REGION 10
SEATTLE, WA 98101

August 2, 2024

Mr. Shawn Woodward
Superintendent
Monroe School District No. 103
14692 179th Avenue SE
Monroe, Washington 98272

Re: Limited Approval of Polychlorinated Biphenyl Encapsulation and Sampling at Sky Valley Education Center, Monroe, WA, pursuant to 40 Code of Federal Regulations § 761.61(c) and § 761.62(c).
EPA ID: WAH000051422

Dear Mr. Woodward:

The U.S Environmental Protection Agency Region 10 Polychlorinated Biphenyl (PCB) Program has reviewed the Monroe School District's (District) *Request for Limited Risk-Based Cleanup and Disposal Approval Under 40 CFR § 761.61(c)* (Application) submitted on May 31, 2024, pursuant to the Toxic Substances Control Act (TSCA) and its implementing regulations at 40 Code of Federal Regulations (CFR) Part 761. The submittals comprising the Application and other relevant documents are listed in Enclosure 1, References. The basis for the EPA's decision to approve the actions identified in Enclosure 2 is provided in the Enclosure 3, Background and Findings. Approved Procedures, which have been adapted from Appendix H of the Application, are provided in Enclosure 4. This letter and the enclosed conditions provide approval for epoxy encapsulant repair or replacement and sampling of PCB remediation waste and PCB Bulk product waste at the Sky Valley Education Center located at 351 Short Columbia Street in Monroe, Washington and for storage of bulk PCB remediation waste at the Monroe Public School Transportation Office located at 1410 W Main Street in Monroe, Washington.

The District's application seeks approval from the EPA to identify and reapply epoxy in areas where it is deteriorated or damaged to ensure the effective encapsulation of caulking and sealants that contain PCBs and to address ongoing unreasonable risk present at the school, as identified by the EPA's September 26 and 27, 2022, inspection. After the reapplication is complete, the District will conduct wipe sampling to verify and document the effectiveness of the epoxy coating, in accordance with 40 CFR § 761.61(a)(6)(i) and indoor air sampling in each room that contains a location where epoxy was repaired or replaced.

The EPA finds that the District's proposed method of identifying and reapplying epoxy in areas where it is damaged or deteriorated does not present an unreasonable risk of injury to health or the environment, subject to the conditions in Enclosure 2. The EPA applies this "no unreasonable risk standard" in accordance with the PCB regulations at 40 CFR § 761.61(c) and § 761.62(c) and TSCA at 15 USC § 2605(e). The EPA approves specific tasks proposed in the Application related to inspection, repair, wipe sampling of epoxy encapsulant, and indoor air sampling pursuant to 40 CFR 761.61(c) and § 761.62(c) and subject to the conditions in Enclosure 2.

This Approval is issued to Monroe School District, the operator of the Sky Valley Education Center, who has responsibility for compliance with TSCA, the regulations at 40 CFR Part 761, and the conditions of this Approval. This Approval applies solely to inspection, repair, and wipe sampling of epoxy-encapsulated PCB building materials identified in the Application, along with indoor air sampling in each room that contains a location where epoxy was repaired or replaced. This Approval does not preclude the EPA from initiating any enforcement action, including an action seeking civil penalties, for any violation of the TSCA or the PCB regulations at 40 CFR Part 761.

This Approval incorporates and is issued in accordance with applicable requirements of the PCB regulations at 40 CFR Part 761, including the requirements applicable to a "risk-based disposal approval" under 40 CFR § 761.61(c) and § 761.62(c). The authority to approve or deny applications under 40 CFR § 761.61(c) and § 761.62(c) has been delegated to the Director, Land, Chemicals and Redevelopment Division.

Any actions which deviate from the terms and conditions of this Approval may result in administrative, civil, or criminal enforcement in accordance with Sections 16 and 17 of TSCA, 15 U.S.C §§ 2615 and 2616. The District must seek advanced approval for any deviations from this written Approval. The EPA may modify, suspend, revoke, or terminate this Approval for any violation or if it determines that the District has misrepresented or omitted material facts in the application, completion report, or any other material communication. The EPA may require additional work if it is determined, based on new information, that the approved activity presents an unreasonable risk of injury to health or the environment.

