READ THIS FIRST

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [ ] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [ “ character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Shift) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

NOTE: This section must be reviewed by:

Port Construction Services Regulated Materials Group

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Port of Seattle Aviation Environmental Programs (for work at Aviation properties)

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Port of Seattle Seaport Environmental and Planning (for work at Seaport properties)

Contact: Mike DeSota / (206) 787-3344 / [DeSota.M@portseattle.org](mailto:DeSota.M@portseattle.org)

1. GENERAL
   1. SUMMARY OF WORK
      1. When caulking materials that contain PCBs at concentrations greater than or equal to 50 parts per million (ppm) are identified at Port of Seattle facilities:
         1. The caulking is classified as PCB Bulk Product Waste upon removal per United States Environmental Protection Agency (EPA) regulations.
         2. Building materials “coated or serviced” with the caulking are also classified as PCB Bulk Product Waste upon removal per the PCB Bulk Product Waste Reinterpretation Memo issued by EPA (October 2012).
         3. Wastes generated during cleanup activities after PCB Bulk Product Waste removal (e.g., cleaning materials, personal protective equipment, etc.) are classified as Cleanup Debris per EPA regulations.
      2. The Work may include:
         1. Removal of PCB caulking and building materials coated or serviced with the caulking, as identified in the Contract Documents.
         2. Containerization of PCB Bulk Product Waste (i.e., caulking building materials coated or serviced with the caulking) and Cleanup Debris in Port of Seattle provided containers. Port of Seattle provided containers may be roll-off boxes or drums.

Choose “Aviation Environmental Programs” or “Seaport Environmental and Planning” in Item 3 below.

* + - 1. Coordination with Port of Seattle [Aviation Environmental Programs or Seaport Environmental and Planning] to allow proper documentation and confirmation sampling. The Engineer will assist with this coordination.
    1. The Work does not include:
       1. Off-site transportation of PCB Bulk Product Waste or Cleanup Debris
       2. Disposal of Bulk PCB Product Waste or Cleanup Debris
  1. GOVERNING CODES, STANDARDS, AND REFERENCES
     1. The Contractor is responsible for monitoring work activities and determining conditions that require conformance with applicable regulatory requirements and standards. The following rules, requirements, and standards may apply to the Work:
        1. United States Occupational Safety and Health Administration (OSHA)
           1. 29 CFR 1910 – Occupational Safety and Health Standards
           2. 29 CFR 1910.134 – Respiratory Protection
           3. 29 CFR 1910.1200 – Hazard Communication
           4. 29 CFR 1926.55 – Gases, Vapors, Fumes, Dusts, and Mists
           5. 29 CFR 1926.57 – Ventilation
           6. 29 CFR 1926.62 – Lead Standard for Construction
        2. United States Environmental Protection Agency (EPA)
           1. 40 CFR 761 – PCB Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
           2. 40 CFR 260 through 268: Resource Conservation and Recovery Act Regulations
           3. 40 CFR 311 – Worker Protection
        3. 3. Washington State regulations codified in the Washington Administrative Code governing hazardous materials work and waste management include but are not limited to:
           1. WAC 296-24 – General Safety and Health Standards
           2. WAC 296-62 – General Occupational Health Standards
           3. WAC 296-155 – Safety Standards for Construction Work
           4. WAC 173-303 – Dangerous Waste Regulations
     2. Refer to the following EPA guidance documents on the internet for information on PCB caulking removal:
        1. Steps to Safe PCB Abatement Activities: <http://www.epa.gov/pcbsincaulk/guide/guide-sect4.htm>
        2. Summary of Tools and Methods for Caulk Removal: <http://www.epa.gov/pcbsincaulk/guide/guide-appendix.htm>
        3. PCB Guidance Reinterpretation: <http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/reinterpret.htm>
     3. All other applicable federal, state and local regulations and industry standards.
  2. DEFINITIONS
     1. Definitions relevant to PCBs:
        1. Cleanup Debris: Waste generated during PCB caulking removal activities. Examples of Cleanup Debris include: rags, wipes, mops, personal protection equipment (PPE), dust, and filters. Liquid materials and decontamination water shall be considered Cleanup Debris. All Cleanup Debris shall be considered contaminated with PCBs and shall be containerized in Port of Seattle provided containers on site.
        2. PCB(s): Polychlorinated Biphenyl(s). A class of organic compounds with chlorine atoms attached to biphenyl, a molecule composed of two benzene rings. PCBs are a class of industrial chemicals that were historically used as lubricants, heat-transfer fluids, insulators and plasticizers.
        3. PCB Bulk Product Waste: 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. This definition includes PCB caulking.
        4. PCB Caulking: Caulking that contains PCBs in concentrations greater than or equal to 50 parts per million. All caulking identified in the Project Area shall be considered PCB caulking.
        5. PCB Waste Storage Area: The Engineer will identify a temporary storage facility located at the Project site that will be used to store PCB Bulk Product Waste and Cleanup Debris. The PCB Waste Storage Area shall be in compliance with 40 CFR 761.65.
  3. SUBMITTALS
     1. The Contractor shall provide complete submittals in accordance with Section 01 33 00 and as specified below.
     2. Preconstruction Submittals: Provide a site-specific PCB Caulking Removal Work Plan which demonstrates the methods by which impact, handling and disposal of PCB caulking will be performed. At a minimum, the Work Plan shall include:
        1. A description of removal methods and engineering controls that will be used on the project.
        2. A complete list of all materials and equipment proposed for use in the work. The list shall include such items as protective clothing, respiratory protection, sorbents and solvents.
        3. Qualifications, certifications, training certificates and role of each individual performing or managing PCB removal work
           1. All site personnel performing PCB caulking removal shall have current 40-hour HAZWOPER Training in accordance with 29 CFR 1910.120
        4. Qualifications of the proposed testing laboratory (to perform analysis of air samples)
        5. Respirator fit testing records for personnel performing PCB removal work
        6. PCB Air Monitoring Program
           1. The Air Monitoring Program shall include the proposed sampling plan, sampling procedures, and field quality control procedures of the firm conducting the air monitoring.
        7. Procedures for personnel and equipment cleanup and decontamination
        8. PCB Waste Management and Disposal Plan, including:
           1. Waste minimization efforts
           2. Location of the designated PCB Waste Storage Area
           3. Waste container management during the work

