

LIMITED PCB REMEDIATION, VERIFICATION SAMPLING WORK PLAN FOR MALIBU HIGH SCHOOL/MIDDLE SCHOOL

Santa Monica-Malibu Unified School District
1651 Sixteenth Street
Santa Monica, California 90404

LIMITED PCB SITE CLEANING AND VERIFICATION SAMPLING WORK PLAN FOR MALIBU HIGH SCHOOL/MIDDLE SCHOOL

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Contents

1.0 Introduction	1
1.1 Objectives	1
1.2 MHS Classrooms Targeted for Cleaning.....	1
2.0 Limited Site Cleaning.....	2
2.1 Field Documentation.....	2
2.2 Project Mobilization.....	2
2.3 Work Area.....	2
2.4 Post Cleaning Activity.....	4
3.0 Air and Surface Sampling Plan.....	5
3.1 Verification Sampling Locations	5
3.2 Sampling Strategy	5
3.2.1 Information Acquisition	5
3.2.2 Sampling and Analytical Methods.....	5
3.2.3 Indoor Air Sampling	6
3.2.4 Surface Wipe Sampling	7
4.0 Analytical Findings.....	7

1.0 Introduction

The Phylmar Group, Inc. (Phylmar) prepared this Site Cleaning and Indoor Air Sampling Work Plan on behalf of the Santa Monica-Malibu Unified School District (SMMUSD) in response to a request from the U.S. Environmental Protection Agency (USEPA) Region 9 for cleaning those classrooms at Malibu High School/Middle School (MHS) with polychlorinated biphenyl (PCB) levels in building caulk exceeding the Toxic Substances Control Act regulatory limit of 50 parts per million (ppm). The MHS is located at 30215 Morning View Drive, Malibu, California.

1.1 Objectives

The objectives for this work are to:

- Clean locations with caulk containing more than 50 ppm
- Remove surface dust where previous wipe samples were in excess of 10 micrograms/100 cm²
- Collect verification air and wipe samples following cleaning
- Report the results to the USEPA

1.2 MHS Classrooms Targeted for Remediation

The MHS locations to be cleaned include the Library and Rooms 1, 5, 8, and 301.

2.0 Limited Site Cleaning

2.1 Field Documentation

The following documents will be provided prior to the mobilization to the project site:

- Employee Training Certifications (29 CFR 1910.120 Hazardous Waste Operations and Emergency Response “HazWOpER” trained technician and or supervisor)
- Employee Fit for Duty Designation under medical approval
- Site Health and Safety Plan
- Site Work Books
- Transportation and Traffic Plan
- Waste Storage and Management Plan
- Site Organizational Chart and contact names/numbers

All documents are submitted with a tracked transmittal form.

2.2 Project Mobilization

The SMMUSD remediation contractor will mobilize the necessary crew and support operations to complete the project. A review of the dispatch order will be conducted to ensure that only authorized employees are assigned to the project site. All personnel shall be subject to site verification by SMMUSD to ensure that all have prior approval.

Equipment shall be staged in protected areas only (i.e., within the locked and access restricted areas within the school property). A designated waste storage area that was established in the work plan shall be erected and properly labelled prior to the generation of mitigation related wastes.

Contractor crews shall wear company identified coveralls. In addition, a clearly displayed Identification badge shall be worn at all times. The badge design and logo shall be provided within the pre-project submittal.

Equipment shall remain secured within the contractor sealed cargo van when not in use. Overnight hours shall require the equipment to remain on site.

2.3 Work Area Cleaning

The contractor will complete the following activities for each cleaning area:

- Complete the work area safety briefing with the assigned crew. Following the meeting, each crew member will sign the safety briefing and the work area entry sheet.
- Work area photographs taken from four perspectives shall be completed prior to any area disturbance.