Compliance with this Approval does not relieve the District of the responsibility to comply with all other applicable federal, state, and local laws and regulations and does not release the District from any liability it may have with respect to releases of hazardous substances at or from the site.

This Approval expires one (1) year from the date of issuance on August 2, 2025. The District may request an extension of this Approval by submitting a written request to the EPA.

If you have any questions or comments, please contact Brett Feldhahn, of my staff, at 206-553-2899 or feldhahn.brett@epa.gov.

Sincerely,

TIMOTHY HAMLIN Digitally signed by TIMOTHY HAMLIN
Date: 2024.08.01 15:48:29 -07'00'

Timothy B. Hamlin
Director
Land, Chemicals and Redevelopment

Enclosures:

1. References
2. Approval Conditions
3. Background and Findings
4. Approved Procedures

Enclosure 1

REFERENCES

Issued to Monroe School District on August 2, 2024

Sky Valley Education Center

Environmental Health & Engineering, Inc. (2012). *Literature review of remediation methods for PCBs in buildings* (Contract No. EP-C-10-043). National Risk Management Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency.

Fulcrum Environmental Consulting, Inc. (2024, May 31). *Request for Limited Risk-Based Cleanup and Disposal Approval Under 40 CFR § 761.61(c)* [Application Document]. Prepared for Monroe School District No. 108.

Hamlin, T. (2017, September 15). *Re: Sky Valley Education Center (SVEC) Approval of Risk-Based Disposal Method for PCB Bulk Product Waste and PCB Remediation Waste in accordance with 40 CFR § 761.61(c) and 761.62(c)* [Letter]. Issued to Monroe School District.

Stock, M. J. (2024, May 31). *Re: Monroe School District Sky Valley Education Center Request for Limited Approval Under 40 CFR § 761.61(c)* [Letter]. Submitted by Hillis Clark Martin & Peterson P.S. for Monroe School District

Enclosure 2

APPROVAL CONDITIONS

Issued to Monroe School District on August 2, 2024

Sky Valley Education Center

1. The terms and abbreviations used in this document have meanings as defined in 40 CFR § 761.3 unless they have been specifically redefined in this Approval.

2. This Approval exclusively authorizes the activities expressly described herein, including inspection, repair, and wipe sampling of epoxy-encapsulated PCB building materials identified in the Application, along with indoor air sampling in each room that contains a location where epoxy was repaired or replaced. This Approval does not authorize any activities that may have been included in the Application but are not expressly approved herein. If there are any discrepancies between the requirements of this Approval and the proposed tasks in the Application, the conditions of this Approval take precedence.

3. SVEC must perform all sampling and analysis in accordance with the EPA Guidance for Quality Assurance Project Plans (EPA QA/G-5, December 2002), as appropriate for the Site. The EPA reserves the right to audit laboratories selected by SVEC or to require SVEC to purchase and analyze any Performance Evaluation (PE) samples chosen by the EPA.

4. Chemical extraction for PCBs must be conducted using Method 3500B/3540C of SW-846 and chemical analysis for PCBs must be conducted using Method 8082 of SW-846 unless another extraction or analytical method is validated according to 40 CFR Part 761, Subpart Q. The minimum laboratory reporting limit must be 1 µg/100 cm^2.

5. Per 40 CFR § 761.61(a)(4), interior clearance criteria for wipe samples are less than or equal to (≤) 10 µg/100 cm^2. The clearance criteria for air samples is less than or equal to (≤) 100 ng/m^3. The District must prohibit use of any area or room where sampling indicates PCB levels exceed the clearance criteria.

6. This Approval does not authorize renovation or demolition activities that may impact any remaining PCB-containing caulk behind windows or ventilators.

7. This Approval does not waive or compromise the EPA's enforcement and regulatory authority, nor does it release SVEC from compliance with any applicable requirements of federal, state, or local laws. Furthermore, it does not release SVEC from liability for, or otherwise resolve, any violations of federal, state, or local law.

8. The District must not undertake any projects that could affect the epoxy sealant, including intentional damage, removal, or repair, using its own staff. Such projects must be executed by a

specialized contractor.

