required, certified workers.

All scrap will be cleaned, properly sized, and staged in the scrap area identified on the site plans. The goal is to recycle as much of the metal as possible, therefore, Brandenburg will be required to clean all piping/metal to meet recycling guidelines.

Brandenburg shall be responsible for containerization and staging and disposal of all residual liquids/materials, and decontamination fluids.

Brandenburg shall be responsible for transportation and disposal of all residual liquids/materials, and decontamination fluids that are generated during the cleaning process at a disposal facility whose information is to be submitted in advance to CenterPoint for approval prior to the start of the project. In addition, Brandenburg shall provide information relating to the intended "emergency spill-response" provider within twenty days prior to the start of on-site work.

15.12 Steel Tanks Demolition

Most identified tanks have been taken out of service and cleaned. For all tanks where residual material may remain in the tank and any process piping, etc. associated with the tank, all supporting infrastructure (fuel lines, fire protection system, steam lines, etc.) will require draining, cleaning, and removal. Exterior steel on tanks may be coated with lead-based or lead-containing paint. Brandenburg shall be responsible for exposing the bottoms of any tanks that are not raised from the ground or standing location for inspection to determine if vapor barrier/moisture protection was utilized under the tanks for asbestos testing.

15.13 Hot Work

Flame cutting and hot work are allowed for structural steel but must follow all regulatory required safe work permit process and if required, are to be coordinated with the City of Kansas City Fire Department. Hot work may be allowed on pipes and vessels, if determined to be "gas free" per direct reading instruments and performed in accordance with regulatory requirements.

A fire watch may be required for welding/burning activities. Additionally, adequate fire protection and spark containment is required for any welding/burning to protect adjacent areas.

15.14 Materials on Floor Slabs

In all areas where floor slabs are to remain in-place following the completion of demolition activities, all flooring materials (ceramic tile and adhesives, non-asbestos flooring materials and mastics, etc.) are required to be removed entirely and disposed of appropriately. All Floor slabs shall be left in a "clean" state to remain in place.

All "non-asbestos" vinyl flooring materials will be required to be removed as non-asbestos construction debris prior to any demolition of slabs from all floors.

15.15 Elevator Decommissioning

Brandenburg shall be responsible for the proper decommissioning of all elevators to include permitting, inspection, proper removal, packaging, and disposal of all fluids and regulated materials and the cleaning and decontaminating elevator pits (where applicable.). See the Brandenburg BFC Demolition Plan for details relating to elevators decommissioning and for details of elevator locations.

Waste Transportation and Disposal

Waste transportation and disposal shall be performed in accordance with the Brandenburg Waste Operations Manual and all applicable regulations.

Brandenburg will provide the name/location and certifications for proposed disposal facilities for debris and waste from the site for approval by CenterPoint. Brandenburg is responsible for contacting the intended waste disposal site to confirm the site's ability to accept materials in the volumes and duration of the intended project.

Brandenburg shall provide the names of their waste transporters for each disposal facility for CenterPoint's approval.

All waste containers must be in accordance with applicable regulatory requirements and accepted by all regulatory agencies.

All roll-off containers used for disposal of asbestos waste will be double lined with approved poly liners and labeled according to all regulations.

Demolition debris and any other debris resulting from the Brandenburg's work, unless specified otherwise, shall become the responsibility of Brandenburg for proper removal from the site to designated disposal or recycling destination, with appropriate transportation and disposal arrangements as specified herein.

Brandenburg will be responsible for properly sizing the waste materials to meet the requirements of the disposal facilities.

Materials Re-Use ABC Rubble

Brandenburg shall perform the on-site crushing down to 3" minus and 1 ½" minus in size for all acceptable brick, block, and concrete materials at the site. Crushed materials shall be temporarily stockpiled until Brandenburg can perform the spreading or use of these materials for fill on site. Brandenburg shall conform to all regulatory requirements for reuse including identifying specific areas where materials are being placed, and cover materials requirements. Specific attention shall be made to the depth to groundwater and requirements for placement of coated materials for reuse above groundwater at the Site.

Crushed cementitious demolition debris not containing Regulated Materials shall be placed in the designated on-site crushed material storage area or in the designated Construction Staging Area. These Materials to be left on Site will be reduced to a size sufficient to prevent voids and settling.

Decontamination/Demobilization

All equipment, materials and personnel shall be removed from the site following completion of the activities included in the work of the BFC Demolition Contract Documents.

Non-disposable equipment that has been used during implementation of the Work and has come in contact with impacted materials, if encountered, shall be cleaned in accordance with these Work Plans before being removed from the site.

Following completion of the equipment cleaning activities, Brandenburg shall remove the temporary staging area(s), decontamination area(s) and other temporary areas constructed to support on-site activities and shall dispose of all materials as described in the contract documents.

A final visual inspection and sign-off shall be implemented by the Owner and Owner's Representative(s) to insure the complete cleanup and demobilization from the site by Brandenburg and its' subcontractors.

Section 16. Air and Environmental Monitoring Plan

This section is intended to supplement the described air and environmental monitoring described in the Brandenburg BFC Demolition Plan including the Perimeter Air Monitoring Plan and carried out by others including Brandenburg's Project Monitor and CenterPoint Representatives or Consultant(s) to verify that the adjacent areas and buildings beyond the work area and the outside environment remain uncontaminated or undisturbed.

General Perimeter Air Monitoring Information

Brandenburg's Perimeter Air Monitoring Plan defines the perimeter air monitoring program and denotes where sampling stations and weather monitoring stations have been designated at the perimeter of the site. In addition, the Monitoring Plan describes the monitoring methods and identifies Action Levels for each of the contaminants being monitored. It is the intent that perimeter monitoring of specific contaminants of concern shall take place during all periods/days when the contaminant is being disturbed or remediated on the exterior of the buildings.

Monitoring shall be performed daily throughout the project and sampling will include locations upwind and downwind of the remediation or demolition activities. The following are the listed COC's intended to be monitored at the perimeter of the Site:

- Particulate Dust (PM-10)
- Total Volatile Organic Compounds (VOCs)
- Asbestos
- Metals – (Lead, Beryllium, and Chromium)
- Polychlorinated Biphenyls (PCBs)
- Trichloroethylene (TCE)

Should an Action Level be exceeded, Brandenburg will stop the activity being performed so that an evaluation of engineering controls for that activity may be performed and adjustments made to reduce or eliminate the elevated measurements.

This section also sets forth analytical levels both inside and outside the work area as action levels, defines clearance criteria for the air, surfaces or specific contaminants, and describes the action required by Brandenburg and its' Subcontractors if an action level is met or exceeded. Further, this Section also describes testing that may be required in addition to monitoring and analysis detailed in the Brandenburg BFC Demolition Plan and Perimeter Air Monitoring Plan.