Choose “Aviation Environmental Programs” or “Seaport Environmental and Planning” in Item d below.

* + - * 1. Procedures for handing off waste containers to Port of Seattle [Aviation Environmental Programs or Seaport Environmental and Planning] for disposal
    1. Construction Phase Submittals
       1. Daily Work Records: Submit the following information to the Engineer daily. This information shall be submitted prior to the start of work on the next scheduled work shift.
          1. Air and bulk sample data sheets and laboratory analytical results, including chain of custody
          2. Supervisor daily inspection report, including scope of work completed, engineering controls used, hours worked, and equipment and materials used
    2. Post-Construction Closeout Submittals
       1. Project Overview: Provide a basic project summary identifying the scope and summarizing the work performed by the Contractor. Provide enough information to have a basic understanding of the project and include project and contact names and ID numbers; Contractor’s company name; where, when, and what type of work was completed; and a discussion of significant problems encountered during the course of the work. The written summary shall include a description of all changes or modifications to the Contractor’s Pre-Construction Work Plan.
       2. Certification: Provide written certification from the Contractor’s Project Manager or Supervisor that the Contractor has fully inspected the work area and completed work in strict accordance with the Specifications.
       3. Air Monitoring: Submit documentation of all Contractor air monitoring results relative to regulatory compliance. Include copies of all air monitoring data sheets, chain-of-custody documentation and analytical reports for sampling conducted at the site.
       4. Project Record Documents: Provide project records including documentation of all contract changes, and copies of work site entry log books, safety logs, sign-in sheets, and supervisor daily field reports. Provide copies of project meetings for pre-construction, construction period, and project closeout meetings.

Choose “Aviation Environmental Programs” or “Seaport Environmental and Planning” in Item 5 below.