9. By August 15, 2024, the District must complete a visual inspection of all encapsulated interior and exterior surfaces at SVEC. This inspection must identify any areas where the epoxy is damaged or deteriorated. The District must collect photographic documentation of each location where it intends to repair or replace the epoxy. Upon identification, the District's specialty contractor must repair or replace all damaged or deteriorated epoxy and properly dispose of it as PCB remediation waste. The District's specialty contractor must then reapply epoxy to all the affected areas. These activities must be conducted in accordance with the Enclosure 4, incorporated here by reference.

10. By September 1, 2024, following the reapplication of epoxy, the District must conduct wipe sampling in accordance with the procedures in Enclosure 4, incorporated here by reference. The District must collect a minimum of one wipe sample from each location where epoxy was repaired or replaced. The sampling results must be provided to the EPA within 72 hours of receipt.

11. By September 1, 2024, following the reapplication of epoxy, the District must conduct indoor air sampling in accordance with the procedures in Enclosure 4, incorporated here by reference. The District must collect a minimum of one indoor air sample from each room containing a location where deteriorated epoxy was repaired or replaced. The sampling results must be provided to the EPA within 72 hours of receipt.

12. The District must document the approved activities in Conditions 9 through 11 in a report and submit this report to the EPA no later than September 15, 2024.

    The report must contain the following Statement of Certification, signed by the District Superintendent:

Statement of Certification

I certify that the enclosed reports and information are true, accurate, and complete. I certify that the portions of the report which I did not personally prepare were prepared by persons acting on behalf of the Monroe School District under my supervision and at my instruction, and that the information provided is true, accurate, and complete. I am aware that there are significant penalties for submitting false information to EPA, including the possibility of fine and imprisonment.

*Dated*_____
*Signature*_____

13. Beginning Fall 2024, the District must conduct quarterly visual inspections of all interior and exterior epoxy coatings in accordance with the procedures in Enclosure 4, incorporated here by reference. If any damage is identified, the District must complete repairs or replacements within fourteen (14) days in accordance with the procedures in Enclosure 4, incorporated here by reference.

14. Visual inspections of epoxy must include the identification of any elements that could potentially increase the risk of children damaging the epoxy or coming into contact with it. Examples of such elements include posters taped to the epoxy or the placement of children's coat hanging areas near the epoxy. If such factors are identified, the District must take immediate action, including safely removing the items that are affecting the epoxy and educating the relevant personnel about the associated risks.

15. The District must require that persons participating in epoxy repair activities governed by this Approval wear or use protective clothing or equipment to protect against dermal contact or inhalation of PCBs or materials containing PCBs.

16. The District must conduct wipe sampling of encapsulated surfaces following standard wipe test procedures in accordance with 40 CFR § 761.123.

17. The District must submit all sample results to the EPA for evaluation within 72 hours of receipt.

18. Power tools used during activities authorized by this Approval must be equipped with a shroud connected to a high-efficiency particulate air (HEPA) filter vacuum to capture chips and dust.

19. The District must implement engineering controls to prevent contaminated materials or dust from being released beyond the immediate work area and falling onto the ground surface during activities authorized by this Approval.

20. For non-powered hand tools, the District must use a HEPA vacuum to capture materials or dust that fall onto the liners or the ground surface during activities authorized by this Approval. When removed, liners must be HEPA vacuumed to remove any accumulation of materials or dust and handled in a manner that prevents the release of potentially contaminated media.

21. The District must comply with the conditions of this Approval. Noncompliance with any condition of this Approval constitutes a violation of the requirement in 40 CFR § 761.50(a) to store or dispose of PCB waste in accordance with 40 CFR Part 761, Subpart D. A violation of the PCB Regulations is a prohibited act under Section 15 of TSCA and may subject the District to civil or criminal enforcement action and associated penalties.

22. The EPA may require the District to collect and analyze any samples it determines to be necessary to verify compliance with TSCA and this Approval.

23. Bulk PCB remediation waste stored on site must be stored in accordance with 40 CFR § 761.65(c)(9) for no longer than 180 days from the date waste was first removed from service.