Personal Air monitoring of Brandenburg's (or subcontractor's) employees as required by OSHA will be the responsibility of Brandenburg.

The purpose of the air and environmental monitoring is to detect faults in the work area isolation or engineering controls such as:

- Contamination of the building outside of the work area with airborne asbestos fibers, dust, or other COC's;
- Failure of filtration or rupture in the differential pressure systems being utilized; or
- Contamination of the air or environment outside the building envelope with airborne asbestos fibers or other contaminants of concern or contaminants being abated.

Should any of the above occur, immediately cease abatement or remediation activities until the fault has been corrected. Do not recommence work until authorized by the Owner's Representative.

The following Table provides the associated analytical levels to be utilized throughout the BFC abatement, remediation, and demolition process. Levels identified will be in accordance with applicable regulatory requirements or associated recommendations or guidelines for the hazard or COC. Materials identified for abatement actions include: asbestos, beryllium, lead-based paint, lead-containing sludge materials, mercury, and PCBs.

Table 4 – Analytical Methods – Regulatory Limits/Guidelines				
Asbestos				
Sample Purpose (Personnel, Ambient, Clearance)	Title	Analytical Method	Level or Limit	Notes
Personnel	PEL	NIOSH Method 7400 PCM	0.1 f/cc	Contractor responsible for respiratory protection evaluation and appropriate levels of protection
Personnel	STEL	NIOSH Method 7400 PCM	1.0 f/cc	Contractor responsible for respiratory protection evaluation and appropriate levels of protection
Ambient Clearance	Clearance	NIOSH Method 7400 PCM	<0.01 f/cc	Clearance criteria to be utilized during background monitoring on daily exterior NPE samples for corrective actions
Lead				
Personnel	IDLH	NIOSH 7082	100 mg/m ³	
Personnel	PEL 8-hr. TWA	NIOSH 7082	0.050 mg/m ³	
Mercury				
Personnel	PEL 8-hr. TWA	NIOSH Method 6009	0.10 mg/m ³	As mercury vapor
Personnel	Ceiling Concentration 8-hr. TWA	NIOSH Method 6009	0.1 mg/m ³	As mercury vapor
Personnel	NIOSH REL	NIOSH Method 6009	0.05 mg/m ³	The National Institute for Occupational Safety and Health (NIOSH) has established a recommended exposure limit (REL). Although not required for worker safety, this REL is included for reference as a conservative benchmark.

Beryllium				
Personnel	PEL 8-hr. TWA	NIOSH Method 7102 or 7300	0.002 mg/m ³	
Personnel	STEL	NIOSH Method 7102 or 7300	0.005 mg/m ³ for 30-min. 0.025 mg/m ³ Max. peak	
Personnel	REL	NIOSH Method 7102 or 7300	0.0005 mg/m ³	The National Institute for Occupational Safety and Health (NIOSH) has established a recommended exposure limit (REL) of 0.0005 mg/m ³ . Although not required for worker safety, this REL is included for reference as a conservative benchmark.
Clearance	Clearance	EPA Method 6010	Below current data	Clearance will be considered successful upon achieving sample results with levels below results from original sampling locations where levels exceeded 1.0
PCB's				
Backgrounds	NIOSH REL	EPA TO-10A	0.001 mg/m ³	During Remediation at Site Perimeter
Personnel	PEL	NIOSH Method 5503	0.5 mg/m ³	

General Asbestos Monitoring Information

Brandenburg's Project Monitor or Air Sampling Technician will be conducting air monitoring throughout the course of the project.

Asbestos Airborne Fiber Counts: Brandenburg's abatement Project Monitor will monitor the baseline fiber counts or those prevalent in all NPE areas before work begins, in-process work area sampling, and post-abatement work area clearance sampling using the National Institute for Occupational Safety & Health (NIOSH) Method 7400 analytical procedure.

Work Area Airborne Fiber Count: Brandenburg's Project Monitor will monitor airborne fiber counts in the Work Area and in adjacent locations outside the Work Area. The purpose of this air monitoring will be to detect airborne asbestos concentrations which may challenge the ability of the Work Area isolation procedures to protect the balance of the building or outside of the building from contamination by airborne fibers and to determine if conditions exist that create elevated airborne fiber counts outside the NPE.

16.1 Stop Action Levels – Personnel Monitoring:

Stop Action Levels Inside Work Area: Maintain an average airborne count in the work area of less than the Stop Action Level given below for the type of respiratory protection in use.

<i>Table 5. Stop Action Levels – Respiratory Protection</i>			
Stop Action Level f/cc	Immediate Stop Level f/cc	Minimum Respirator Required	Minimum Protection Factor
0.1	1.0	Half Face	10
0.5	5.0	Full Face	50
1.0	10.0	PAPR/Supplied Air	100

If airborne fiber counts rise above this figure for any sample taken, revise work procedures to lower fiber counts. If the Time Weighted Average (TWA) fiber count for any work shift or 8-hour period exceeds the Stop Action Level, stop all work except corrective action, and leave pressure differential and air circulation system in operation immediately upon notification by the Project Monitor. Evaluate personnel work procedures, engineering controls, and water usage for wetting, or misting air inside the containment. After correcting cause of high fiber levels, do not recommence work until authorized, in writing, by Owner's Representative.

16.2 Immediate Stop Action Level

If airborne fiber counts inside or outside the NPE exceed Immediate Stop Level given above for type of respiratory protection in use for any period of time, cease all abatement work except corrective action. Notify Owner's Representative. Do not recommence abatement work until fiber counts fall below Stop Action Level given above for the type of respiratory protection in use. After correcting cause of high fiber levels, do not recommence work until authorized, in writing, by the Project Monitor or Owner's Representative.

Daily During Work:

From the start of work building temporary enclosures, until the area is ready for clearance air monitoring, the Project Monitor shall collect air samples on a daily basis. Numbers of samples will be at the licensed Project Monitors discretion, however, at a minimum two samples shall be collected in areas outside and adjacent to the containment area or NPE, one of which shall be collected near the entrance to the decontamination unit.

If airborne fiber counts exceed allowed limits, additional samples will be taken as necessary to monitor fiber levels.

Stop Action Levels - Outside Work Area: If any air sample taken outside of the Work Area exceeds the baseline established by pre-work, background air samples, immediately and automatically stop all work associated with the abatement action except corrective action. The Project Monitor will determine if possible the source of the high reading and so notify the Contractor in writing.

If the high reading was the result of a failure of Work Area isolation measures initiate the following actions:

- Immediately erect new critical barriers
- Temporary Enclosures to isolate the affected area from other areas.
- Erect Critical Barriers at the next existing structural isolation of the involved space (e.g. wall, ceiling, and floor).
- Decontaminate the affected area.
- Require that respiratory protection be worn in affected area until area is cleared for occupancy.
- If the fiber loading appears to be the result of other causes initiate corrective action as determined by Brandenburg's Project Monitor.

