Operations & Support Services
200 East Fremont Street
Monroe, WA 98272-2336
Phone: 360 804 2570
Fax: 360 804 2529

May 25, 2016

Jefferson Ketchel
Director, Environmental Health Division
Snohomish County Health District

Michelle Mullin
PCB Coordinator
U.S. EPA Region 10

Kendall Moore
PCB Coordinator
U.S. EPA Region 5

Subject: Corrective Action Plan for Sky Valley Education Center
351 Short Columbia Street, Monroe, WA 98272

Dear Mr. Ketchel, Ms. Mullin, and Mr. Moore:

In response to the letter dated April 25, 2016 received from the Snohomish Health District, and email communique received on April 21, 2016 from U.S. EPA Region 10, we respectfully provide this draft of our Corrective Action Plan.

Item 1: PCB Fluorescent Light Ballasts

As of the date of this communique we believe that all older fluorescent light ballast (FLBs) that could potentially contain Polychlorinated Biphenyls (PCBs) have been removed from the Sky Valley facility, and have previously been disposed of, or are current properly stored for disposal in accordance with 40 CFR 761.65. Documentation of this to follow under separate cover within ten (10) working days (by June 9, 2016).

The school district purchased and utilized a Philips Advance Ballast Checker, model number ABC100, to determine where magnetic FLBs remained in use, and have removed any magnetic FLB and replaced it with an electronic ballast whether it was an older non-labeled FLB that was likely to contain higher concentrations of PCBs or a later FLB labeled at the factory as “No PCBs.” Given our understanding that even these later ballasts labeled “No PCBs” could contain

minute amounts of PCB, we determined to remove them as well and treat all removed magnetic FLBs as hazardous waste.

Item 2: Inspection and Cleaning of Fluorescent Light Fixtures

As of this date all fluorescent light fixtures in the Annex Building and Library/Pod Building have been cleaned using Xylene whether there was visible evidence of oily residue, dried oils or tar like material, or no visible indication of a past ballast failure whatsoever.

Visual inspection of fluorescent light fixtures in the Library/Pod building in advance of confirmation re-testing indicated that some of the fixtures had not been cleaned to our expected standards. All light fixtures in the rooms that failed our visual inspection have been re-cleaned, and the staff member who had performed that work has received additional guidance.

Our maintenance staff are currently working to clean fluorescent light fixtures in the Technology Building, Gymnasium/Music Building, and the Office Building. This work is scheduled to be completed by June 30, 2016.

Item 3: Re-testing of Contaminated Fluorescent Light Fixtures

Given the outcome of our visual inspection prior to initial re-testing, we have implemented a system of visually double-checking the cleaning of all fluorescent light fixtures as we move forward. Our Director of Facilities will personally oversee this inspection protocol, and only maintenance staff who have received the PCB remediation training from Argus-Pacific will be allowed to perform the double-check inspections. These inspections will be performed by someone other than the staff member who performed the initial cleaning of any particular room or fixture.

Confirmation testing of the light fixtures initially wipe tested by Kendall Moore of U.S. EPA Region 5 was conducted on May 13, 2016. The outcome of the wipe sample re-testing is that in all cases the level of PCBs found on the light fixtures was significantly reduced. However, in one case the level of PCBs remaining in the light fixture still exceeds 10 mg/kg. Classroom D Ballast 6 Cover had initially come back at 9,300 mg/kg, and after cleaning it came back at 29 mg/kg. Classroom D Ballast 6 Fixture initially came back at 170 mg/kg, and after cleaning it came back at 13 mg/kg. This fixture will be re-cleaned and confirmation testing will be conducted to ensure they are brought below the 10 mg/kg action threshold. All other fixtures came back at or slightly above the detection level of the lab testing protocol. (See attachment

The school district proposes to conduct confirmation wipe tests of all fluorescent light fixtures where any visible evidence of oily residue, dried oils, or tar like material is found, and to randomly wipe test ten (10) percent of fluorescent light fixtures where no visible evidence of a failed FLB is found as we proceed with our FLB clean-up efforts. Confirmation testing is scheduled to begin by June 1, and will be completed by July 15, 2016. We will conduct such testing building by building as we complete initial clean-up work in each structure.

Item 4: Remediation of PCB Caulk

The school district proposes to contract with PBS Environmental to undertaking additional samples of the gray caulk to determine the location and extent of application. Given that samples of gray caulk came back with as little as 1.04 mg/kg, and as high as 5,730 mg/kg in PCBs, we would like to attempt to determine whether we can more accurately establish the location of each material. This would allow us to concentrate our resources on the removal of the material that exceeds 50 mg/kg.

Once the location of gray caulk containing 50 ppm or more of PCBs has been established we propose to remove the material by hand scraping, without the removal of windows, doors, or destruction of the structural columns. The hand scraping will be conducted by an abatement contractor familiar with the rules and regulations governing PCB waste.

