

PCB-CONTAINING CAULK ABATEMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. PCB-containing caulk removal, brick and mortar sealing, debris and waste handling and disposal.

1.02 GENERAL REQUIREMENTS

- A. The Contractor shall furnish all labor, materials, facilities, equipment, installation services, employee training, notifications, permits, licenses, certifications, agreements and incidentals necessary to perform the specified work. Work shall be performed in accordance with the contract documents, the latest regulations from the Occupational Safety and Health Administration (OSHA), the United States Environmental Protection Agency (USEPA), the State of New York and all other applicable federal, state and local agencies. Whenever the requirements of the above references conflict or overlap, the more stringent provision shall apply.
- B. All project personnel engaged in the work covered under this section shall be trained in accordance with OSHA Regulations 29 CFR 1910 and 1926.
- C. The Contractor shall provide a Project Health and Safety Officer having a minimum of eight (8) hours of supervisor training in hazardous waste site operations in accordance with the requirements of 29 CFR 1910. The supervisor must be on site at all times during abatement work.
- D. All caulk on exterior doors and windows shall be assumed to contain PCBs unless otherwise established through laboratory analysis.
- E. The Contractor shall remove all caulk surrounding each window to be replaced under this project scope, seal the exposed brick and mortar in each window opening with two (2) layers of solvent resistant and water repellant coatings; properly collect and containerize all caulk and other debris, personal protection equipment, and decontamination wastes; and arrange for transportation and disposal of project wastes at an appropriately permitted disposal facility.

1.03 SUBMITTALS

- A. The following documents shall be submitted to the Project Architect a minimum of twenty one (21) business days prior to commencement of abatement work:
 - 1. Work Plan: A written work plan that describes the methods to be used for the removal and containment of caulk and associated debris, and the contractor's plan to protect workers and prevent PCB contamination from migrating from the work areas. The work plan shall include floor plans and/or site plans indicating the (3) district zones for each work area as outlined in this Specification.
 - 2. Training Documentation: Documentation of OSHA 40-Hour HAZWOPER Training for all employees and subcontractors to be used for the abatement work, and 8-Hour HAZWOPER Supervisor Training for the designated on-site Health and Safety Officer for the abatement work.
 - 3. PCB Disposal Plan: A written plan that details the Contractor's plan for transportation and disposal of PCB-containing wastes generated during the project. The Disposal Plan shall identify:
 - a. Waste packaging, labeling, placarding and manifesting procedures.
 - b. The name, address and 24-hour contact number for the proposed treatment or disposal facility or facilities to which waste generated during the project will be transported.
 - c. The name, address, contact person(s) and state-specific permit numbers for proposed waste transporters, and EPA identification number for firms that will transport hazardous waste.
 - d. The license plate numbers of vehicles to be used in transporting of the waste from the site to the disposal facility.
 - e. The route(s) by which the waste will be transported to the designated disposal facility, and states or territories through which the waste will pass if the waste is to be disposed of outside of New York State.

4. Material Safety Data Sheets: Material Safety Data Sheets (OSHA Form 174 or equivalent) and manufacturer's information shall be provided for all chemicals and materials to be used during the project.

B. The following documents shall be submitted to the Project Architect within twenty one (21) calendar days following removal of waste from the site:

1. Waste Profile Sheets
2. Pre-Disposal Analysis Test Results (If required by disposal facility)
3. Manifests signed by the disposal facility
4. Tipping Receipts provided by the disposal facility
5. Certification of Final Treatment/Disposal signed by the responsible disposal facility official.

1.04 APPLICABLE STANDARDS AND REGULATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only. Where a conflict or overlap among regulations and/or these specifications exist, the most stringent requirements shall apply. The Project Architect will determine which requirements are most stringent.