- To determine if the elevated airborne fiber counts encountered during abatement operations within a full containment NPE have been reduced to an acceptable level, Brandenburg's Project Monitor will sample and analyze air in accordance with the NIOSH Method 7400 and Phase Contrast Microscopy (PCM).

16.3 Work Area Clearance Asbestos.

Leave Critical Barriers in place until completion of work and insure that the operation of the pressure differential system in the Work Area results in a flow of air from the balance of the building into the affected area.

After completion of Certification of Visual Inspection by the Project Monitor in the Work Area, remove critical barriers separating the work area from the affected area. Final air samples will be taken within the entire area by Brandenburg's Project Monitor.

Aggressive Sampling: All clearance air samples will be taken using aggressive sampling techniques as follows:

Before sampling pumps are started, the exhaust from forced air equipment (leaf blower with at least 1 horsepower electric motor) will be swept against all walls, ceilings, floors, ledges and other surfaces in the room. This procedure will be continued for five minutes per 1,000 square feet of floor.

One 20 inch diameter fan per 10,000 cubic feet of room volume will be operated at low speed for the entire period of sample collection. The fans will be shut off after sampling pumps are shut off.

Air samples will be collected in areas subject to normal air circulation away from obstructed locations, windows, doors or vents.

Work area shall be completely dry before air sampling begins.

Final air clearance samples in full containment areas will be conducted in the following manner: The full containment abatement areas shall be cleared by PCM after the timeframe required by regulation and as detailed in the technical specification.

If the PCM samples fail clearance criteria, Brandenburg will be required to re-clean the area, and then a new set of samples will be collected and analyzed using the same procedures. This process will be repeated until successful clearance analytical results have been achieved. Sample reporting of clearance results of this type will be within 24 hours. Final teardown of the containment may be performed upon receipt of notice of successful analytical results.

Sample Numbers and Volumes:

General: The number and volume of air samples taken by Brandenburg's Project Monitor will be in accordance with the analytical methods. The number of samples taken per area may vary according to the size of the area. The number of samples collected will be decided according to the professional judgment of the Project Monitor and in accordance with the Brandenburg BFC Demolition Plan and regulatory requirements.

Before Start of Work:

Brandenburg's Project Monitor will secure background Air Samples to establish a base-line before start of work.

Personal Air Monitoring of Contractor's Personnel:

Brandenburg shall conduct air monitoring and laboratory testing required by OSHA 1926.1101 on a daily basis during asbestos or other COC removal activities. Brandenburg shall be required to submit all personnel air monitoring results to the Owner's representative on a weekly basis by the close of business on Fridays.

Dust and Particulate Monitoring

In accordance with regulatory requirements, it should be noted that Brandenburg's Project Monitor will be instituting a Dust and Particulate Monitoring Program on-site and at locations adjacent to the site. Should recorded levels during abatement/demolition activities reach exceedance levels detailed in the Brandenburg BFC Demolition Plan, Brandenburg may be required to discontinue operations to initiate mitigation procedures following the evaluation of current site activities and conditions which may be contributing to the related exceedance.

Noise Monitoring

It should be noted that Brandenburg's Project Monitor will be instituting a Noise Monitoring Program as detailed in the Brandenburg BFC Demolition Plan, on-site at perimeter locations detailed in the plan. Should noise levels during abatement/demolition activities reach exceedance levels (See 15.10, Noise Control), the Contractor may be required to discontinue operations to initiate mitigation procedures following the evaluation of current site activities and conditions which may be contributing to the noise related exceedance.

Vibration Monitoring

In an effort to limit disturbances/damages to adjacent properties/neighbors to the site, It should be noted that either the Owner's Representative or Consultant will be instituting a Vibration Monitoring Program on-site and at locations at the perimeter and adjacent to the site. Should vibration levels during abatement/demolition activities reach above background levels recorded prior to site activities, the Contractor may be required to discontinue operations to initiate mitigation procedures following the evaluation of current site activities and conditions which may be contributing to the vibration exceedance.

Section 17. Submittals Summary

Pre-Construction Submittals

- Brandenburg shall submit within ten days prior to the start of on-site work the names, qualifications, certifications of designated on-site abatement and demolition supervisors responsible for on-site supervision of abatement and demolition work.
- Brandenburg shall within 10 days prior to project startup provide the credentials for the designated Site Supervisor(s) and the designated Site Safety Officer (SSO).
- Brandenburg shall submit within twenty days prior to the start of on-site demolition activities the Project Specific Demolition Sequencing Plan and Schedule for review and approval.
- Within 10 days prior to the start of on-site activities Brandenburg shall submit:
 1. Copies of all notifications to all local, state, and federal agencies to the Owner's Representative(s) for review.
 2. Site Specific Health & Safety Plan
 3. Submit qualifications, certifications of all equipment operators.
 4. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports
 5. Notices: Submit notices required by federal, state and local regulations together with proof of timely transmittal to agency requiring the notice.
 6. Permits: Submit copies of current valid permits required by state and local regulations.
 7. Licenses: Submit copies of all State and local licenses and permits necessary to carry out the work of this contract.
 8. Brandenburg shall provide SDS (Safety Data Sheets) for all chemicals brought on-site and are governed under current and pending OSHA Hazard Communication Standards.
 9. Brandenburg shall provide the Project Specific Demolition Sequencing Work Plan which includes a schedule, manpower projections, hours-of-operation.
 10. Submit Respiratory Usage Plan/Negative Exposure Assessment.
 11. Submit list of emergency phone contacts, including names and titles of personnel.
 12. Submit a list of Subcontractors and their licenses/credentials with intended purpose or project specific activities. Include required Insurance certificates naming CenterPoint as Additional Insured's.

In-Process Project Submittals

During the course of the Project Brandenburg shall be required to Submit from time to time or as defined below the following:

- Critical Lifts Plan: For any required rigging or lifts.
- Personnel Monitoring Results on a Weekly Basis.
- Weekly Status Reports
- Copies of all Waste Manifests or Disposal Records or Waste Shipment Records on a Weekly Basis.

Post-Completion Project Submittals

- Within Ninety Days of completion of all on-site project work, Brandenburg shall provide a Final Close-Out Report to include: documents of all work activities, photographs, logs, records, weigh

tickets, Hazardous and non-Hazardous waste manifests or Waste Shipment Records, and any personnel sampling results, records of personnel licenses, medical monitoring and training information.