- The contractor will conduct personal exposure monitoring for PCBs. Twenty (20) percent of the work crew shall be equipped with a personal sampling train that includes a Florisil®Tube and Glass Fiber Filter attached to the employee within their breathing zone. The sampling will be conducted to obtain worker exposure data during cleaning activities: surface vacuuming, furniture movement, surface wipe down, and setup of polyethylene sheeting. The information shall be received within 5 working days and provided to both the employee, SMMUSD, and the USEPA.
- Furniture and other materials that are stored adjacent to the window areas of the identified rooms shall be photographed and pre-cleaned and placed on polyethylene sheeting.
- The entire work area shall be photographed as work continues.
- The area below the window (wall and floor), once surface cleaning is completed, shall be HEPA vacuumed to remove visible dust.
- The area below the window (wall and floor) shall be cover with polyethylene sheeting. This shall be affixed with low tack tape and staples to limit surface damage during cleaning.
- The window frame, primarily where the caulking exists, shall be HEPA vacuumed to remove surface dust.
- The window frame shall receive a solvent wipe to remove any adhered materials beyond that of the caulk, i.e., tape, glue, and permanent marker.
- All generated cleaning wastes will be placed into a sealed 55 gallon steel drum and maintained in the designated project only storage area.
- Utilizing a photographic image of the initial work area, all furnishing and materials moved in the course of the work shall be replaced.
- All equipment utilized during the work operations shall be cleaned prior to moving to a new work location. This shall include empty all vacuums, attach new hose ends, and thorough cleaning of the vacuum exterior. Brushes utilized in surface preparation shall be disposed of and only new ones used at the next location.

The contractor will repeat the process at each work location with the same cleaning process. All log books will be secured following the work activity. Only one log book will be used per room.

The log books are copied and secured. An initial copy of the field records will be presented at the completion of each room.

2.4 Post Cleaning Activity

Phylmar, on behalf of the SMMUSD, will manage the document records from the cleaning phase that will include:

- Quality Assurance and Quality Control (QA/QC) to verify that all documents are accurately and properly signed by employees
- Testing data for employee exposure is referenced to Chain of Custody documents
- Testing data from cleaning waste samples is referenced to Chain of Custody documents
- Cleaning waste disposal profiles are properly are executed and submitted
- Cleaning waste disposal is handled under state approved documents
- Post area inspection to insure that all equipment and supplies are removed from site
- Safety Data Sheets (SDS) for all chemicals introduced during the course of work operations shall be provided.
- A photographic index of all site photography shall be provided along with 2 sets of CDs

These documents will be provided to the USEPA for review.

3.0 Air and Surface Sampling Plan

3.1 Verification Sampling Locations

Five sampling locations are proposed within the MHS classrooms. The samples will be collected in the following locations:

- *Library*
- *Room 1*
- *Room 5*
- *Room 8*
- *Room 301*

The verification indoor air samples will be collected in the center of each room approximately three feet above the floor. All indoor air samples will be collected in accordance with the protocol outlined in the following sections. The post remediation surface wipe samples will be collected on surfaces identified as having PCB levels exceeding ten (10) micrograms per one hundred (100) square centimeters during the November 2, 2013, sampling event. Each location and the reasons for selecting the location will be documented in the report resulting from this work.

An ambient air sample will be collected from an outdoor location on the MHS campus, approximately five feet above the ground surface. To the extent possible, this ambient air sample will be collected away from obvious potential sources such as exterior building caulk. The ambient air sample location will be determined based on wind conditions at the time the samples are collected.

3.2 Sampling Strategy

One indoor air sample will be collected from each of the five sample locations listed in Section 3.1. The air samples will be analyzed for total PCBs and the 209 congeners with USEPA risk guidelines. Wipe samples will be analyzed for total PCBs and 209 congeners.

The sampling procedures and methods are detailed in the following sections.

3.2.1 Information Acquisition

Various types of information will be obtained and recorded for this sampling effort.

An air sampling form will be used to record data on the condition of the sampling device, sampling times, flow rate, etc.

The room and general area where sampling will occur will also be surveyed for conditions that could affect sample results. This survey will be documented on the form as well.