24. By September 15, 2024, signage must be posted and maintained at a prominent location at the Facility notifying site workers and visitors of the presence of PCBs and instructions for obtaining

more information.

25. The District must prepare and maintain all records and documents required by 40 CFR § 761.125(c)(5) and Subpart K, including, but not limited to, the notification of PCB waste activity, manifests, documentation of the work conducted under this Approval, and certificates of disposal. Records must be established and maintained by the District in one centralized location for a period of 5 years following the EPA's determination that all work subject to this Approval has been completed. All records must be made available for inspection to authorized representatives of the EPA.

26. If at any time the District possesses or is otherwise made aware of any new relevant information, including but not limited to spills or releases, or site conditions, that differs from the information presented in the application, the District must report such information to the EPA by phone or e-mail within 24 hours. The EPA may require the District to submit a written report and request modification of this Approval.

27. The District must ensure the transporters, storers or disposers of PCB waste are authorized to conduct the activities set forth in the work plans in accordance with all applicable federal, state, and local statutes and regulations.

28. The District must provide a copy of this Approval and any incorporated documents and requirements to all personnel conducting work under this Approval.

29. The District must ensure that its officers, employees, agents, contractors, and subcontractors comply with the requirements of this Approval.

30. The District must ensure that all field work conducted under this Approval is conducted in compliance with all applicable health and safety standards, as required by federal, state, and local regulations and ordinances. The District must make any plans developed to protect worker health and safety available to the EPA upon request.

31. The District must allow authorized representatives of the EPA to inspect areas of the Sky Valley Education Center at reasonable times and to take any samples that the EPA determines to be necessary to determine compliance with the federal PCB regulations and this Approval.

32. The District must request and receive approval from the EPA prior to deviating from this Approval.

Enclosure 3

BACKGROUND AND FINDINGS

Monroe School District on August 2, 2024

Sky Valley Education Center

This enclosure provides the basis for the EPA's decision to approve certain activities proposed in the *Request for Limited Risk-Based Cleanup and Disposal Approval Under 40 CFR § 761.61(c)* (Application), submitted by Monroe School District (the District) to the EPA on May 31, 2024.

Background

Caulking and sealants containing Polychlorinated biphenyls (PCB) are present around window units, door units, exterior penetrations, adjacent exterior columns, and in window in-fill systems at Sky Valley Education Center (SVEC). Previous laboratory analyses revealed PCB concentrations of up to 140,000 parts per million (ppm), thus exceeding applicable Toxic Substances Control Act (TSCA) cleanup levels.

Site History

In May 2016, the District submitted a Corrective Action Plan (CAP) to the U.S. Environmental Protection Agency (EPA). The CAP addressed the removal of PCB-impacted materials and waste management. The CAP underwent multiple amendments in June and July 2016, collectively referred to as the Notification.

During the summer of 2016, the District removed accessible caulking and sealants from affected surfaces at SVEC. Two layers of epoxy coating were then applied to encapsulate the remaining PCB-containing caulking and sealants, as well as any adjacent building materials potentially contaminated by PCBs. The District submitted compliance documentation in August and September, followed by a PCB Abatement Closeout Summary Report in December.

From September 2016 to August 2017, the District conducted air and wipe sampling. In April 2017, the EPA conducted a PCB inspection and collected wipe samples. The EPA reviewed all submitted documents and sampling results, which formed the basis for the September 15, 2017, Approval. The 2017 Approval remained in effect until May 25, 2022.

On October 24, 2019, the EPA conducted a compliance inspection of SVEC, during which two older light fixtures in the Admin Building's Storage/IT Closet were identified. Despite having new electronic ballasts, signs of spilled potting were evident. The fixtures—which were disposed of in November 2019—had three samples with 1.3 µg/wipe, 8.3 ppm, and 18 µg/wipe of Aroclor 1242. PCB samples from the Gym and CTE Buildings all contained less than 0.25 µg/wipe. Two unit ventilator filters from

the Pod/Library building showed total PCBs of 2.61 ppm and 4.46 ppm. The second light fixture sample from the Administration Building storage closet exceeded the decontamination standard of 10 µg/100 cm^2, and the used ventilator filter samples exceeded 1 ppm.