The abatement contractor will be charged with following work processes and protocols outlined in a PCB Caulk Removal Work Plan developed by PBS Environmental to ensure there is no release of PCB contaminated caulk into the environment, including the generation or mobilization of dust during the work. PBS Environmental shall also be required to develop a Contingency Plan to address any release of caulk/caulk dust under the PCB Spill Cleanup Policy. The PCB Caulk Removal Work Plan and Contingency Plan shall follow under separate cover within ten (10) working days (by June 9, 2016).

The waste caulk will be disposed of following all applicable EPA guidelines. Any residual caulk that cannot be removed by hand scraping will be encapsulated by painting a suitable epoxy material (specific material or chemical composition of material to be approved by EPA and SCHD). The epoxy encapsulant will be applied two inches (2") beyond the edge of the crevice or joint, so as to provide additional protection against the transmission of any residual PCB material or contaminants having leeched into adjacent material strata. New weather sealant caulk will be installed after the encapsulant has fully cured.

The school district proposes to take representative wipe samples (minimum of 25% of the interior spaces where PCB containing caulk has been removed) of the surface of the new caulk and adjacent epoxy encapsulant once those materials have cured properly, to ensure that any residual PCBs are not leaching through the encapsulant layers. The school district will take a series of three (3) such samplings during the first year – one when the epoxy encapsulant and nee caulk have sufficiently cured, a second set in December or January during what is typically the coldest time of year in the region, and a third set of samples during the summer of 2017 (July or August) when the weather is at its hottest in our region. Thereafter, the school district proposes taking a single set of wipe samples per year – during the summer months when temperatures are at their warmest – until such time as the building is fully modernized or demolished. These tests will serve to alert the school district to any residual PCBs or contaminated adjacent strata of materials leaching through the encapsulant layers at a later date. Evidence of such leaching shall initiate additional containment or remediation procedures.

We propose a target completion date of August 31, 2016 for the remediation work, and ongoing sampling of materials as outlined.

Item 5: Remediation of PCB Paint

It is our understanding that the clarification of the sampling protocol used by PBS Environmental – that only layers of paint were sampled, with substrate material such as concrete or cinder block not included in the sample – along with the very low level of PCB content (0.196 mg/kg) has eliminated this as an area of concern in regards to this Corrective Action Plan.

Item 6: PBS Environmental Air Tests Positive for PCBs

Confirmation air samples in spaces where PCBs were previously detected in air samples taken by PBS Environmental were conducted on May 12/13, 2016. The results of the confirmation air samples – after fluorescent light ballasts had been initially cleaned and each classroom space had been HEPA vacuumed and/or wet wiped are not as anticipated. In each instance the level of PCBs in the air samples increased. (See attached lab results.)

After initial discussion with our consultant from PBS Environmental we are planning to perform wipe sample testing in all of these spaces. The initial wipe samples performed by PBS Environmental in these spaces came back negative for PCBs. This new round of wipe samples will help to determine whether cleaning of the fluorescent light fixtures or deep cleaning of the rooms themselves might have stirred up PCB contaminants. If PCBs are now found in these additional wipe samples, then re-cleaning of the classrooms or spaces is warranted. If the wipe samples do not show any PCB contamination then it is likely that additional cleaning of the light fixtures themselves may be warranted. Additional wipe samples of the fluorescent light fixtures in these spaces will also be conducted to give us further information to assist in formulating a plan to address this unanticipated outcome.

Wipe samples of these spaces will be undertaken by June 1, 2016, with air sampling to follow immediately upon a negative wipe sample result, or at the conclusion of an additional round of cleaning of the rooms and light fixtures, dependent on the results of the additional wipe sample testing.

We anticipate that these spaces will ultimately come in below a concentration of 100 ng/m3, and our target date for insuring that they do so is July 31, 2016.

Item 8: Removal of Old Carpet

All remaining areas of old carpet are scheduled to be removed from the Sky Valley facility this summer. The school district is currently seeking bids from qualified flooring companies for the removal of the old carpet and installation of new flooring materials.

The carpet in Room 8, which was tested for the presence of PCBs and came in at 6.51 mg/kg, was removed in December of 2015, over the school district's winter break. A small square of carpet from each room where carpet was removed was bagged and provided to PBS Environmental for analysis.

The small remnant of carpet under the unit-ventilator in Room 11 is scheduled for removal. The removal of the small piece of carpet requires the disconnection and partial disassembly of the unit-ventilator in order to get underneath the mechanical equipment, and is therefore slated for shortly after school gets out in June

All carpet/flooring work will be completed by August 31, 2016.

Item 9: Housekeeping and Best Management Practices

- Ensure that ventilation systems are operating properly and are regularly inspected and maintained according to system manufacturer instructions and guidelines or ANSI/ ASHRAE/ACCA Standard 180-2012—Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems.

  In November of 2015 school district maintenance personnel completed the cleaning of the primary air chamber of all classroom unit-ventilators at Sky Valley. District maintenance staff will work on cleaning outside air grills, insect screening, fresh air intake chambers, return air intake chambers, and the motor and controls chambers (non-air pathways) as other work allows. This work is anticipated to be completed by August 31, 2016.