* + - 1. Disposal Manifests: Submit documentation showing that containerized PCB waste was properly handed off at the completion of work to Port of Seattle [Aviation Environmental Programs or Seaport Environmental and Planning].
      2. Submit copies of inspections or visits by regulatory agencies. Include copies of any citations or notices received by the Contractor from regulatory agencies during the course of the project.

1. MATERIALS AND EQUIPMENT
   1. MATERIAL REQUIREMENTS
      1. Containers
         1. All PCB Bulk Product Waste and Cleanup Debris shall be placed in Port of Seattle approved containers. Port of Seattle approved containers will be roll-off boxes or drums.
         2. Roll-off boxes will be provided for solid PCB Bulk Product Waste and Cleanup Debris.
         3. Liquid wastes shall be placed in drums as approved by the Port.
      2. Enclosure
         1. Enclosure materials shall be fire-retardant and conform to applicable local fire codes.
         2. The enclosures shall be constructed of materials such that when the enclosure is completed there is limited potential for impact damage to the enclosure and no potential for contaminant release.
         3. Wood framing used for enclosure shall be pressure treated and fire retardant and shall conform to Uniform Building Codes 23-4 and 23-5.
         4. Polyethylene sheeting for enclosure walls shall be a minimum of 6-mil thick. For floors and all other uses, sheeting of at least 6-mil thickness shall be used in widths selected to minimize the frequency of joints. Polyethylene shall be fire retardant per UL Ratings and ASTM standards D-2898-81 and D-3201-79.
         5. Polyethylene sheeting utilized for worker decontamination enclosures shall be opaque white or black in color.
         6. Tape: Tape shall be capable of sealing joints of adjacent sheets of polyethylene sheeting and for attachment of polyethylene sheeting to finished or unfinished surfaces of dissimilar materials and capable of adhering under dry or wet conditions. Minimum 2” wide tape must be used.
         7. Other materials: The Contractor shall provide all other materials which may be required to construct and dismantle the decontamination area and the barriers that isolate the work area, and as required to complete the work as specified.
2. EXECUTION
   1. INSPECTIONS
      1. Removal of PCB caulking shall not begin until the work area, containment systems, ventilation equipment and enclosures have been inspected and approved by the Engineer.
      2. The Contractor’s Supervisor shall perform daily inspections of the site and generate a written daily quality control report.
   2. SITE SECURITY
      1. The Contractor shall submit to the Port of Seattle a demolition plan that at a minimum addresses the following:
      2. Products that are required to accomplish, or to be incorporated into, the Work of this section shall be as selected by the Contractor, subject to the approval of the Port Representative.
   3. PREPARATION OF WORK AREA
      1. Prior to PCB caulking removal work, the Contractor shall establish and maintain an exclusion zone around the work area. The exclusion zone shall be delineated by “danger” barrier tape and signs.
      2. Prior to PCB caulking removal work, the Contractor shall block storm drain catch basins in the vicinity of the work area with plastic or other approved means. The catch basins shall remain blocked during removal activities.
      3. Construct a polyethylene enclosure that encompasses the work area and prevents the migration of dust and debris. The work area enclosure shall be constructed and maintained in accordance with the EPA guidance document “Steps to Safe PCB Abatement Activities” and 40 CFR Part 761. The enclosure shall remain in place until the visual clearance standards have been achieved in the removal area.
      4. All electrical conduits, junction boxes and other electrical equipment in or adjacent to the work areas shall be protected from water. Wire in conduit that passes through the work area shall be assumed to be energized at all times. The Contractor is responsible for all electrical safety.
      5. Before PCB caulking removal work begins, clean surfaces in the work area and implement engineering controls (e.g., use of water spray vacuums equipped with HEPA filters, etc.) to reduce airborne dust and help ensure acceptable clearance results. Pre-clean all fixed objects in the containment area using HEPA filtered vacuums and/or wet cleaning techniques as appropriate.
   4. REMOVAL PROCEDURES
      1. Protective Clothing and Equipment