Section 18. References

- Description of Current Conditions Report (DCCR) for the Bannister Federal Complex, National Nuclear Security Administration. 2013
- Bannister Federal Complex Facility Environmental Assessment, Brandenburg Industrial Service Company
- Brandenburg BFC Demolition Plan - 2016
- NIOSH Pocket Guide to Chemical Hazards: Beryllium & beryllium compounds (as Be)
- <https://www.cdc.gov/niosh/npg/npgd0054.html>
- Toxicological Profile for Beryllium, U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, September 2002 (ATSDR 2002).
- URS, 2015. Baseline Risk Assessment, Bannister Federal Complex. URS Corporation, December 2015
- Apex, 2016. Baseline Air Monitoring, Bannister Federal Complex. Apex Companies, LLC, March 2016.
- ToxStrategies, 2016. Technical Memorandum: Proposed Cleanup Levels for On-Site Areas of the Bannister Federal Complex. ToxStrategies, Inc. November, 2016.
- IL1561 CenterPoint NNSA Demolition HASP, 2016
- City of Kansas City, MO - Code of Ordinances
- EPA, National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61
- OSHA 29 CFR 1926 & 1910 Regulations
- 40 CFR 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
- 49 CFR, Department of Transportation Hazardous Materials Regulations

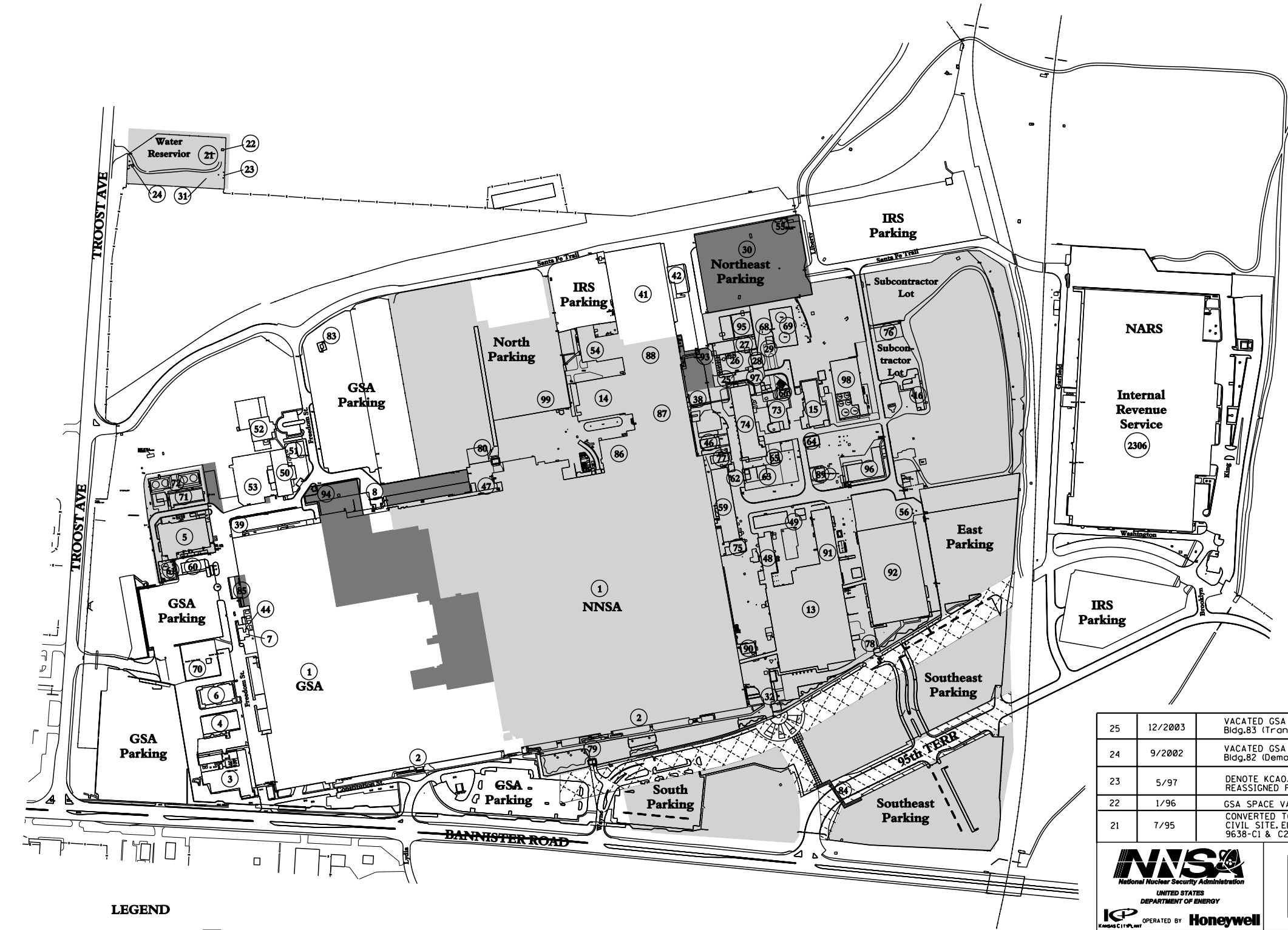


Attachment A

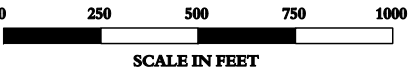
**Diagram – Bannister
Federal Complex Exhibit
1. Site Plan**

SITE LISTING

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- 2306
- Manufacturing Building
- Main Office Building
- GSA - Federal Aviation Administration
- GSA - Fleet Management Center
- West Boiler House
- GSA - FSS Commodity Center
- GSA - Employee Entrance - West
- GSA - Employee Entrance - North
- Manufacturing Support Building
- Four Experimental Test Cells
- Polymer Building
- Kinematics Building
- Water Reservoir - Empty
- GSA Radio Support Hut
- GSA - Microwave Tower
- Abandoned (1999) Water Control Pit - Reservoir
- Truck Scale and Booth
- Shelter (former Liquid Waste)
- Chip Waste Shelter
- Containerized Waste Shelter
- Oil Separater Shelter
- Fire Main Backflow
- GSA permit (former Air Monitoring Bldg.)
- Central Bannister Guard Building
- Pipe Tunnel
- Pipe Tunnel (Boiler House)
- GSA - IRS Warehouse
- GSA Material Handling Building
- GSA Meter House
- Four Unfinished Test Cells
- Employee Entrance - North
- East Power House
- East Cooling Towers
- GSA - Shops
- GSA - Storage Building
- GSA - Day Care Center
- Fire Main Backflow
- High Power Lab
- Water Meter Pit
- Tower
- Waste Management Building
- Storage Building
- Oil Storage Tanks (West Boiler House)
- Waste Acid Shelter
- Barrel Lot
- Shelter (Red - X)
- Chemical Storage Acid Shelter
- Process Liquids Storage Tanks
- Storage Shed
- Storage Tanks
- K.C.P. & L. Substation
- West Basin
- Cooling Towers
- Solid Waste Disposal Building
- Production Storage Building
- Supervisory Control Building
- Storage Bunker
- Oil Storage Building
- East Bannister Guard Building
- West Bannister Guard Building
- North Guard Building
- GSA (Farmer's Market)formerly Air Monitoring Bldg.
- Pedestrian Tunnel
- Main Switch Gear
- North Wing Lab
- Test Cells
- Forge & Casting
- Fire Protection Pump Building/Tank
- Mold Heating & Cooling Equipment
- Plating Building
- Technical Transfer Center
- Northeast Guard Building
- Northwest Guard Building
- Special Demolition Shelter
- Special Process Building
- GroundWater Monitoring Equipment Building
- Industrial Wastewater Pretreatment Facility
- Receiving & Shipping Security Post
- GSA - Internal Revenue Service Building