1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
 - a. ANSI.Z89.1 Personnel Protective Equipment-Protective Headwear for Industrial Workers-Requirements (Latest Revision)
 - b. ANSI.Z87
2. CODE OF FEDERAL REGULATIONS (CFR)
 - a. 29 CFR Subpart D Walking-Working Surfaces
 - b. 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response
 - c. 29 CFR 1910.134 Respiratory Protection Standard
 - d. 29 CFR 1910.146 Permit-Required Confined Spaces
 - e. 29 CFR 1910.1200 Hazard Communication
 - f. 29 CFR 1926.20 General Health and Safety Provisions
 - g. 29 CFR 1926.57 Ventilation
 - h. 29 CFR 1926.59 Hazard Communication Program
 - i. 29 CFR 1926.62 Lead Exposure in Construction
 - j. 29 CFR 1926.65 Hazardous Waste Operations and Emergency Response
 - k. 29 CFR 1926.95 Criteria for Personal Protective Equipment
 - l. 29 CFR 1926, Subpart H Materials Handling, Storage, Use and Disposal
 - m. 29 CFR 1926, Subpart L Scaffolding
 - n. 29 CFR 1926, Subpart M Fall Protection
 - o. 29 CFR 1926, Subpart X Ladders
 - p. 29 CFR 1926, Subpart Z Toxic and Hazardous Substances
 - q. 40 CFR 50.6 National Primary and Secondary Ambient Air Quality Standards for Particulate Matter
 - r. 40 CFR 260 Hazardous Waste Management System: General
 - s. 40 CFR 261 Identification and Listing of Hazardous Waste
 - t. 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
 - u. 40 CFR 263 Standards Applicable to Transporters of Hazardous Waste
 - v. 40 CFR 264 Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
 - w. 40 CFR 265 Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
 - x. 40 CFR 268 Land Disposal Restrictions
 - y. 40 CFR 700 Toxic Substances Control Act (TSCA)
 - z. 40 CFR 761 PCBs Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
 - aa. 49 CFR 105 Hazardous Materials Program Definitions and General Procedures
 - ab. 49 CFR 171 General Information, Regulations and Definitions
 - ac. 49 CFR 172 Hazardous Material Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

- ad. 49 CFR 173 Shippers-General Requirements for Shipments and Packagings
- ae. 49 CFR 177 Carriage by Public Highway
- af. 49 CFR 178 Specifications for Packagings
- 3. NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)
 - a. Publication Number 87-108 Respiratory Decision Logic
 - b. NIOSH/OSHA Booklet 3142 Lead in Construction
 - c. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH Publication 85-115)
- 4. U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
 - a. PUB 3126 Working with Lead in the Construction Industry
 - b. 29 CFR 1910, Subpart I, Appendix B-Non-Mandatory Compliance Guidelines for Hazard Assessment and Personal Protective Equipment Selection
- 5. NEW YORK CODES, RULES, AND REGULATIONS (NYCRR)
 - a. 6NYCRR Part 360 Solid Waste Management Facilities
 - b. 6NYCRR Part 364 Waste Transporter Permits
 - c. 6NYCRR Part 370 Hazardous Waste Management System: General
 - d. 6NYCRR Part 371 Identification and Listing of Hazardous Wastes
 - e. 6NYCRR Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters, and Facilities
 - f. 6NYCRR Part 373 Hazardous Waste Management Facilities
 - g. 6NYCRR Part 376 Land Disposal Restrictions
- 6. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY GUIDANCE
 - a. Polychlorinated Biphenyl (PCB) Site Revitalization Guidance Under the Toxic Substances Control Act

1.05 POSTING AND RECORD MAINTENANCE REQUIREMENTS

- A. The following items shall be conspicuously displayed proximate to but outside of abatement work areas. The contractor shall assure that the posted regulations are not altered, defaced or covered by other materials.
- B. Exit Routes
 - 1. Emergency exit procedures and routes
- C. Emergency Phone Numbers
 - 1. A list indicating the telephone numbers and locations of the local hospital(s); the local emergency squad; the local fire department; the local police department; the Poison Control Center; Chemical Emergency Advise (CHEMTREC); the New York State Department of Health's local office; the contractor (on-site and after hours numbers); and the environmental consultant (on-site and after hours numbers).
- D. Warning Signs
 - 1. Warning signs shall be in English and the language of any workers on-site who do not speak English, and be of sufficient size to be clearly legible and display the following:
 - a. WARNING:
 - b. HAZARDOUS WASTE WORK AREA
 - c. PCBS-POISON
 - d. NO SMOKING, EATING OR DRINKING
 - e. AUTHORIZED PERSONNEL ONLY
 - f. PROTECTIVE CLOTHING IS REQUIRED IN THIS AREA
- E. Items Available On-Site
 - 1. The contractor shall maintain the following items on-site and available for review by all employees and authorized visitors:
 - a. Project Health and Safety Plan
 - b. Certificates of Training for all employees and the project Supervisor
 - c. Codes, Standards and Publications

- 1) Copies of applicable codes, standards, and publications
- d. MSDS
 - 1) Material Safety Data Sheets (MSDS) for all chemicals used during the project.
- e. Compliance Programs
 - 1) Copies of the contractor's written hazard communication, respiratory protection, and confined space entry programs.