On September 26 and 27, 2022, the EPA conducted a compliance inspection of SVEC. During the inspection, the EPA collected wipe samples from epoxy-coated areas both inside and outside the buildings, along with bulk samples and other samples from inside the buildings. Of the six exterior samples collected, PCBs were detected in four, with two exceeding the decontamination standard of 10 µg/100 cm^2. The 2022 testing by the EPA identified PCBs in exterior caulking outside Rooms 7 and 11 above risk-based levels. Samples collected from two unit ventilator filters and one area of carpet were also found with PCBs above risk-based levels.

Request for Limited Approval

Currently, some areas of the epoxy coating have degraded, and inaccessible caulk remains on interior surfaces behind unit ventilators in some classrooms and around cement board panels in window in-fill systems. The District's *Request for Limited Risk-Based Cleanup and Disposal Approval Under 40 CFR § 761.61(c)* (Application) is seeking approval from the EPA to identify and reapply epoxy in areas where it has worn or deteriorated to ensure the effective encapsulation of caulking and sealants that contain PCBs and to address the ongoing unreasonable risk present at the school, as determined by EPA's September 26 and 27, 2022 inspection. After the reapplication is complete, the District will conduct wipe sampling to document the effectiveness of the new epoxy coating.

The District's application also proposes to remove building systems with inaccessible caulking and sealant containing PCBs, followed by verification sampling. However, the EPA's risk determination for this Approval is limited to the inspection, repair, and wipe sampling of epoxy-encapsulated PCB building materials, along with indoor air sampling in each room that contains a location where deteriorated epoxy was repaired or replaced.

Endangered Species Act Determination

Section 7(a)(2) of the Endangered Species Act (ESA), 16 U.S.C. § 1536(a)(2), requires all Federal agencies, in consultation with the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), to ensure that any action they carry out, fund, or authorize (such as through a permit) is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Under the ESA, management of listed species is divided between the USFWS for terrestrial and freshwater species and the NMFS for marine and anadromous species.

The EPA considers the issuance of the Sky Valley Education Center Approval as an "action" subject to the ESA. To address this requirement, EPA Region 10 staff conducted a search for threatened and endangered species for the area surrounding the Sky Valley Education Center using web-based tools provided by the USFWS and the NMFS. Based on the results of these searches, the EPA determined

that there are six threatened or proposed threatened species, but no critical habitat present for these five species at or near the Sky Valley Education Center. However, the EPA determined that issuance of the Sky Valley Education Center Approval "will not affect" any listed species or designated critical habitat. Accordingly, consultation with the USFWS and the NMFS is not required.

The EPA's ESA determination and assessment of data is derived from the USFWS web-based tool located at https://ipac.ecosphere.fws.gov/ and from the NMFS web-based tool located at https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=68d8df16b39c48fe9f60640692d0e318.

Risk Determination

When properly monitored and maintained, epoxy encapsulant can provide an effective temporary interim measure to protect receptors from PCB exposure until further activities can be taken to permanently address PCB contamination. The EPA has determined that the procedures outlined in the Application and this Approval, which include the inspection, repair, and wipe sampling of epoxy-encapsulated PCB building materials, along with indoor air sampling in each room that contains a location where epoxy was repaired or replaced, will not present an unreasonable risk to human health or the environment.

Enclosure 4

APPROVED PROCEDURES

Issued to Monroe School District on August 2, 2024

Sky Valley Education Center

The following approved procedures are adapted from Appendix H of Monroe School District's *Request for Limited Risk-Based Cleanup and Disposal Approval Under 40 CFR § 761.61(c)* (Application) submitted on May 31, 2024. The District must seek advanced approval for any deviations from the approved procedures.

1. Interior and Exterior Epoxy Repair or Replacement

If deterioration or damage is detected on the interior or exterior epoxy sealants, the epoxy layer must be repaired or replaced within 14 days. The epoxy sealant consists of two layers: an outer layer (tan or gray) and a base layer (red). Typically, repairs will affect only the outer tan or gray layer, while replacement will necessitate the removal of both the outer and base layers of epoxy sealant, abrasion of the underlying surfaces, and application of two new layers of epoxy sealant.