LEGEND	
Floodwall	
Railroad Tracks	
Fence	
DOE Custody & Control	
DOE per Permit	
DOE Area by Easement from KCMO	
Roadway KCMO by Easement from DOE	



25	12/2003	VACATED GSA Permit for Bldg.83 (Transfer to GSA)	JRH	CDG	
24	9/2002	VACATED GSA Permit for Bldg.82 (Demolished)	JRH	CDG	
23	5/97	DENOTE KCAO/GSA REASSIGNED PARKING	BMB	JRH	CDG
22	1/96	GSA SPACE VACATED	ILS	JRH	CDG
21	7/95	CONVERTED TO CAD CIVIL SITE, ELIMINATED 9638-C1 & C2	ILS	JRH	CDG

Facility Engineering Services

CONTRACT NO. _____ APPROVAL _____

PROJECT TITLE

Bannister Federal Complex

DRAWING TITLE

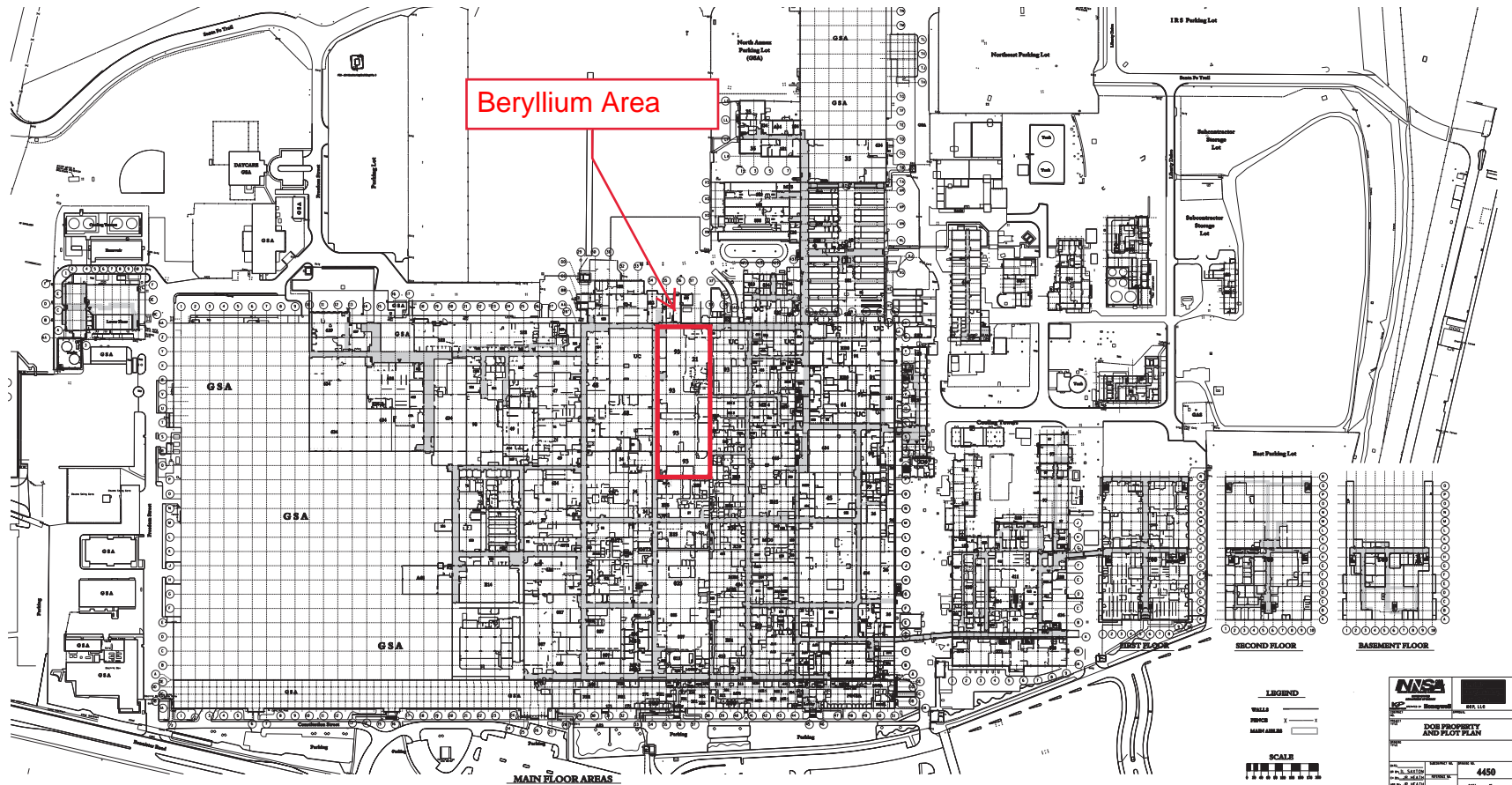
**Exhibit I
Site Plan**

DATE: July 1995	SUBCONTRACT NO. -N/A-	DRAWING NO. 9638-C3
DR BY: IL Saxton	REFERENCE NO. original C032	
CH BY: JR Heath		
APP BY: CD Gehrke		SHEET 1 OF 1



Attachment B

Diagram - Beryllium Remediation Area





Attachment C

Beryllium Sampling Results – Brandenburg FEA

TABLE 4: SUMMARY OF BERYLLIUM DETECTIONS¹

Sample Area	Sample ID	Media	Result (mg/kg)
Department 93	BFC-D93H114	Hardfill	0.17
Department 93	BFC-D93H146	Hardfill	0.21
Department 93	BFC-D93H148	Hardfill	0.082
Department 93	BFC-D93H151	Hardfill	0.6
Department 93	BFC-D93H197	Hardfill	0.17
Department 93	BFC-D93H198	Hardfill	0.22
Department 93	BFC-D93H200	Hardfill	0.16
Department 93	BFC-D93H201	Hardfill	0.14
Department 93	BFC-D93H202	Hardfill	0.17
Department 93	BFC-D93H203	Hardfill	0.21
Department 93	BFC-D93H204	Hardfill	1.0
Department 93	BFC-D93H205	Hardfill	1.8
Department 93	BFC-D93H206	Hardfill	1.2
Department 93	BFC-D93H208	Hardfill	1.1
Department 93	BFC-D93H209	Hardfill	1.2
Department 93	BFC-D93H210	Hardfill	0.26
Department 93	BFC-D93H211	Hardfill	0.26
Department 93	BFC-D93H212A	Hardfill	0.24
Department 93	BFC-D93H212B	Hardfill	0.19
Department 93	BFC-D93H213	Hardfill	0.19
Department 93	BFC-D93H214	Hardfill	0.22
Department 93	BFC-D93H215	Hardfill	0.15
Department 93	BFC-D93H216	Hardfill	0.19
Department 93	BFC-D93H217	Hardfill	0.23
Department 93	BFC-D93H218	Hardfill	1.3
Department 93	BFC-D93H219	Hardfill	1.4