  In January of this year the school district hired McKinstry – a Seattle based design, build, operate, and maintain (DBOM) mechanical systems contractor – to inspect, verify operation, re-balance fresh outside air intake and exhaust air, and repair any heating or ventilation units that were no longer operating properly. McKinstry has completed the work of re-balancing the HVAC systems, and has returned four (4) non-operational or less than optimally performing units to proper function and operation. (A report of McKinstry's work and findings is attached.)

  In March of this year the school district's maintenance department ordered MERV 4 rated filters for all Sky Valley unit-ventilators. Maintenance had previously contacted the manufacturer of the unit-ventilators to inquire about the use of MERV rated filters and was told that the unit-ventilators were designed to use simple media filters (non-MERV rated), and that the manufacturer had no guidance or input on utilizing a MERV rated filter in their equipment. After unsuccessfully seeking additional guidance from the manufacturer regarding more effective filtration in their equipment, the maintenance department took amperage readings of the unit-ventilator motors before installing the MERV 4 filters, and again after installing the new MERV 4 filters. These readings will be compared against motor amperage readings as the filters are utilized and become more and more clogged with dust, dirt, and debris. If the amperage does not increase too drastically over 90 days (approximately the end of June), we will assess utilization of either a MERV 6 filter, or our desired MERV 8 filter. Careful monitoring of motor amperage is necessary in order to avoid an electrical fire caused by overworking the electric motors due to excessive static pressure across the filter media.

A final non-operational rooftop mounted heat pump unit on the Office Building is scheduled for replacement this summer. There are four (4) heat pumps servicing that building, and the other three are operational and providing ventilation to the structure.

- Clean inside schools and other buildings frequently to reduce dust and residue.

  At the end of February of this year a third full-time custodial staff member was hired by Sky Valley. This additional staff member will significantly reduce the total area assigned to each custodian, and will therefore help ensure that the facility is kept in a cleaner condition.

  In January of this year the school district posted and hired for a new continuing position, that of Custodial Supervisor. The individual hired has significant experience in custodial/housekeeping services from private enterprise, contracted services providers, K-12 public schools, and the University of Washington. We believe her knowledge and experience, along with ongoing training and professional development she has initiated, and critical review of all practices, procedures, equipment, and chemicals utilized will substantially improve our housekeeping services.

  In March of this year the school district initiated a "deep cleaning" of classrooms and work spaces at Sky Valley. This was undertaken to significantly reduce the level of dust and dirt that had accumulated, and reduce the overall particulate counts seen in PBS Environmental's air sampling. This work involved a top down procedure utilizing HEPA vacuuming and/or wet wiping of all horizontal surfaces, and concluded with extracting the carpet or damp mopping of hard surface flooring in the space. As a part of this process the school district hired Seattle Facility Services – a Seattle based cleaning/housekeeping services contractor – to assist district staff with the deep cleaning of Sky Valley spaces. (Map of division of assignments attached.)

  As of the end of April the deep cleaning of all areas of the Sky Valley facility, other than the Art Room, had been completed. The Art teachers specifically asked that cleaning of their space be delayed until after the Art Show that was scheduled for early May. Seattle Facility Services staff returned to Sky Valley to perform deep cleaning of the Art Room last week.

- Use a wet or damp cloth or mop to clean surfaces.

  In February of this year Facility services was instructed not to use dry cloths or dust mops as part of their cleaning activities. Our new Custodial Supervisor has purchased microfiber cloths and provided the custodial staff with training in appropriate dusting procedures.

- Use vacuums with high efficiency particulate air (HEPA) filters.

  In February of this year the school district purchased four (4) new HEPA filtered vacuums for use at Sky Valley; two backpack units for use by the custodial staff, and two

upright units for use by teachers and parents assisting teaching staff. A third full-time custodial staff member was hired by Sky Valley Education Center at the end of February of this year.

- Do not sweep with dry brooms or use dry cloths for dusting.

  In February of this year Facility services was instructed to discontinue use of dry sweeping as part of our housekeeping activities. Alternative methods and equipment have been provided to Sky Valley custodial staff, along with appropriate training regarding their use.

- Wash hands with soap and water, particularly before eating.

  Information from the State Department of Health regarding had washing practices has been provided to Sky Valley Education Center administration.

- Wash children's toys.

  Information from the State Department of Health regarding had washing practices has been provided to Sky Valley Education Center administration.

Thank you for your time and guidance over the past few weeks as we discussed this situation in preparation for submittal of this plan. The Monroe School District and the Sky Valley Education Center respectfully submit this Corrective Action Plan for your review.

Sincerely,

John A. Mannix
Assistant Superintendent, Operations

Cc: Dr. Fredrika Smith, Superintendent, Monroe School District No. 103
Devlin Piplic, Director of Facilities, Monroe School District No. 103
Nancy Bernard, Washington State Department of Health