1.06 MINIMUM REQUIREMENTS FOR WORKER HEALTH AND SAFETY

A. GENERAL

1. The contractor is responsible and liable for the health and safety of all on-site personnel and the off-site community affected by the project. All on-site workers or other persons entering the abatement work areas, decontamination areas or waste handling and staging areas shall be knowledgeable of and comply with the requirements of the site-specific Health and Safety Plan (HASP) at all times. The contractor's HASP shall comply with all applicable federal, state and local regulations protecting human health and the environment from the hazards posed by the work to be performed under this project.
2. The contractor shall not initiate on-site work in the contaminated areas until the HASP has been finalized, and approved by the Project Architect.
3. Consistent disregard for the provisions of the HASP shall be deemed as sufficient cause for immediate stoppage of work and termination of the Contract or any Subcontracts without compromise or prejudice to the rights of the Owner or the Architect.
4. Any discrepancies between the contractor's HASP and these specifications or federal and state regulations shall be resolved in favor of the more stringent requirements that provide the highest degree of protection to the project personnel and the surrounding community and environment, as determined by the Project Architect.
5. In addition to exposure concerns relating to the presence of PCBs, other health and safety considerations will apply to the work. The contractor shall be responsible for recognizing such hazards and shall be responsible for the health and safety of contractor employees at all times. It is the contractor's responsibility to comply with all applicable health and safety regulations.

B. HEALTH AND SAFETY PLAN

1. The contractor shall prepare and submit a site-specific Health and Safety Plan (HASP) to the Project Architect a minimum of twenty one (21) business days prior to commencement of abatement work. The HASP shall govern all work conducted at the site during the abatement of caulk and related debris; waste handling, sampling, and management; and waste transportation.
2. At a minimum, the HASP shall address the requirements set forth in 29 CFR 1910.120, as further outlined below:
 - a. Health and Safety Organization
 - b. Site Description and Hazard Assessment
 - c. Training
 - d. Medical Surveillance
 - e. Work Areas
 - f. Personal Protective Equipment
 - g. Personal Hygiene and Decontamination
 - h. Standard Operating Procedures and Engineering Controls
 - i. Emergency Equipment and First Aid Provisions
 - j. Equipment Decontamination
 - k. Air Monitoring
 - l. Telephone List
 - m. Emergency Response and Evacuation Procedures and Routes
 - n. Site Control
 - o. Permit-Required Confined Space Procedures
 - p. Spill Containment Plan
 - q. Heat and Cold Stress
 - r. Record Keeping
 - s. Community Protection Plan

3. The HASP shall be reviewed by all persons prior to entry into the abatement, decontamination, or waste staging areas, whether a representative of the contractor, owner, architect/engineer, environmental consultant, subcontractor(s), waste transporter or federal, state or local regulatory agency. Such review shall be acknowledged and documented by the contractor's Health and Safety Officer by obtaining the name, signature and affiliation of all persons reviewing the HASP.
4. The HASP shall be maintained so as to be readily accessible and reviewable by all site personnel throughout the duration of the abatement project and until all waste materials are removed from the site and disposed of at the appropriate disposal facility.
5. The Contractor's on-site Health and Safety Officer shall be responsible for ensuring that project personnel and site visitors are informed of and comply with the provisions of the HASP at all times during the project.