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Department 93	BFC-D93H220	Hardfill	1.4
Department 93	BFC-D93H221	Hardfill	1.3
Department 93	BFC-D93H222	Hardfill	0.85
Department 93	BFC-D93H223	Hardfill	1.1
Department 93	BFC-D93H224	Hardfill	1.5
Department 93	BFC-D93H225	Hardfill	0.38
Department 93	BFC-D93H226	Hardfill	2.7

¹ – For the purpose of this FEA, a beryllium detection is any detectable amount of beryllium.



Attachment D

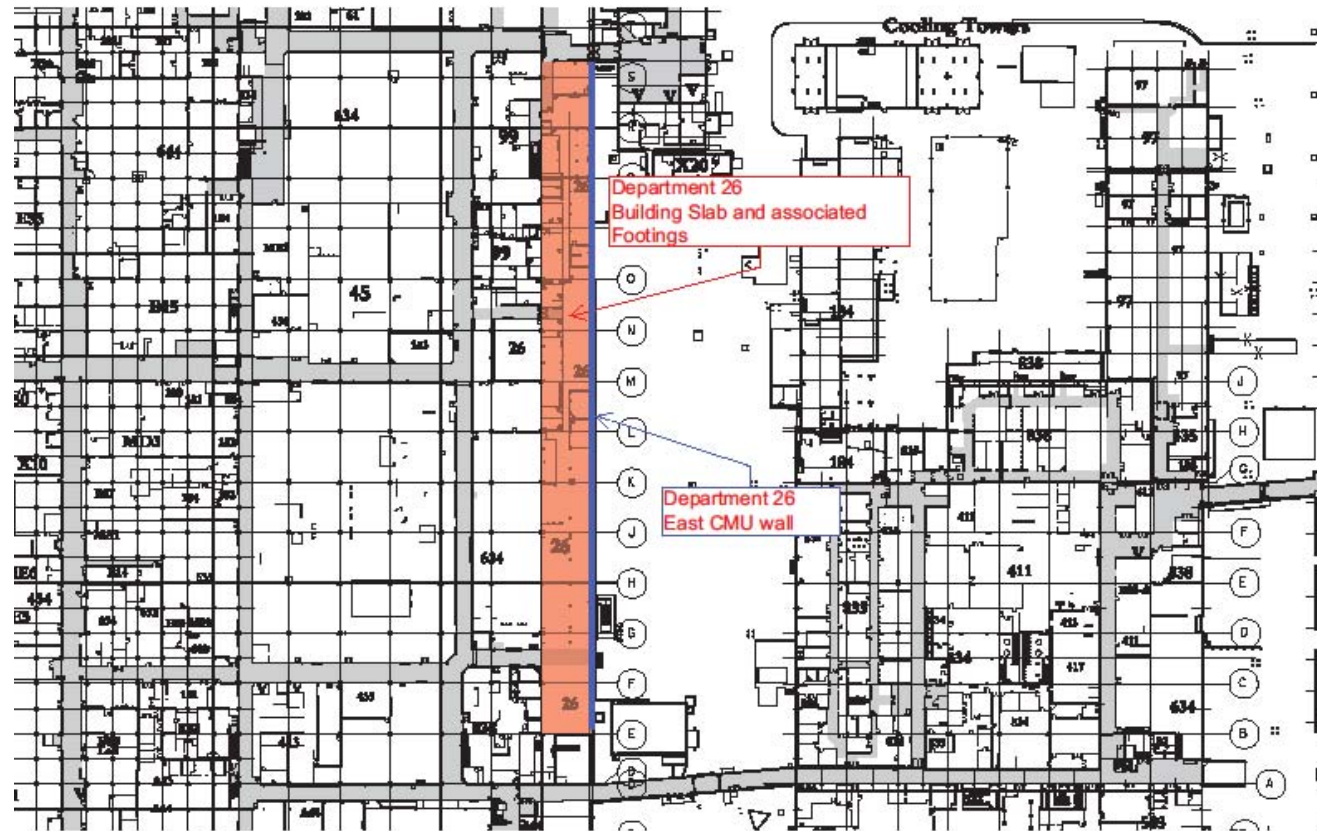
Diagrams – PCB Material Locations – Brandenburg FEA

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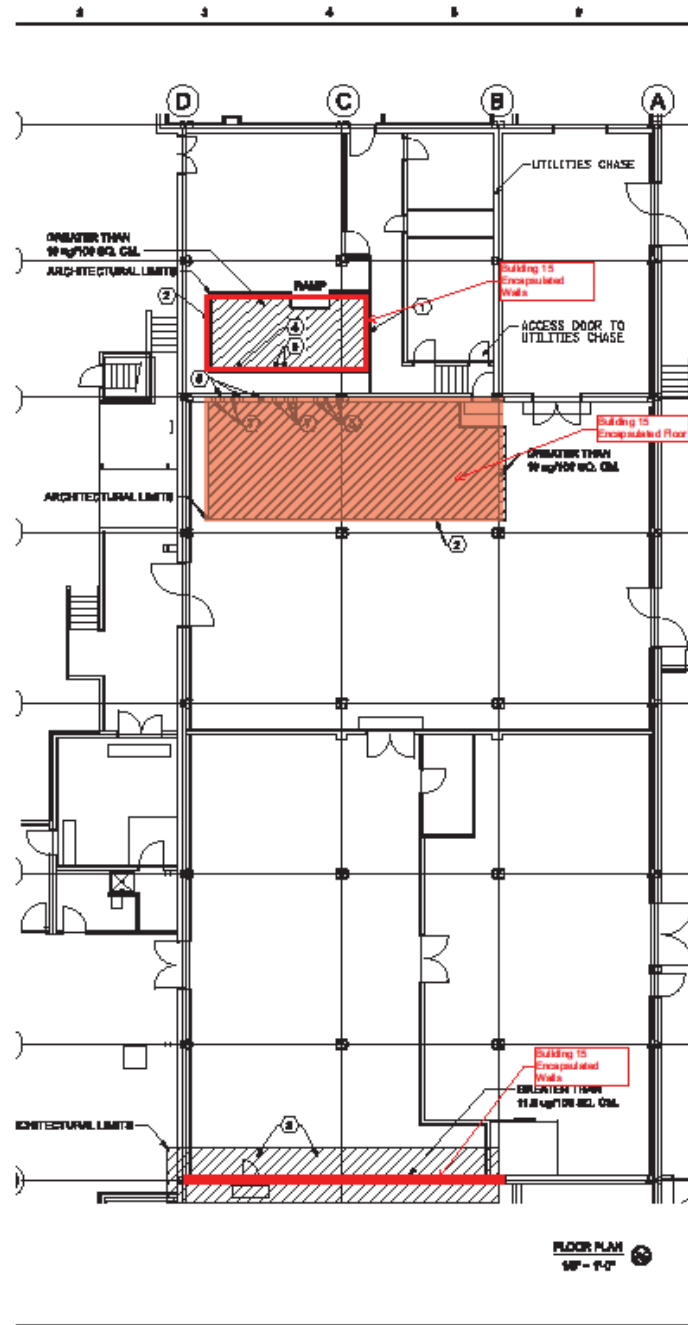
- Department 26
 - East CMU Wall
 - Floor Slab and associated footings