Only a specialty contractor with experience in handling PCBs and PCB wastes will carry out repairs or replacements that affect the epoxy sealants. The goal of the work is to restore the integrity and protectiveness of the covering epoxy layer. Epoxy sealant has been applied around door frames, window frames and panels, column joints, expansion joints, mechanical systems, plumbing systems, and various other penetrations and junctions.

A specialty contractor with experience in handling PCBs and PCB wastes will complete the removal, surface preparation, and reapplication of Sikagard 62 according to the manufacturer's specifications. The reapplication process requires the removal of all deteriorated or damaged existing epoxy. Where Sikagard 62 remains, the surface must be mechanically or chemically abraded so that the new Sikagard 62 epoxy can bond to the existing material. If a chemical method is chosen, all chemical residues must be removed. All dust and debris must be cleared before applying the new epoxy.

The new epoxy sealant layer will be applied in a gray color, as the previously used tan color is no longer available. The manufacturer's instructions for surface preparation, mixing, and application must be followed. The new epoxy sealant will extend an additional one (1) inch in all directions beyond the area of the underlying epoxy layers.

Photographs and a written description of the deterioration or damage at each location, including the extent (size), will be captured before surface preparation begins, after preparation is completed, and after the epoxy has cured. These will be provided to the EPA PCB Coordinator as part of the project record. A report of the completed repairs will be submitted to the District's Director of Facilities and the Superintendent. The District will compile the repair reports and provide a summary of the

completed repairs to the EPA PCB Coordinator within 14 days after the work is completed. Post-work clearance wipe and air sampling will be conducted in accordance with approved procedures.

2. <u>Interior and Exterior Area Setup, Equipment, etc.</u>

All interior and exterior epoxy sealant repair or replacement will include the following steps for setting up the work area:

For both interior and exterior areas:

- The work will be carried out by a specialty contractor with experience and training in handling PCBs and PCB waste.
- At a minimum, those entering the work area must be equipped with a full-face elastomeric respirator or a half-face elastomeric respirator with safety glasses and goggles, a disposable Tyvek-type respirator with hood and boot coverings, and appropriate work gloves. They must also have level D personal protective equipment beneath the disposable coverings.
- Washing facilities with hot water and soap/cleanser capable of removing oily compounds without harming human skin must be provided. A shower must be available when dust is generated during removal activities. All wash waters must be captured for characterization and disposal/treatment.
- The work area must be marked as a construction and remediation area, and access by others must be prohibited.
- All vacuums must be commercial and abatement grade, equipped with activated charcoal pre-filters and HEPA primary filters. All activated charcoal pre-filters and all HEPA primary filters must be disposed of as PCB Remediation Waste at the end of the project.
- Any power tools used during the work must have a dust capture shroud connected to a HEPA vacuum.
- All waste must be double bagged and labeled per 40 CFR 761.61, 40 CFR 761.62 and/or 40 CFR 761.65 before being removed from the work area and properly disposed of.
- All waste packaging and transport must comply with Department of Transportation (DOT) and interstate DOT regulations for waste transport. Temporary PCB project waste storage will be kept at the site for removal by the transporter during the project or will be temporarily stored by the District in accordance with 40 CFR 761.65.
- Tools and equipment contaminated by the work must be decontaminated with an organic solvent, such as xylene, and clean cloth rags, or disposed of as PCB Remediation Waste. Decontamination materials must be containerized for disposal.
- Small volumes of PCB project waste may be stored at the District's Transportation Center (1401 West Main Street, Monroe, Washington), in the secured and signed storage area designated for this purpose in accordance with 40 CFR 761.65.
- A waste profile will be prepared for each waste stream generated during the work and submitted to the proposed disposal facility for approval.