C. WORK AREAS

1. The contractor shall lay out and clearly identify work areas in the field. Access by equipment, site personnel, and the public to the work areas shall be limited as follows:
 - a. Abatement Zone-The Abatement Zone(s) shall consist of all areas where abatement or waste handling and staging activities are ongoing and the immediately surrounding locale or other areas where contamination could occur. Each Abatement Zone shall be visibly delineated with orange construction fencing at a minimum, and restricted from access by all persons except those directly necessary to the completion of the respective abatement tasks. The Abatement Zones shall be relocated and delineated as necessary as work progresses from one portion of the project site to another, to limit access to each abatement area and to minimize risk of exposure to site workers and the general public. Access shall be controlled at the periphery of the Abatement Zones to regulate the flow of personnel and equipment into and out of each zone and to help verify that proper procedures for entering and exiting are followed. All persons within the Abatement Zones shall wear the appropriate level of protection established in the HASP.
 - b. Decontamination Zone-The Decontamination Zone is the transition zone between the abatement area and the clean support zone of the project site, and is intended to reduce the potential for contaminants from being dispersed from the Abatement Zone to clean areas of the site. The Decontamination Zone shall consist of a buffer area surrounding each Abatement Zone through which the transfer of equipment, materials, personnel and containerized waste products will occur and in which decontamination of equipment, personnel, and clothing will occur. The Decontamination Zones shall be clearly delineated with orange construction fencing at a minimum and labeled with signage as provided in Part 1.06 of this Section. All emergency response and first aid equipment shall be readily maintained in these Zones. All protective equipment and clothing shall be removed or decontaminated in the Decontamination Zone prior to exiting to the Support Zone.
 - c. Support Zone-The Support Zone will consist of the area outside the Decontamination Zones and the remainder of the project site. Administrative and other support functions and any activities that by nature need not be conducted in the Abatement or Decontamination Zone related to the project shall occur in the Support Zone.
2. Access to the Abatement and Decontamination Zones shall be controlled by the Health and Safety Officer and limited to those persons necessary to complete the abatement work and which have reviewed and signed the HASP.

D. PERSONNEL PROTECTIVE EQUIPMENT

1. The contractor shall be responsible to determine and provide the appropriate level of personal protective equipment in accordance with applicable regulations and standards necessary to protect the contractor's employees and the general public from all hazards present.
2. The contractor shall provide all employees with the appropriate safety equipment and protective clothing to ensure an appropriate level of protection for each task, taking into consideration the chemical, physical, ergonomic and biological hazards posed by the site and work activities.
3. The contractor shall establish in the HASP criteria for the selection and use of personal protective equipment (PPE).
4. The PPE to be utilized for the project shall be selected based upon the potential hazards

associated with the project site and the work to be performed. Appropriate protective clothing shall be worn at all times within the Abatement Zone.

5. The contractor shall provide the appropriate level of respiratory protection to all field personnel engaged in activities where respiratory hazards exist or there is a potential for such hazard to exist.
6. The contractor shall provide, as necessary, protective coveralls, disposable gloves and other protective clothing for all personnel that will be actively involved in abatement activities or waste handling activities or otherwise present in the Abatement Zones. Coveralls shall be of Tyvek or equivalent material. Should the potential for exposure to liquids exist, splash-resistant disposable suits shall be provided and utilized.
7. Protective coveralls, and other protective clothing shall be donned and removed within the Decontamination Zone and shall be disposed of at the end of each day. Ripped coveralls shall be immediately replaced after appropriate decontamination has been completed to the satisfaction of the Health and Safety Officer. Protective clothing shall not be worn outside of the Decontamination Zone.
8. Hard Hats, protective eyewear, rubber boots and/or other non-skid footwear shall be provided by the contractor as required for workers and authorized visitors. Safety shoes and hard hats shall be in conformance with ANSI Z89.1 (1969) and ANSI Z41.1 (1967), respectively.
9. All contaminated protective clothing, respirator cartridges and disposable protective items shall be placed into proper containers to be provided by the contractor for transport and proper disposal in accordance with 40 CFR 262.

E. EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS

1. The contractor shall provide and maintain at the site, at a minimum, the following Emergency and First Aid Equipment:
 - a. Fire Extinguishers-a minimum of one (1) fire extinguisher shall be supplied and maintained at the site by the contractor throughout the duration of the project. Each extinguisher shall be a minimum of a 20-pound Class ABC dry fire extinguisher with Underwriters Laboratory approval per 29 CFR 1910.157.
 - b. First Aid Kit-a minimum of one (1) first aid kit meeting the requirements of 29 CFR 1910.151 shall be supplied and maintained at the site by the contractor throughout the duration of the project.
 - c. Communications-telephone communications (either cellular or land line) shall be provided by the contractor for use by site personnel at all times during the project.
2. The Health and Safety Officer shall be notified immediately in the event of personal injury, potential exposure to contaminants, or other emergency. The Health and Safety Officer shall then immediately notify the Project Architect of same.
3. If a member of the work crew demonstrates symptoms of heat or cold stress, injury, chemical exposure or other similar issue, another team member present within the delineated abatement zone (i.e., suitably equipped with appropriate PPE provisions) should remove the affected person from the delineated work site and signal/communicate to the Health and Safety Officer of the incident. Precautions should be taken to avoid exposure of other individuals to contaminated media.
4. An evaluation of the person's condition shall be made by the Health and Safety Officer, to determine the appropriate course of action to administer first aid or other emergency response provision. The Health and Safety Officer shall assess the seriousness of the injury, give first aid treatment if appropriate, and arrange for appropriate emergency response from outside emergency services, if warranted.
5. If soiled clothing cannot be removed, the injured person will be wrapped in a blanket while transported from the site.
6. The Health and Safety Officer shall monitor the affected person to determine whether there are symptoms resulting from the exposure or injury. If there is a visible manifestation of exposure such as skin irritation, the affected party shall be referred to a medical facility for treatment and evaluation as to whether the manifestation may be indicative of a delayed or acute exposure, a secondary response to exposure such as skin infection or occupational dermatitis. All incidents of injuries and/or obvious chemical exposure shall be evaluated by the Health and Safety Officer and the Project Architect to determine whether modifications to work practices and/or protective provisions are warranted.

F. STANDARD SAFETY AND HEALTH PROCEDURES AND ENGINEERING CONTROLS

1. The following provisions shall be employed to promote overall safety, personnel hygiene and personnel decontamination:
 - a. Each contractor or subcontractor shall ensure that all safety equipment and protective clothing to be utilized by its personnel is maintained in a clean and readily accessible manner at the site.
 - b. All prescription eyeglasses in use on this project shall be safety glasses conforming to ANSI Standard Z87.1. No contact lenses shall be allowed on the site.
 - c. Prior to exiting the delineated Decontamination Zone(s), all personnel shall remove protective clothing, and place disposable items in appropriate disposal containers to be dedicated to that purpose. Following removal of PPE, personnel shall thoroughly wash and rinse their face, hands, arms and other exposed areas with soap and tap water wash and subsequent tap water rinse. A fresh supply of tap water shall be provided at the site on each work day by the Contractor for this purpose.
 - d. All PPE used on site shall be decontaminated or disposed of at the end of each work day. Discarded PPE shall be placed in sealed NYSDOT-approved 55-gallon barrels for off-site disposal.
 - e. Respirators, if necessary due to an upgrade to Level C PPE, shall be dedicated to each employee, and not interchanged between workers without cleaning and sanitizing.
 - f. Eating, drinking, chewing gum or tobacco, smoking, and any other practice that increases the likelihood of hand to mouth contact shall be prohibited within the delineated abatement and decontamination work zones. Prior to performing these activities, each employee shall thoroughly cleanse their face, hands, arms and other exposed areas.
 - g. All personnel shall thoroughly cleanse their face, hands, arms and other exposed areas prior to using toilet facilities.
 - h. No alcohol, tobacco, illicit drugs or firearms will be allowed on the site at any time.
 - i. All personnel that are on non-prescription (i.e., over-the-counter) or prescription medication of any kind shall notify the Health and Safety Officer prior to conducting work at the site. The Health and Safety Officer will make a determination as to whether such individuals will be allowed to work on the site, and, if so, in what capacity. The Health and Safety Officer may require signed documentation from the individual's personal physician stating what limitations may be posed by the medication or condition that may apply to that individual's work activities.
 - j. Contact with potentially contaminated surfaces should be avoided, if possible. Field personnel should minimize walking through standing water/puddles, mud or other wet or discolored surfaces; kneeling on ground; and placing equipment, materials or food on ground or other potentially contaminated surface.
 - k. The use of the "Buddy System" shall be employed at all times while conducting work at the site. Each employee shall frequently monitor other workers for signs of heat stress or chemical exposure or fatigue; periodically examine others PPE for signs of wear or damage; routinely communicate with others; and notify the Site Safety Officer in the case of an emergency.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. All materials shall be delivered in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name.
- B. House Keeping of Work Site
 1. The Contractor shall keep all surfaces as free as practical from accumulations of caulk, brick debris, mortar and other waste materials during the abatement work.
 2. All loose caulk, brick, mortar and other debris shall be thoroughly collected and securely containerized in the final waste receptacles at the conclusion of each work day.
 3. All disposable personal protective equipment shall be placed in the designated waste receptacles at the conclusion of each work day or at any time that such items are removed or changed.

PART 3 EXECUTION