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- [illegible]

- Building 15
 - Select interior walls/floors that have been encapsulated

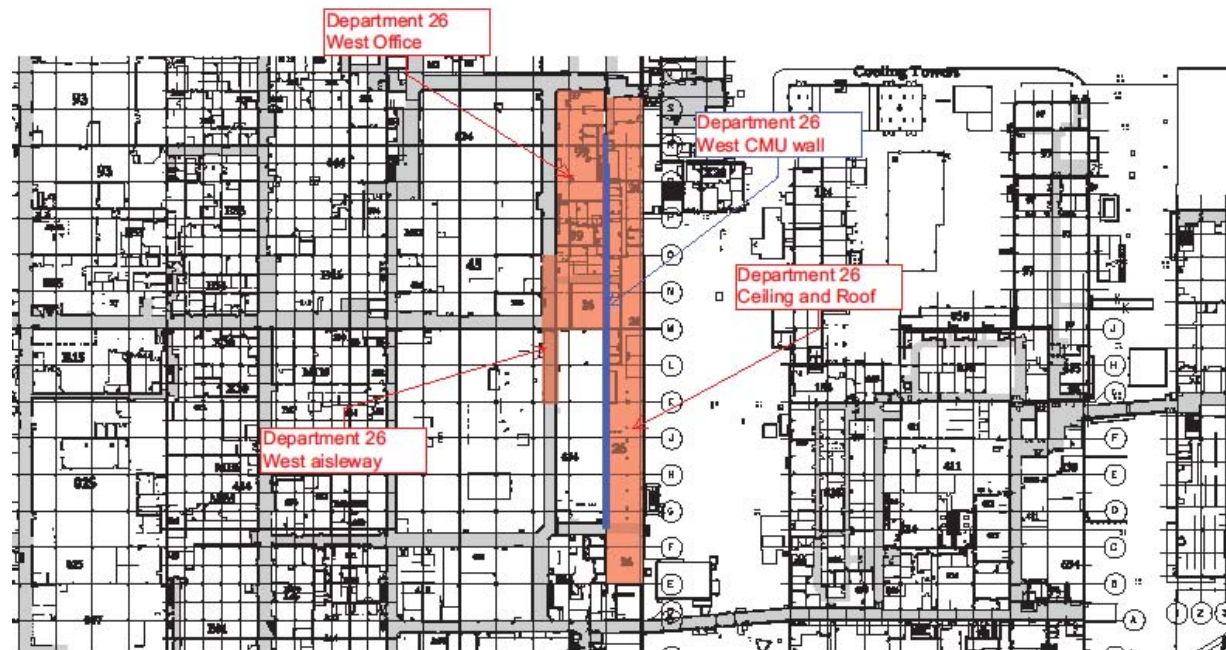


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- Department 26
 - Ceiling
 - West CMU wall
 - West Office
 - West aisleway

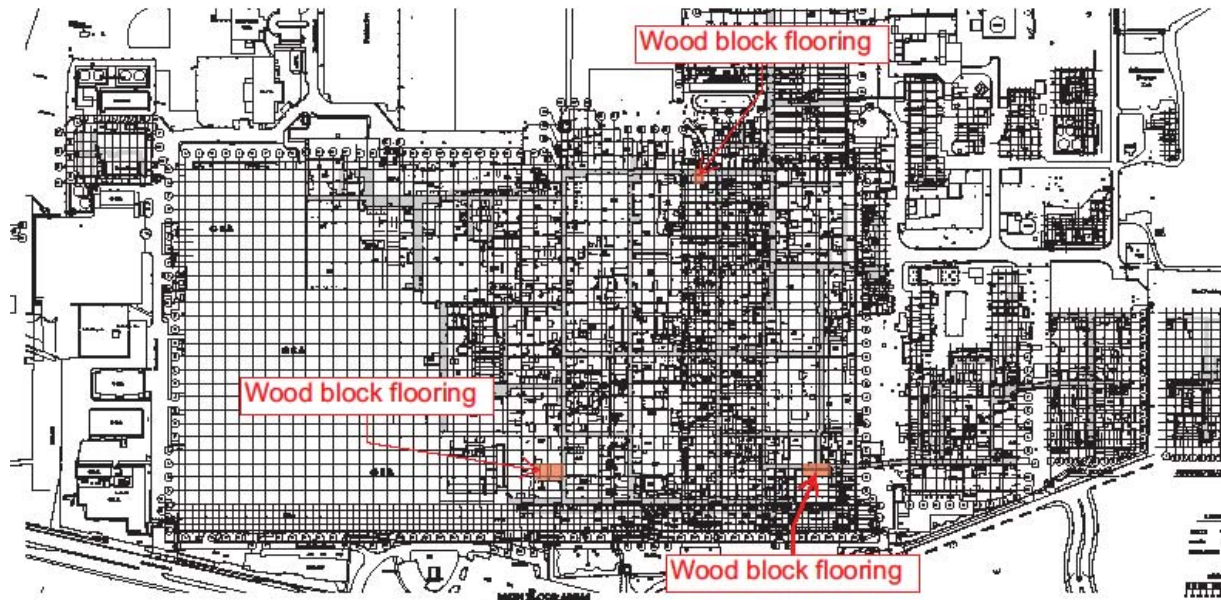


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- Old Wood Block Flooring and Associated Mastic
 - Multiple Areas