3.2.2 Sampling and Analytical Methods

Indoor air sampling methods used will be consistent with USEPA protocols for collecting air samples using TO-10A polyurethane foam (PUF) sampling and analysis methods (*Compendium of Methods for the Determination of Compounds in Ambient Air, Second Edition, Compendium Method TO-10A, Determination of Pesticides And Polychlorinated Biphenyls In Ambient Air Using Low Volume Polyurethane Foam (PUF) Sampling Followed By Gas Chromatographic/Multi-Detector (GC/MD)*) (EPA/625/R-96/010b). Frontier Laboratories in El Dorado Hills, California, will analyze the samples. Turnaround time will be approximately five business days (expedited turnaround times). The laboratory will report the concentration of all 209 congeners plus the total PCB concentration.

Wipe samples will be collected using a 10 cm by 10 cm (or equivalent that equals 100 cm²) template to outline the sample area and a gauze pad or filter paper that has been saturated with hexane will be used to collect the sample. The solvent-saturated wipe will be used to thoroughly swab the area inside the 100 cm² template and detailed in "Wipe Sampling and Double Wash/Rinse Cleanup as Recommended by the Environmental Protection Agency PCB Spill Cleanup Policy," dated June 23, 1987, and revised on April 18, 1991. Frontier Laboratories in El Dorado Hills, California will analyze the samples. Turnaround time will be approximately five business days (expedited turnaround times). The laboratory will report the concentration of all 209 congeners plus the total PCB concentration.

3.2.3 Indoor Air Sampling

The indoor air samples will be collected using a PUF sampler connected to a properly calibrated low flow air sampling pump operating at a flow rate of approximately 6.5 liters per minute over a 24-hour sampling period. Care will be taken to deploy the PUF samplers away from the direct influence of any forced air emanating from air conditioning units, central air conditioning vents, furnaces or heaters.

The indoor air sampling procedure is described as follows:

- Building spaces will be examined to determine a location for deploying the sample. Samples will be collected under typical winter conditions for the sampling locations (room ventilation system off, doors closed and windows partially open). An attempt will be made to deploy the PUF samplers in areas not subject to disturbances.
- One field co-located duplicate air sample will be collected in the room with the highest initial air sampling result. The field duplicate will be collected using the same method as the other air samples.
- Air samples will be labeled with a unique sample designation number. The sample number and location will be recorded in the field log book.
- The pump flow rate will be measured using a primary standard prior to sample deployment, and recorded in the field log book. The start time will be recorded.
- Other data recorded will include: outside and interior temperatures at the start and end of the sample period, equipment serial numbers, sampler name, and any comments.
- The pump will be turned off at the end of the sample period (after 24-hours) and the end time recorded. Any evidence of sample disturbance during the sample collection will be recorded.
- The pump flow rate will be measured and recorded immediately after pump retrieval at the end of the sample period. Any samples where the flow rate was less than 85% of the original set point will be rejected. Field data will be verified as correctly entered into field books prior to shipment; and samples will be shipped to the laboratory under a chain-of-custody.

- MHS faculty, staff and students will be requested to keep out of the sampling area during the sampling event.

The ambient air samples will be collected in the same manner as the indoor air samples.

3.2.4 Surface Wipe Sampling

Surface sampling locations will correspond to those areas sampled on November 2, 2013, that were either adjacent to building caulk with concentrations greater than 50 ppm, or where previous wipe samples exceeded 10 µg/100 cm². Surface samples will be collected using a gauze pad or filter paper that has been saturated with hexane. The hexane-saturated wipe will be used to thoroughly swab the area inside the 100 cm² template.

One field co-located duplicate wipe sample will be collected adjacent to sample collected on November 2, 2013, in the room with the highest initial sampling result. The field duplicate will be collected using the same method as the other wipe samples.

All data concerning sample collection will be documented in a field notebook and respective sampling forms.

4.0 Analytical Findings

The sampling will be completed in December 2013, predicated on USEPA approval of this work plan. Phylmar will prepare a sampling and data summary report after the analyses are completed and will provide this report to the USEPA.