For interior areas:

- All HVAC units must be turned off and all air intakes and exhausts must be sealed. Unit ventilators must be protected with at least two independently sealed layers of polyethylene sheeting.
- All work will take place within a Negative Pressure Enclosure (NPE) using at least two layers of 6-mil fire retardant polyethylene sheeting on the walls, floor, ceilings, etc.
- Only air filtration devices (AFD) with HEPA primary filters and activated carbon pre-filters should be used. The airflow from all AFDs must be directed to the exterior of the building.
- The NPE must maintain a -0.02 column inches of water pressure differential, relative to outside pressure, as evidenced by a real-time paper chart or digitally recorded and downloadable data file of the manometric measurements. An OmniGuard Differential Pressure Recorder, or a similar unit, with an audible alarm, must be used.
- The NPE must be inspected for breaches and smoke-tested for leaks before the commencement of epoxy removal, and at the beginning of each shift.
- The NPE must consist of a two-stage airlock, including a decontamination chamber and clean room, and a separate waste loadout chamber/pathway.
- The decontamination chamber must consist of an additional layer(s) of PCB-resistant sheeting (drop cloth) with absorbent material and other necessary equipment.
- The entry and exit from a work area must be to the exterior of the building. If no exterior access is readily available, the floor of the pathway to the exit must be protected by at least two layers of 6-mil fire retardant polyethylene sheeting.

For exterior areas:

- All windows and doors within 20 feet of the work area must be secured and protected with at least two layers of 6-mil fire retardant polyethylene sheeting.
- Interior doors leading to classrooms or other spaces where fire egress through an exterior door would be prevented by the work, must be locked and signed for non-use during the project.
- If a window is broken during the work, the interior work area must be deemed contaminated and testing and remediation must be completed.
- The work area must consist of at least two layers of 6-mil fire retardant polyethylene sheeting on the concrete or asphalt ground surface, landscaping/vegetation, adjacent building surfaces, or other ground surface.
- The ground covering must extend to the setback barrier.
- A 10-foot work area setback barrier, consisting of rope with signs or barrier tape, must be erected around the perimeter of the work.

3. <u>Interior and Exterior Epoxy Removal</u>

If a project involving the removal and replacement of interior or exterior epoxy is identified, the District will compile a project summary. This summary will include the area(s) involved, the materials used, the timeframe for the work, and representative photographs. The summary will then be provided to the EPA PCB Coordinator. Formal approval of the plan is not required.

For both interior and exterior areas:

- Cured epoxy has a shiny finish that does not allow new epoxy to adhere or bond to it. Therefore, the cured surface needs to be abraded to create a new bonding surface.
- Surface abrasion will be carried out using an orbital sander or a similar system equipped with a shroud attached to a HEPA vacuum and an 80-grit sanding pad or paper. After the abrasion process, the existing epoxy will be cleaned with either acetone or xylene solvent to remove any loose abrasive media and epoxy. methyl ethyl ketone (MEK) will not be used inside the building.

For interior areas:

- All removal of interior epoxy or preparation for new epoxy coating(s) will take place in a Negative Pressure Enclosure (NPE). If the work area is small, a mini-NPE or a glove-bag NPE can be used, subject to the review of a Certified Industrial Hygienist.
- In the event of an NPE failure during the work, the entire classroom or space where the NPE was located will be treated as a contaminated area. Wipe and air samples will be collected under the supervision and direction of the project's Certified Industrial Hygienist.

4. <u>New Interior and Exterior Epoxy Application</u>

The new epoxy sealant layer will be applied in a gray color, replacing the tan color of the outer layer and maintaining the red color of the base epoxy layer. The new epoxy sealant will extend an additional one (1) inch in all directions beyond the area of the underlying epoxy layers.

The new epoxy coatings will be applied as specified by the manufacturer by a specialty contractor. The underlying surface must be clean and structurally sound. It can be dry or damp, but it must be free of standing water. Dust, laitance, grease, curing compounds, impregnations, waxes, and any other contaminants must be removed from the surface. Refer to the Sikagard 62 product data sheet, component "A" and "B" safety data sheets, and coating specification for more information. The Sikagard 62 product documents provide the following instructions for new epoxy application:

- The epoxy has a shelf life of 2 years when stored dry in original, unopened containers at temperatures between 40°F (4°C) and 95°F (35°C).
- Before use, condition the epoxy to a temperature between 65°F (18°C) and 75°F (24°C).
- Each component should be pre-mixed before mixing the components together.
- Equal parts by volume of Components 'A' and 'B' should be proportioned into a clean mixing container.
- Components 'A' and 'B' should be mixed at a 1 to 1 ratio by volume.
- Use a low-speed (400-600 rpm) drill with a Sika paddle to mix for 3 minutes, until the mixture is uniform in color.
- Apply the coating using a high-quality roller, brush, or spray.
- Two coats are required.
- The second coat should be applied as soon as the first coat is tack-free and the application traffic will not damage the first coat.