         1. At all times when PCB Bulk Product Waste or Cleanup Debris in any volume are not sealed in drums or containers, workers shall wear:
            1. Disposable non-porous, chemical-resistant (e.g., nitrile) gloves
            2. Disposable, whole body protective clothing that is impermeable to PCBs
            3. Half-face air purifying respirators (NIOSH-approved) equipped with combination organic vapor/P100 particulate filter cartridges
            4. Eye protection (e.g., safety glasses or protective goggles)
      2. The Contractor shall provide protective clothing, eye protection and respiratory protection as required for regulatory personnel who may monitor work activities within the work area.
      3. The PCB work area shall be, at no time, left unattended after work procedures have been implemented, and shall be attended until all removed materials and incidentals have been sealed in approved containers. During procedures and at all times when PCB Bulk Product Waste and Cleanup Debris in any volume are not sealed in drums or containers, all personnel entering the work area must don protective clothing and equipment listed herein. Upon exiting the work area, all disposable protective clothing shall be placed in open-top drums, sealed and removed from building property when other PCB Bulk Product Waste and Cleanup Debris.
      4. Apply water while removing material to prevent fugitive dust. Do not allow excessive water to accumulate in the work area. Vent HEPA filter exhaust to the outside where appropriate. At a minimum, the use of a HEPA vacuum shall be part of each removal activity.
      5. Aspiration of dust (i.e., vacuum equipped with a HEPA filter) at the source shall be utilized when cleaning residual caulking by mechanical methods.
      6. Minimize waste to the extent possible.
      7. Capture and store waste water generated during removal, mopping, wet cleaning, or misting. At no time shall liquids be allowed to escape the work area or discharged down any drain.
      8. Place all PCB caulking and Cleanup Debris into Port of Seattle provided containers. Solid materials may be placed in the designated roll-off containers. Liquid materials must be placed in provided drums and sealed when not in use.
      9. Containers shall not be overfilled and must be kept closed except when actively adding materials to the container.
      10. The Contractor may move the Port of Seattle provided containers around the Project Site to accommodate different work areas; however, the containers must be stored in the designed PCB Waste Storage Area while not in immediate use.
   5. CLEANUP
      1. Cleanup of Work Area
         1. Upon completion of PCB caulking removal work, all tools and equipment used in the work shall be decontaminated and properly stored for reuse.
         2. All exterior surfaces of PCB Bulk Product Waste and Cleanup Debris containers shall be thoroughly cleaned with a HEPA-filtered vacuum and wet wiping/mopping to ensure that they are free of dust and debris before leaving the work area.
         3. The Contractor shall thoroughly clean all interior surfaces of the work area enclosure by HEPA vacuuming and wet wiping prior to the visual clearance inspection by the Engineer or designated Project Monitor. Re-cleaning and inspection will continue until no visible suspect material remains.
   6. WORK AREA CLEARANCE
      1. The Engineer or designated Project Monitor will perform a visual clearance inspection of each work area.
      2. Once the work area has passed the visual clearance, the Engineer or designated Project Monitor will conduct confirmation bulk sampling of the cleaned areas.
      3. Work area clearance is achieved when:
         1. The work area has been thoroughly cleaned (i.e., HEPA-vacuumed and wet-wiped)
         2. The work area has passed visual clearance
         3. All PCB Bulk Product Waste and Cleanup Debris have been removed from the area and containerized in Port of Seattle provided containers.

Choose “Aviation Environmental Programs” or “Seaport Environmental and Planning” in Item 4 below.

* + - 1. The Contractor has coordinated with Port of Seattle [Aviation Environmental Programs or Seaport Environmental and Planning] to hand off waste containers for disposal.

1. MEASUREMENT AND PAYMENT
   1. PAYMENT

Choose “Schedule of Unit Prices” or “Lump Sum price bid for the Project” at the end of Paragraph A below.

* + 1. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the Schedule of Unit Prices or Lump Sum price bid for the Project.

End of Section

Revision History:

03/23/2015 Conversion to 2004 CSI Numbering System

10/17/18 Changed Aviation Environmental Programs reviewer to Chris Milewski