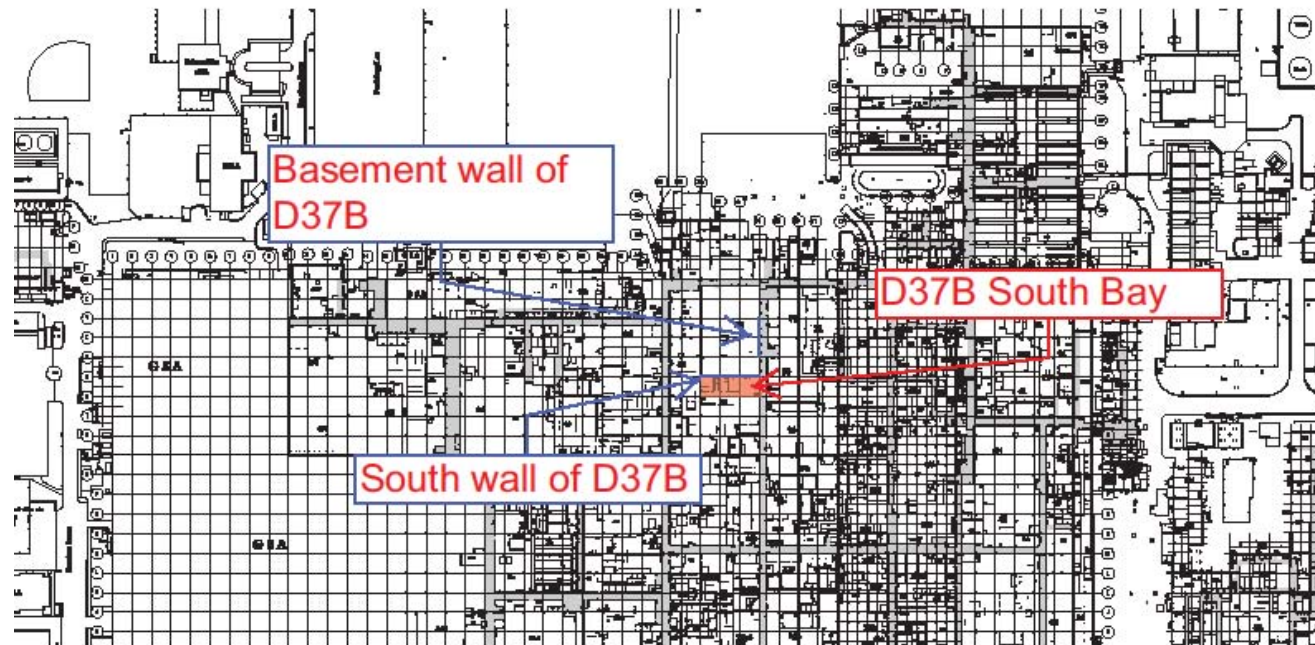


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- Department 37B
 - South CMU Wall and associated south bay
 - Basement CMU Wall

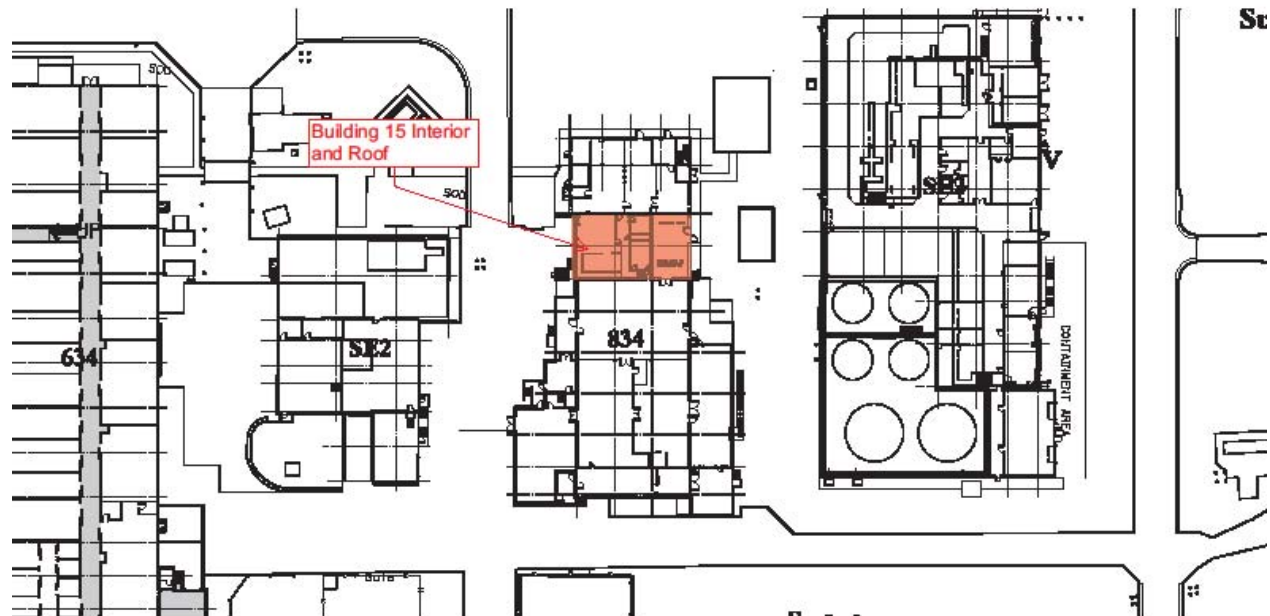


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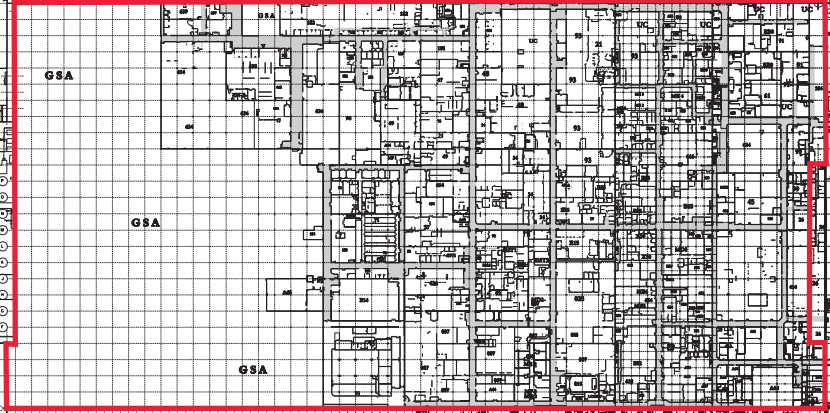
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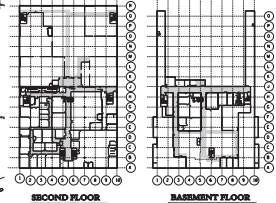
- Building 15
 - Roof
 - Select interior walls/floors and building materials



PCB Floor Slab Area



MAIN FLOOR AREAS



LEGEND

WALLS ———

POUR X X

MAINT AREAS ———

SCALE

1" = 10' 0"

NSA

NSA PROPERTY AND PLOT PLAN

4450