- The second coat must be applied within 48 hours of the first coat. A longer delay will require additional surface preparation.
- Allow the applied epoxy to cure for a minimum of 3 days.

5. Indoor Testing Following Epoxy Application

Testing will be conducted after the application and curing of the new epoxy and before the removal of the NPE. The number of wipe and air samples collected will depend on the size of the NPE and the extent of the work.

- Wipe samples will be collected from the cured epoxy surface at a rate of one sample for every 50 square feet or 50 linear feet in all repair or replacement locations. Additionally, at least two samples will be collected for every 250 square feet of interior NPE, with a minimum of one sample and a maximum of five samples in a work area.
- One wipe sample will be collected from the floor surface at the exit from the NPE to determine if there has been any track-out of PCB-contaminated dust. An additional sample will be collected from any separate exit or waste loadout from the NPE.
- A minimum of two air samples will be collected inside each NPE after completion of the work and before the removal of the NPE. If the NPE is larger than 500 square feet, an additional sample will be collected for every 500 square feet of area.
- The interior clearance criteria require that all wipes be less than 10 µg/100 cm^2 and all air samples be at or below 100 ng/m^3. All analyses will be conducted using the approved laboratory method(s).
- The work area should only be removed after all wipe samples have been received and found to be below the clearance criteria.

6. Exterior Testing Following Epoxy Application

Once the new epoxy coating has been applied and the necessary curing time has elapsed, wipe samples will be collected from the newly coated materials and from the concrete or asphalt surface beneath the poly sheeting.

- Wipe samples will be collected from the cured epoxy surface at a rate of one sample for every 50 square feet or 50 linear feet in all repair or replacement locations. At least one wipe sample must be taken in each repair or removal area.
- After the polyethylene sheeting on the ground surface has been removed, one wipe sample will be collected from the concrete or asphalt surface for every 300 square feet of concrete or asphalt surface.

The exterior clearance criteria require that all wipes, on both the epoxy and ground surfaces, be less than 10 µg/100 cm^2. All analyses will be conducted using the approved laboratory method(s).
The work area will only be removed after all wipe samples have been received and found to be below the clearance criteria.

7. Wipe Sampling of Non-Porous Surfaces

Wipe sample collection and analysis will be carried out in accordance with the project's QAPP. All project wipe samples will be collected, prepared, and analyzed using the following methods:

- ASTM D6661-01 2010 - Field Collection of Organic Compounds from Surfaces Using Wipe Sampling
- 40 CFR 761.123 - Standard Wipe Test
- 40 CFR 761.130 - Sampling Requirements
- EPA Method 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography, Revision 1, February 2007.

Wipe sampling may be necessary at times not associated with routine semi-annual wipe sampling, such as following activities that impact epoxy coating or PCB caulk.

All wipe samples will be collected as outlined in 40 CFR 761.130 – Sampling Requirements, using single-use wipes to sample a 100 cm^2 area. A non-porous surface is defined as PCB-contaminated if it has a PCB concentration greater than 10 µg/100 cm^2.

If a wipe sample from an interior space is found to exceed the PCB contamination level, the HVAC system(s) for that room or area will be turned off. The room or area will be closed and the doorway(s) sealed in accordance with the remediation work area guidelines. The room/area will remain closed until the cleanup and remediation are completed and all clearance criteria are met.

Cleanup and remediation will entail repairing any identified damaged epoxy and cleaning the surface of the epoxy sealant in all areas of the room. After repair and cleaning, samples will be collected to confirm completion of the remediation.

If a wipe sample from an exterior area is found to exceed the PCB contamination level, the District must carry out repair or replacement within 14 days following the approved procedures.